Apology Components and Corporate Recovery: Understanding the Mechanisms Impacting Trust and Brand Equity

Yaying Han

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prepared By: Yaying Han

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Signed by the final Examining Committee:

Kamila Sobol Chair

Chair's name

Sharlene He Examiner

Examiner's name

Kamila Sobol Examiner

Examiner's name

Bianca Grohmann Supervisor

Supervisor's name

Approved by Darlene Walsh

Chair of Department or Graduate Program Director

August 2023 Anne-Marie Croteau

Dean of Faculty

Abstract

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Yaying Han

Apologies are crucial components of brand recovery after brand crises, yet the role of the apology components and apologizer's gender and status in shaping consumer responses remains understudied. This thesis aims to contribute to the existing literature on brand crises and apology effectiveness by investigating the impact of apology components (i.e., acknowledgment, remorse, compensation) and apology source (i.e., gender and status of the apologizer) on consumer recovery, with a focus on post-crisis trust and brand equity. Additionally, the study explores the mediating roles of perceived accountability, authenticity, and fairness in this relationship. The research involved an experiment with a 3 (apology component: acknowledgment, remorse, compensation) × 2 (gender of apologizer: male vs. female) × 2 (status of apologizer: CEO vs. employee) between-subject design where participants were exposed to a fictitious brand crisis news article and imagined themselves as affected consumers. Despite non-significant results, the study contributes theoretical insights into the complex interplay between apology components, source, and post-crisis outcomes. Trends in the data suggest potential relationships that warrant further exploration in future research.

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Table of Contents

List of Figures

List of Tables

Introduction

How will a company's wrongdoing affect its performance and the consumers' brand perception? Branding is challenging and complex, and brand equity can be fragile. For example, in November 2018, Italian luxury fashion brand Dolce & Gabbana was widely criticized by Chinese consumers for releasing a promotional video deemed to contain racist and stereotype-pandering content and had to cancel its big show in Shanghai just hours before it was due to start (Holland & Wang, CNN, 2018). Moreover, D&G co-founder Stefano Gabbana responded to the advertising controversy with a series of derogatory comments about China and Chinese people on his social media accounts, which resulted in a large number of consumers returning their goods and the brand quickly being removed from Chinese e-commerce platforms and department stores, such as Lane Crawford. The brand almost completely withdrew from the Chinese market after this incident. Even though the founder and the brand subsequently apologized, the apology seems to have had little success. Up to today, Dolce & Gabbana has not been able to win back Chinese consumers (Hills, CNN, 2021).

Brand crises are somewhat likely, with even leading brands having to pay the price for crises the brand is accountable for or involuntarily involved in. For example, Twitter has faced several brand crises in recent years, but one of the most significant was the platform's role in spreading misinformation and hate speech. In particular, Twitter has been criticized for allowing political leaders and other public figures to use the platform to spread false information and incite violence. After Elon Musk acquired Twitter, a series of brand-unsafe actions led to the loss of half of Twitter's most prominent advertisers in 2022, with brands such as Chanel and Dell stopping their advertising on Twitter (Kann & Carusone, 2022).

Research on brand crises and consumer response has grown significantly over the past few decades. The fast pace of technology and social media connectivity has made it more critical than ever for companies to be proactive in addressing potential issues and maintaining the trust of their customers and stakeholders (Pace et al., 2017). Research has shown that the way a company responds to a crisis can have a significant impact on consumer perceptions and the company's reputation (Greyser, 2009). Scholars have explored how consumer perception of a brand changes after a crisis, the factors influencing consumers' forgiveness, and the types of strategies that brands can use to restore their image (e.g., Dutta & Pullig, 2011; Shao et al., 2022). One such strategy is an apology, which has been found to be effective in mitigating the negative consequences of brand transgressions. However, the effectiveness of an apology may depend on various factors, including the gender and status of the apologizer and the type of apology used (e.g., Hill & Boyd, 2015; Wei & Ran, 2019).

This research aims to contribute to the existing literature on brand crises and apology effectiveness by examining the influence of apology source, which stands for the gender (i.e., male or female) and status of the apologizer (i.e., CEO or the employee who did things wrong), investigating the effects of "who" delivery the apology, and their interactive relationship with apology components (i.e., acknowledgment, remorse, and compensation) on consumer recovery (i.e., post-crisis trust and brand equity) to study the question of "how", as well as the mediation role of perceived accountability, authenticity, and fairness to further understanding the mechanism of the relationships between apology components and post-crisis trust and brand equity.

The study seeks to contribute to the theoretical understanding of how apology sources and apology components impact consumers' trust and brand equity after a brand crisis. From a

managerial perspective, this research aims to offer insights into how brands can design more effective apology strategies to restore trust and brand equity after a crisis. By understanding how the gender and status of the apologizer affect consumers' responses, brands can tailor their apology messages and select the most appropriate apologizer to achieve the desired outcomes. Understanding the impact of apology sources can guide the selection of appropriate spokespersons, enhancing the authenticity and credibility of the apology. The study's findings seek to inform brand managers seeking to restore brand trust and equity image after a crisis.

Literature Review

Negative Events in Marketing

As an event that cannot be avoided and can significantly impact a company, adverse events such as brand crises, service failures, product recalls, brand transgressions, have been studied extensively and in great detail in recent years. The consumer-brand relationship would be affected, sometimes destructive, by brand transgressions, which Aaker et al. (2004, p.2) define as "a violation of the implicit or explicit rules guiding relationship performance and evaluation," such as unethical behavior or a defective product. It is worth noting that many similar concepts exist in this area of research. For instance, service failure was defined by Holloway and Beatty (2003, p.93) as "activities that occur as a result of customer perceptions of initial service delivery behaviors falling below the customer's expectations or 'zone of tolerance'"; Dutta and Pullig (2011) conceptualize brand crises as unexpected events that threaten a brand's perceived ability to deliver expected benefits. Previous research has suggested that research on brand transgressions, service failures, and crises should be integrated as the discipline of negative events in marketing since they "study a similar phenomenon by using complementary conceptualizations, theories, and methods" (Khamitov et al., 2020, p.519).

The impact of these unfavorable events on corporate performance and relationships with consumers is significant. For instance, product-harm crises can cause major revenue and market-share losses, lead to costly product recalls, and destroy carefully nurtured brand equity (Dawar & Pillutla, 2000; Cleeren et al., 2013). Dawar and Lei (2009) believe that a brand crisis can cause severe damage to a brand regardless of the authenticity of the brand damage statement itself and that this impact is moderated by consumers' relevance to the crisis and their familiarity with the brand, which affects their evaluation of the brand after the crisis. In research about the evolution of consumer-brand relationships considering brand personality, Aaker et al. (2004) found that transgression has damaging effects on this relationship for both sincere and exciting brands. Furthermore, even when companies respond and make amends after transgressions are not always effective, their research found minimal signs of recovery in brand-consumer relationships for sincere brands. Transgressions violate consumer expectations, weaken self-connection, and undermine consumer satisfaction and commitment (Aaker et al., 2004; Khamitov et al., 2020; Tsarenko & Tojib, 2015). However, the effects of brand recovery may also vary and depend on many factors. According to the experimental results of Aaker et al. (2004), the transgression-recovery sequence showed an increase in relationship strength between brand and customer when for the exciting brand, increasing the level of interdependence and commitment in the relationship relative to the brand characteristics of sincere.

Furthermore, there are spillover effects to competitors for transgression. Carrillat et al. (2014) and Trump et al. (2017) talked about the factors outside the brand that show competitors' scandals and transgression would not only impact their own brand image and revenues but also influence the consumers' perception of their similar competitors. According to Trump et al. (2017), the spillover effects will occur only to similar competitors and at low construal levels,

and it will also make similar brands have negative consequences because of the competitors' wrongdoing. Carrillat et al. (2014) 's study on athlete endorsers indicated that a scandal involving an athlete endorser harmed the attitude toward the endorsed brand and competitor brands. Cleeren et al. (2013) found that the effects of product-harm crises would spill over to nonaffected competitors in the category, as well as the impact of post-crisis advertising and price adjustments on consumers' brand share and category purchases, which the extent are moderated by the extent of negative publicity surrounding the event and whether the affected brand had to acknowledge blame publicly. Various studies have shown that negative brand events, whether the brand itself is actively or passively involved, can have a negative impact on the brand, and sometimes this impact can even spread to the entire industry, dealing a fatal blow to certain companies, and ruining long-term brand development efforts (e.g., Trump et al., 2017; Cleeren et al., 2013; Carrillat et al., 2014). Therefore, the management of negative events for brands is particularly crucial.

In the discussion of negative brand events, there is always a discussion of the factors that influence brand recovery to study how to regain consumer trust and restore the brand. The ultimate goal of a company is to mitigate, neutralize, or even reverse the effects of these negative events, and much depends on the company or brand's post-crisis response strategy. As an example, brand crises can have a significant impact on a company's reputation, and the response to a crisis is crucial for mitigating the damage and regaining consumer trust (e.g., Dutta & Pullig, 2011; Greyser, 2009). In marketing, research has focused on the moderating effects of the recovery effort or interactions between the recovery and characteristics of the transgression. For instance, the influence of product-harm crises on consumer-based brand equity will be moderated by the consumer's prior expectation; expectations and firm response are shown to be

interacted to affect post-crisis brand equity (Dawar & Pillutla, 2000). The severity of a brand transgression, consumers' prior awareness of the firm's corporate social responsibility (CSR) initiatives, and the firm's response (apology vs. apologia) have an interactive influence on consumers' forgiveness after the brand transgression. Consumers' prior awareness of CSR initiatives significantly distinguished between apologia and apology, and the effect of apology on consumer forgiveness was more significant when brand aggression was less severe (Tsarenko & Tojib, 2015).

Khamitov et al. (2020) concluded the Negative Event Episode, which includes three phases, the initial critical negative event, the company's and brand's recovery, and post-recovery interactions. They suggested little research and limited attention to the latter two stages of brand transgression, which calls for more studies in this particular direction, and exceptionally more detailed prescriptions about compensation and apology in the recovery stage. Therefore, according to this insight, this paper will focus on the latter two stages to explore the impact of how a company apologizes for consumer recovery.

The Role of Apologies

Apologies are frequently a crucial aspect of crisis communication. For some organizations or business leaders, apologizing or not after a negative event may not be an easy choice, where the decision to apologize is highly political, and refusal or readiness to apologize can be perceived as a sign of weakness (Kellerman, 2006). Some scholars have offered alternative options of crisis response strategies to apologizing based on the crisis type, such as denial or reduction of offensiveness (Dutta & Pullig, 2011). However, despite no one response strategy for all crises, good apologies usually work as "one component of a successful response and recovery strategy" (Shao et al., 2022, p.3420). According to a systematic study of corporate

apologies by Shao et al. (2022), a corporate apology is defined as a public statement made by a company about a past transgression that has been widely publicized, and they classified the elements of corporate apologies into four dimensions: content, spokesperson, timing and delivery method. Numerous studies have proven that apologies effectively mitigate damage and turn around consumer satisfaction after a company experiences a negative event such as a transgression or a service failure (e.g., Liao, 2007; Mattila et al., 2009). The value and significance of an apology is unquestionable. In a survey of 223 non-financial crises, researchers found that failure to respond appropriately after a crisis is harmful to shareholders, that failure to apologize will reduce shareholder wealth when the firm is directly responsible for the crisis, and that apologizing for the crisis can mitigate the loss of shareholder value caused by the crisis (Racine et al., 2020). In addition, late apologies can reduce service recovery satisfaction (Roschk & Kaiser, 2013), further illustrating the importance of apologies to companies after a negative event.

Moreover, academics have suggested that the study of corporate apologies should no longer be limited to the question of "the existence of apologies" but should move to a more prosperous research direction, such as "how to apologize," since experimental result shows that simply apologizing does not necessarily lead to higher satisfaction than not apologizing at all (Roschk & Kaiser, 2013). It is how one apologizes that is the key to apology effectiveness research.

Apology Components

The apology is a complex discipline, and its effect is not only in its existence but also in how it is made and delivered. Instead of focusing on whether a company should apologize or deny following a brand crisis and which post-crisis response strategy should be used, researchers

are now focusing on "who and how to apologize properly." For example, Wei and Ran (2019) looked at how the gender of the person who apologizes affects consumer forgiveness, and they found that this gender effect is related to the transgression type. Hill and Boyd (2015) argued that the effectiveness of who apologizes for the crisis, the CEO or the employee who caused the crisis, depends on the apology components (i.e., acknowledgment, remorse, and compensation). Besides, more recent research reveals that apologies can also have negative outcomes, mainly if they are poorly delivered (Hill & Boyd, 2015). Successful apologies can turn hostility into triumph, but a poorly executed apology can lead to ruin. For instance, the facial expression of the apologizer impacts communication and investors' confidence as well. The expression of deviant sentiment is associated with a decline in investor confidence, which manifests itself in negative stock market returns; adverse financial effects can last even up to three months after the apology (Brinke & Adams, 2015), hence affecting post-crisis recovery. According to the literature review conducted by Li and Wei in 2016, a valuable prospective future research direction for brand crisis management is shifting from what to how. This study follows this direction and aims to investigate the effectiveness of who and how to apologize on consumer response and brand recovery after brand negative events.

Kellerman (2006) examines terrible and good examples of apologies and concludes that a good apology includes acknowledging the mistake, accepting responsibility, expressing regret, and assurance that the offense will not be repeated. Similarly, Lee and Chung (2012) summarized four apology components: responsibility, sympathy, compensation, and assurance, and from an online experiment, they found that the effect of different apology statements on relieving public anger was different, that apology statements that take active responsibility are more effective in reducing public anger than those that use passive responsibility. However,

there is no significant difference in public anger relief between a highly sympathetic apology statement and its counterpart. Through a systematic review of prior research on corporate apologies, Shao et al. (2022) outlined corporate apologies as being expressed through content, spokesperson, timing, and delivery method. As per their summary (Shao et al., 2022), the content of an apology can include cognitive, affective, and conative language components. Cognitive content involves acknowledging the wrongdoing, explaining it, recognizing the extent of the harm, and addressing any violated rules or norms. Affective content includes expressing emotions such as empathy, concern, sadness, regret, or remorse, and intensifying these emotions can strengthen the apology. Expressing empathy and concern for those affected can be particularly effective in gaining forgiveness. Finally, conative components involve admitting and accepting responsibility for the transgression, then demonstrating corrective actions or organizational changes to prevent the recurrence of the issue. These generalizations are consistent with the definitions and understandings of Hill and Boyd (2015), conducting a study on the interaction of apology sources and apology components, where they divided apology components into three major categories: "an acknowledgment of violated rules and norms, an expression of remorse, and an offer of compensation" (p.164). In light of the above, an effective and reasonable apology should have three main components: firstly, proactive responsibility and acknowledgment of wrongdoing; secondly, an emotional expression such as expressing regret to evoke sympathy; and finally, effective remedial measures and commitment. Therefore, in this study, I will adopt the definition in Hill and Boyd's 2015 study, which concluded the apology component as acknowledgment, remorse, and compensation, to explore further the mechanism of the apology component's influence on the effectiveness of apology.

Apologizer Characteristics

In the event of a crisis caused by an organization, offering an apology can be a valuable tool to safeguard its reputation and performance in the stock market (e.g., Lee & Chung, 2012; Racine et al., 2020; Shao et al., 2022). However, when an organization is comprised of various levels, the question arises as to who should be offering the apology – the organization as a whole or a specific member or group within the organization (Verhoeven et al., 2012). In addition to how the apology is said, who makes it after a negative corporate event is just as important. Studies suggest that the source of an apology can impact consumer perceptions of sincerity and the effectiveness of an apology in promoting consumer forgiveness and brand recovery (e.g., Kim & Park, 2017; Walfisch et al., 2013). In the comparative study of Verhoeven et al. (2012) of organizational reputation and spokesperson reputation (CEO), it was found that there was an inclination to attribute crises to the collective level, i.e., crises were seen more as the collective responsibility of the organization, which leads to a further research question of who should deliver the apology. It is also suggested that future research could elaborate on the effects of other crisis responses, such as the subtle differences between CEOs who express shame and those who express regret, which are worth considering.

Studies have explored how the source of an apology affects consumers' willingness to forgive and how well a brand does after a brand crisis (e.g., Hill & Boyd, 2015; Koehn, 2013). The source of an apology refers to who is delivering the apology, such as a company CEO or a lower-level employee in the study of Hill and Boyd (2015). The status is evidently not the sole characteristic of the apology source that affects the effectiveness of the apology. For instance, according to Walfisch et al. (2013), in a scenario-based experiment conducted among 780 undergraduate students, researchers found that the gender and workplace status of the apologizer

would influence the effectiveness of the apology. In particular, apologies were most effective when the apologizer was male, a manager, or a male apologizing to a female. Building on this literature, the current study therefore focuses on two attributes of the apologizer, namely their gender and their status (i.e., CEO vs. employee). In practice, the spokesperson issuing the corporate apology is usually the person in charge of the company (i.e., CEO) or the employee responsible for the crisis. This research therefor operationalizes status of the apologizer as the CEO versus the responsible employee, although it needs to be acknowledged that this creates a confound in terms of direct responsibility for the incident.

Status of the Apologizer. The CEO is increasingly becoming an essential role in the communication between companies and consumers as the spokesperson of the company, and the CEO's reputation and statements are tightly linked to corporate reputation and response (Verhoeven et al., 2012). The status of the apologizer has been found to affect the effectiveness of the apology (e.g., Hill & Boyd, 2015; Kim & Park, 2017; Walfisch et al., 2013). CEOs' apologies may significantly impact brand image more than those of lower-level employees. In an online crisis communication study, Kim and Park (2017) used a mixed experiment with three variables: source of apology, response strategy, and type of crisis to conclude that "who apologizes" affects consumers' perceived credibility, with organized more trustworthy than unorganized, and that crisis response messages delivered by the CEO were seen in this study as the most reliable. Perceived source credibility mediates the effect of source reputation and behavioral intentions, and this mediation appears to depend on the type of crisis response strategy.

However, other scholars believe that leaders need to consider carefully whether to apologize or not because the CEO's reputation represents the reputation of the whole company to

a certain extent, and a public apology by the CEO may put both him/herself and the organization at risk, so "leaders should not apologize often or lightly" (Kellerman, 2006, p.78). Furthermore, Hill and Boyd (2015) found interactive effects of the apology source and apology components, in which who should apologize, the CEO of the company or the employee who did the wrong thing, depends on what to say, i.e., acknowledge the wrongdoing, express their remorse, or promise a compensation, when apologizing. In their study, 106 participants were recruited for payment via the Amazon Mechanical Turk platform. They were first asked to read a passage to imagine themselves in an inconvenient situation caused by corporate wrongdoing, and then all the participants were randomly assigned into one of six apology conditions with two factors (CEO or employee apologizer × three apology components). After reading the apology messages with different components delivered by different sources, participants were asked to rate measure indicators, including their extent of forgiveness, trust, satisfaction, and positive word-of-mouth intention to the company. Their results revealed that the influence of apology sources and apology components on apology effectiveness, i.e., consumer forgiveness, is through interaction between these two variables, where a remorseful employee apology was more effective than a remorseful CEO apology because customers felt more empathetic with the employee. In addition, a compensatory CEO apology was more successful than a compensatory employee apology since CEOs can significantly influence consumer perceptions of fairness and convince the consumer of compensation.

These findings suggest that when responding to a crisis, businesses should evaluate the source of their apologies and tailor their apology techniques to ensure they are effective and regarded as sincere.

Gender of the Apologizer. According to social role theory, the gender division of labor in society has developed a wide range of gender stereotypes. Males can be more involved in a paid position with higher power and status, while females are more assigned to the role of "nurturer." The theory predicts that, in the same context, females' behavior is generally more communal than males' rather than instrumental (Ridgeway, 2001). Such stereotypes also create different expectations of males and females in general; for example, males are more likely than females to be the primary breadwinners for their families and to hold full-time jobs in the waged economy, and they are frequently associated with physical strength, assertiveness, or leadership skills. In contrast, females are linked with traits such as communication, empathy, and vulnerability (Eagly & Wood, 2016). Generally, females are considered warmer than males, whereas males are perceived as more competent (Wei & Ran, 2019). These differential perceptions of male and female biases are also consistent in corporate settings. Pillemer et al. (2014) studied CEOs of Fortune 1000-ranked companies and implied a relationship between gender-linked traits and corporate performance and profits. In their experiments among college students, in line with social role theory, male CEOs were evaluated higher than female CEOs on agentic qualities (dominance, leadership, and powerfulness), while female CEOs were rated higher on community traits (supportiveness, compassion, and warmth).

Even though the impact of gender on the effectiveness of corporate apologies are not well-researched as a potentially decisive influencing factor, the literature has shown that an apology's effectiveness may vary depending on the gender of the apologizer (e.g., Cowen & Montgomery, 2020; Walfisch et al., 2013; Wei & Ran, 2019). Several studies have explored how male and female apologizers are perceived differently by consumers (Cowen & Montgomery, 2020), and consumers have different expectations and evaluations of apologies delivered by

different genders (Walfisch et al., 2013), which can impact the effectiveness of apology efforts by brands. Recent studies indicate that gender can impact how individuals perceive and respond to apologies in different settings (e.g., Kapuściński et al., 2021; Root & Exline, 2011), such as the gender of the apologizer can be used as a cue to help the audience evaluate the apology message and perceive the organization, as audience pay little to gain this information (Kapuściński et al., 2021).

According to a study by Brescoll and Uhlmann (2008), men and women have different expectations for apologies, with women expecting more remorse, responsibility, and compensation. On the other hand, people's perceptions of individuals of different genders who perform the same expression vary. Brescoll and Uhlmann (2008) explored the effect of gender and emotion on workplace communication and discovered that women who exhibited rage were seen as less competent than males who expressed anger. Research on gender and communication suggests that males and females may be perceived differently when delivering apologies. Wei and Ran (2017) discovered that the type of corporate wrongdoing—whether the wrongdoing relates to performance or value—determines the relative effectiveness of corporate apologies made by males versus females, where females, considered to be warmer than males, were more successful in winning people over when they apologized for value-related problems. Conversely, when making amends for performance-related wrongdoings, which often indicate low-competence organizations, males—regarded as more competent than females—got greater consumer forgiveness. This pattern was corroborated by Cowen and Montgomery (2020), who found that apologies made by female CEOs (as opposed to male CEOs) had a beneficial impact because of the enhanced relevance of social norms. This effect is also diminished when the consumers are the same gender as the apologizer.

These findings highlight the importance of considering gender differences when crafting apologies. It has been proved that who and how to apologize are essential to brand crisis management and reputation restoration. Given the proven correlation between the role of the apologetic representative and the content of the apology (Hill & Boyd, 2015), it is relevant to include a study of the gender factor of the apologizer on this basis for further understanding. Brands need to understand the unique expectations of different genders to ensure their apologies are perceived as practical and sincere. Brands may benefit from the current research to better understand gender differences in apology perceptions and responses and incorporate these findings into their apology strategies.

Conceptual Framework and Hypotheses Development

According to the systematic study by Khamitov et al. (2020), different negative brand events are grouped at the level of different spheres of influence. For example, brand transgressions are placed at the micro level. In service failure and recovery studies, the focus tends to be on minor failures (one or a few people affected) and private reactions, but crisis communication studies are mainly concerned with public reactions to major, widely known failures that affect many people. Due to the widespread use of social media, the impact of a negative event that happens to a brand today is hardly constrained only to a few firsthand consumers but will quickly fester and expand its impact and become well-publicized. Thus, this study focuses on the macro level to investigate the general reactions of consumers on brand recovery efforts after a crisis, which refers to those unexpected events that threaten the expected profitability of a brand and thus erode consumer trust and brand equity (Dutta & Pullig, 2011).

The Interaction of Apologizer Characteristics and Apology Components

As mentioned above, as the spokesperson for the corporate facing a crisis, the personal characteristics of the apologizer have an impact on the effectiveness of the apology, but it is interesting to note that this impact often does not exist independently but acts in interactions with other factors to work on firm recovery and consumer forgiveness (e.g., Cowen & Montgomery, 2020; Walfisch et al., 2013). For example, in the study about the impact of apology source and apology components on consumer forgiveness, there was no main effect for apology components (Hill & Boyd, 2015), whereas this factor interacted with apology source. In the study of Cowen and Montgomery (2020), after a product failure, consumers' perceptions of a company and their propensity to purchase its products are influenced by the interaction of the CEO's gender and response type. More than that, researchers also found that gender, status, and validity of the apologizer interacted (Walfisch et al., 2013). Based on the previous summary and overview of current research in this domain, we can find that there is always an interaction between gender and status of the apologizer and other factors to affect the apology effectiveness and that single factors sometimes do not find significant main effects. Therefore, a reasonable research path is to interact the apologizer's characteristics (i.e., status, gender) with other factors, such as the apology component, to explore their joint effect on corporate apologies.

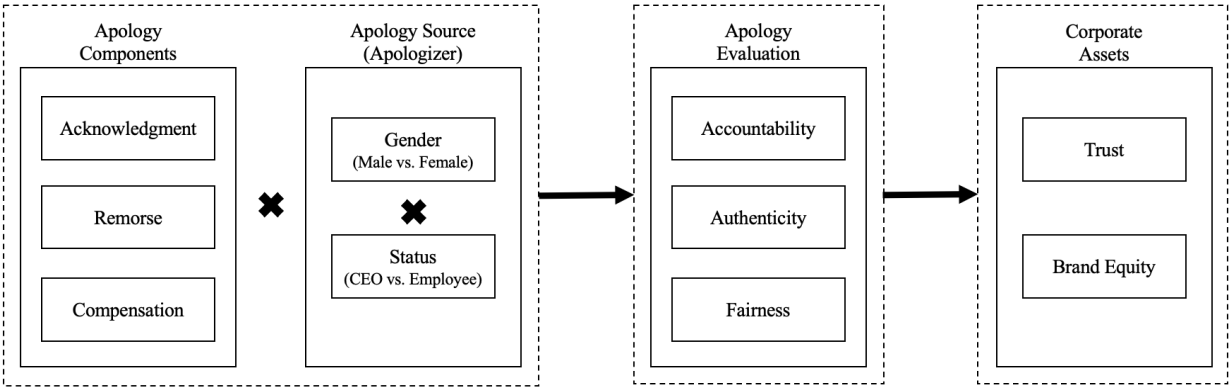
Apology Evaluation

In the conceptual framework for corporate apologies from the research of Shao et al. (2022), they concluded three dimensions of public apology evaluation that could mediate the relationship between apology elements (including content and spokesperson, which respectively refers to apology components and apology source in this study) and post-crisis corporate assets—trust and brand equity. Through their systematic study of corporate apology, Shao et al.

(2022) summarized the mechanisms of apology evaluation, i.e., authenticity, accountability, and fairness, which represent the extent to which the apology is perceived as sincere and genuine, the extent to which the corporate accepts blame and takes responsibility, and the extent to perceived distributive, procedural, and interactional fairness elicited by the apology, respectively. Firstly, researchers suggested building company authenticity and thus maximizing customer satisfaction by providing genuine apologies (Radu et al., 2019). A study of Airbnb customers also showed that perceived authenticity is positively related to repurchase intention and electronic word-of-mouth (Liang et al., 2018). Second, apology statement expressing active responsibility is more forgivable (Lee & Chung, 2012), as well as accepting blame, because when people suffer, they tend to retaliate and make wrongdoers feel the same harm (Tang & Gray, 2018). Compared to economic recovery, emotional recovery is more effective in eliciting customer empathy and forgiveness toward the corporate, and consumer empathy with the organization mediates the effectiveness of each recovery strategy (Wei et al., 2020). Thus, increasing consumer perceived accountability of the apology should positively affect trust and brand equity restoration after crises. Third, Apology demonstrates a greater sense of fairness (De Cremer & Schouten, 2008), which (perceived fairness) is a mediating factor between service recovery and consumer forgiveness (Wei et al., 2020), and all three types of fairness (distributive, procedural, and interactional) have a beneficial influence on overall satisfaction with service recovery among different cultural value orientation (Patterson et al., 2006).

Figure 1

Conceptual Framework



The conceptual framework suggests that apology components (i.e., acknowledgment, remorse, compensation) and apologizers' gender and status interactively affect post-crisis trust and brand equity, and that authenticity, accountability, and fairness mediate this interactive effect on post-crisis trust and brand equity.

Acknowledgment

Acknowledging a mistake sends a positive signal of responsibility to the affected consumer and conveys to the consumer that the mistake was an "isolated case" and will not happen again (Hill & Boyd, 2015). Along with Hill and Boyd (2015), the apology component contains acknowledgment, remorse, and compensation, which, together with the apology source, the CEO, or the employee who made the mistake, influenced the apology's effectiveness. While in their experiment, no source effect was found for the component of acknowledgment, however, acknowledging wrongdoings as a precursor to the effects of remorse and reparation (Hill & Boyd, 2015) and a necessary component of apology (Shao et al., 2022), the source effect of acknowledgment is expected to become significant when gender variables are introduced. As per Walfisch et al. (2013), there is less of an expectation of apologies from men and managers (versus women and employees), and this may increase the effectiveness of such apologies.

However, Cowen and Montgomery (2020) compared the efficacy of three apology strategies, accepting full responsibilities, stating sympathy without taking responsibility, and accepting only partial responsibilities. They found no differences in consumer perception when attributed to male CEOs, but consumers perceive apologies for accepting full responsibility as fairer and thus increasing their future purchase intention when attributed to female CEOs. When companies accept accountability for their mistakes, they create more favorable impressions, more trust, and increased purchase intentions (Blasio & Veale, 2009). Based on earlier evidence, I hypothesize that

H1a: If the apologizer is a CEO (but not when the apologizer is an employee), an apology conveying acknowledgment communicated by a female (vs. male) increases post-crisis trust and brand equity.

H1b: The interactive effect of apologizer status and gender in an acknowledgment apology on post-crisis trust and brand equity (H1a) is mediated by perceived accountability.

Expression of Remorse

Roschk and Kaiser (2013) identified three elements of apology in service failure and recovery context: empathy, intensity, and timing, which are influential for post-crisis satisfaction, and implied that empathy has the most substantial impact of the three. Strong emotions such as remorse that elicit the recipient's awareness and response could make empathy more inclined to occur, and those who have been offended are more inclined to feel empathy and sympathy for people they see as being similar to them (Hill & Boyd, 2015). Hill and Boyd (2015) proved that an apology from a remorseful employee generates more forgiveness than a remorseful CEO because being an "employee" also generates more empathy from the general

consumer. Moreover, apology satisfaction is higher when consumers feel that the wrongdoer is punished and expresses remorse (Tang & Gray, 2018). Also, customers sympathize with others more when they perceive they are warmer, making the apology more effective (Wei & Ran, 2019). As mentioned above, compared to males, female apologizers are perceived as warmer (Pillemer et al., 2014), a trait that encompasses sincerity, trustworthiness (Kervyn et al., 2012), and are able to evoke more empathy since a female (vs. a male) apologizer ought to be considered more moral and innocent, which could suggest that the business had not intended to commit such immoral acts. People's perception of the authenticity of an apology affects their propensity to forgive the apologizer subsequently, and when authenticity decreases, so does the willingness to forgive (Glikson & Asscher, 2023). Claeys and De Waele (2022) argued that the role of authenticity is critical in the practice of crisis communication, and it is an essential factor in how the public evaluates such socially mediated crisis communication attempts. Thus, I propose that

H2a: If the apologizer is an employee, an apology conveying remorse communicated by a female (vs. male) increases post-crisis trust and brand equity.

H2b: The interactive effect of apologizer status and gender in a remorse apology on post-crisis trust and brand equity (H2a) is mediated by perceived authenticity.

Compensation

An essential part of crisis management is trust reconstruction because trust is the basis for consumer loyalty to the brand, product acceptance, good corporate-consumer relationships (Bozic, 2017). A recovery strategy combining apology and compensation affects fairness (Mattila & Cranage, 2005), and can be more effective in recovering consumer trust (Cui et al., 2018), and that compensation as a concrete and substantial action can facilitate the process of

restoring trust. Implementing a compensating strategy indicates that the organization accepts responsibility for the crisis (Coombs, 2023; Kiambi & Shafer, 2016). In most situations, the group provides money or other presents to the victims as recompense (Kiambi & Shafer, 2016). When the apologizer is male, the apologizer and the company he represents may be perceived as more competent and capable of solving the practical problem and obtaining more consumer forgiveness than female apologizers (Wei & Ran, 2019). When expressing compensation, the CEO's apology is considered more effective because, compared to the employee's apology, the CEO's apology represents the corporate level and can improve the perceived justice of the recipient (Hill & Boyd, 2015). It is reasonable to suppose that the apology compensation offered by the CEO should also be considered more powerful and committed because the CEO is the company's decision-maker. The findings of Nikbin et al. (2010) indicated that distributive and interactional justice have a considerable impact on recovery satisfaction. To sum up, I hypothesize that

H3a: If the apologizer is a CEO, an apology conveying compensation communicated by a male (vs. female) increases post-crisis trust and brand equity.

H3b: The interactive effect of apologizer status and gender in a compensation apology on post-crisis trust and brand equity (H3a) is mediated by perceived fairness.

Method

To examine the relationship between apology components, apology source, post-crisis trust, and brand equity, and the mediating roles of perceived accountability, authenticity, and fairness, this research employed an online experiment involving a fictitious electricity brand ("VoltMax"). The experiment was based on a 3 (apology component: remorse, acknowledgement, compensation) × 2 (gender of apologizer: male, female) × 2 (status of apologizer: CEO, employee) between-participants design. The transgression scenario and

apology statements were adapted from the research of Hill and Boyd (2015). The apology manipulations are shown in Appendix 1.

Participants

558 participants were recruited from the Amazon Mechanical Turk platform with a remuneration of CAD 0.50. All participants provided informed consent prior to the research and were informed at the end of the study that the brand crises and news mentioned in the study were fictitious. Only participants who correctly answered manipulation check questions for gender and status of the apologizer were included in the analysis. The final sample size was 268 (42.2% female). The age of participants ranged from 18 to 68 years old, with a mean age of 34.04 (SD = 9.95).

Materials and Procedure

After consenting to their participation in the study, participants first read a fictitious news article entitled "VoltMax Power Outage Blamed on Distracted Employee". The article described that a distracted VoltMax engineer caused a power outage, leaving homes in darkness for three hours, which affected many consumers and caused severe economic damage for businesses. The full article is shown in Appendix 1. After exposure to the cover story, participants were asked to imagine that they were one of the people affected after arriving home from work, who could not cook their diner, missed their favorite TV program, and could not complete work that had be done that evening. Then, participants were randomly assigned to one of conditions in a 3 (apology component) × 2 (genders of apologizer) × 2 (status of apologizer) experimental design. The experimental manipulations consisted of a news article entitled "Representative of VoltMax Corporate to Apologize." The article described that the company held a public conference to apologize for the power outage. The article contained information regarding the type of apology

(i.e., acknowledgment, remorse, compensation), the status of the apologizer (i.e., CEO, employee) and the gender (i.e., male, female) of the apologizer. Appendix 2 provides full details.

After reading the news article regarding the apology, participants were asked to indicate perceived accountability, authenticity, or fairness, brand trust (adapted from Cui et al., 2018), and consumer-based brand equity (Yoo & Donthu, 2001). Participants completed control variables, manipulation checks, and provided demographic information.

Measures

The measures employed in this study are summarized in Table 1.

Table 1

Measures of Main Constructs

Construct	Reference	Scale items (5-point Likert)	Reliability
Perceived accountability	(Lewicki & Bunker, 1996, p. 131) (De Blasio & Veale, 2009)	The apologizer recognized and acknowledged the mistakes and did not try to cover them up. The apologizer admitted that the mistake had caused losses and inconvenience to consumers. The company admitted to being held accountable for this incident. The company accepted the blame for this incident. The company bears responsibility for this incident.	0.706
Perceived authenticity	(Glikson & Asscher, 2023), (Basford et al., 2014)	The apology sounded sincere. The CEO/employee was truly sorry for the problem caused to me. The apology was not just an attempt to protect the brand's reputation. The apology represents the apologizer's true feelings. His / Her remorse is authentic. The apologizer felt genuine remorse for the incident.	0.835
Perceived fairness	(Patterson et al., 2006)	The way compensation the apologizer offered was fair. I get what I deserved. The company showed adequate flexibility in dealing with the problem. The apologizer showed appropriate concern about the problem. The apologizer put the proper effort into resolving the problem. The apologizer's communications were appropriate.	0.832
Post-crisis trust	(Cui et al., 2018)	Generally speaking, I trust this company.	0.829

		Generally speaking, this company is dependable. Generally speaking, this company is reliable. I will use this brand when I need. I am willing to recommend this company to my relatives and friends.	
Consumer-based brand equity	(Yoo & Donthu, 2001)	It makes sense to use VoltMax instead of any other brand, even if they are the same. Even if another brand has the same features as VoltMax, I would prefer to use VoltMax. If there is another brand as good as VoltMax, I prefer to use VoltMax. If another brand is not different from VoltMax in any way, it seems smarter to purchase VoltMax.	0.843

All measures exceeded Cronbach's alpha of 0.70 and were found to be sufficiently reliable. According to Shao et al. (2022), the type of crisis, transgression severity, and consumer's prior perception of the brand are influential factors and should therefore be controlled for. The type of crisis was controlled for by presenting an identical transgression scenario in all conditions. Control measures ascertained that credibility (mean = 5.48, to 7, SD = 0.991) of the new story did not differ across conditions ($p = .252$). Transgression severity perceptions and brand familiarity were included in the analysis as they were significant covariates. Manipulation checks ensured that participants perceived the type of apology (i.e., apology components), gender of apologizer, and status of apologizer as intended. Table 2 summarizes the control measures and manipulation checks, as well as demographic variables measured.

Table 2

Control Variables and Manipulation Checks

Construct	Reference	Scale items	Scale anchors
Control variables			
Transgression severity	(Wei & Ran, 2019)	The issue that VoltMax Corporate apologized for is a major problem. The issue that VoltMax Corporate apologized for is significant. The issue that VoltMax Corporate apologized for is severe.	1 = definitely no, 7 = definitely yes
Brand familiarity	(Ha & Perks, 2005)	The brand gives me a feeling of goodwill. I am always aware of the brand. The brand has a good reputation. Using the brand makes me feel comfortable.	1 = strongly disagree, 5 = strongly agree
Manipulation checks			
Type of apology		Which kind of apology does the apologizer mainly express? Acknowledgment / remorse / compensation	yes / no
Gender of apologizer		The apologizer is …	male / female
Status of apologizer		The apologizer is …	CEO / employee
Credibility of news story		The news story was …	1 = unrealistic/not credible, 7 = realistic/credible
Demographic information			
Gender		What is your gender?	Female Male Other (specify) Prefer not to answer
Age		How old are you?	Age in years Prefer not to answer
Education		Which of the following best describes your highest level of education?	Some high school Completed high school Some college or university Apprenticeship training and trades Completed college or university

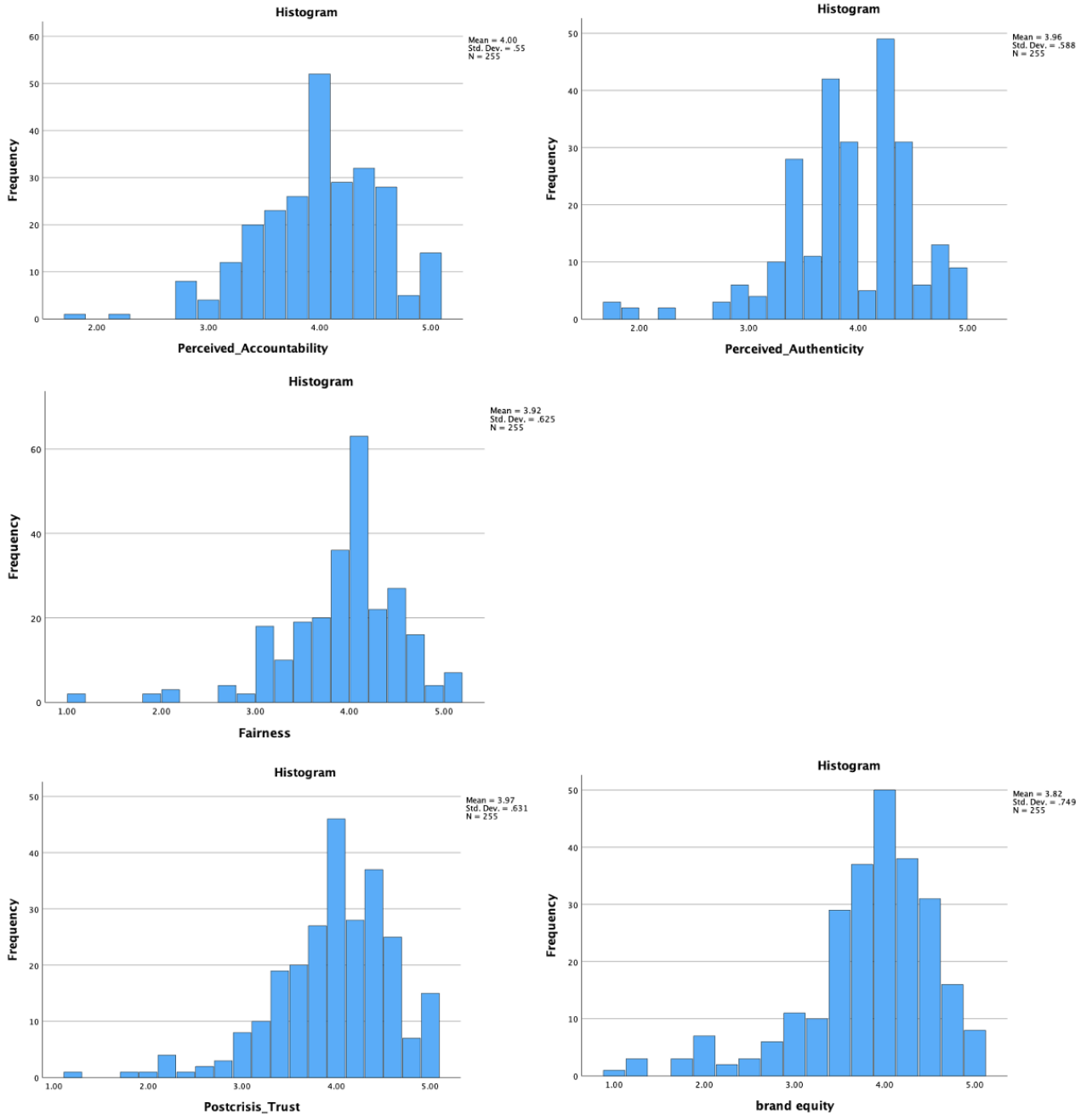
		Some graduate education Completed graduate education Professional degrees Prefer not to answer
Employment Status	Are you currently…?	Employed for wages Self-employed Out of work and looking for work Out of work but not currently looking for work A homemaker A student Military Retired Unable to work Prefer not to answer

Data Analysis and Results

Data exploration indicated that mediators and dependent variables were slightly left-skewed. Based on the test of normality and the robustness of the subsequent analysis (i.e., MANOVA) to violation of normality assumptions, use of non-transformed data was acceptable.

Figure 2

Histograms of mediators and dependent variables



Influential outliers, which are data points significantly deviate from the general pattern of the dataset and have a substantial impact on the statistical results, were detected in each condition. Taking into account the quality of the responses and the attentiveness of the

participants (only one third passed two manipulation checks), it is reasonable to assume that these influential outliers are likely to be unreliable. They were therefore removed from analysis, such that 255 responses remained.

Table 3

Conditions and Sample Size

Condition	n	n after removing influential outliers
Female CEO Acknowledgment	23	23
Female Employee Acknowledgment	21	19
Male CEO Acknowledgment	25	23
Male Employee Acknowledgment	21	20
Female CEO Remorse	21	21
Female Employee Remorse	21	20
Male CEO Remorse	25	23
Male Employee Remorse	24	23
Female CEO Compensation	21	20
Female Employee Compensation	20	19
Male CEO Compensation	24	24
Male Employee Compensation	22	20
Total	**268**	**255**

Correlation analyses showed that correlations between perceived accountability, authenticity and fairness, between post-crisis trust and brand equity, and between mediators and dependent variables, were significant ($p < .01$).

MANOVA

Multivariate analysis of variance (MANOVA) was conducted to examine the effects of apology components (i.e., acknowledgment, remorse, compensation), gender of apologizer (i.e., male or female), status of apologizer (i.e., CEO or employee) on mediators (i.e., perceived accountability, authenticity, fairness). Transgression severity and brand familiarity were controlled for in the analysis as covariates. Despite the brand being fictitious, participants seem to have drawn on their general knowledge of electricity supply brands, which resulted in the

familiarity covariate emerging as significant in the analysis. Participants might have associated the focal brand with existing brands or industry stereotypes, which could have triggered preconceived notions about how brands in this industry typically respond to crises, potentially affecting participants' perceptions and responses to the experimental manipulations. Bonferroni corrections were used to adjust the probability (p) values. No interactions were found between the independent variables to the three mediators (i.e., perceived authenticity, accountability, fairness).

Table 4

Tests of Between-Subjects Effects on Perceived Accountability, Authenticity, and Fairness

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Perceived Accountability	27.515[a]	13	2.117	10.358	<.001
	Perceived Authenticity	37.491[b]	13	2.884	13.848	<.001
	Fairness	42.882[c]	13	3.299	14.111	<.001
Intercept	Perceived Accountability	16.853	1	16.853	82.475	<.001
	Perceived Authenticity	10.797	1	10.797	51.844	<.001
	Fairness	7.332	1	7.332	31.368	<.001
Transgression Severity	Perceived Accountability	7.682	1	7.682	37.597	<.001
	Perceived Authenticity	4.271	1	4.271	20.511	<.001
	Fairness	3.171	1	3.171	13.567	<.001
Brand Familiarity	Perceived Accountability	3.884	1	3.884	19.007	<.001
	Perceived Authenticity	11.879	1	11.879	57.042	<.001
	Fairness	17.871	1	17.871	76.451	<.001
Apology Component	Perceived Accountability	.626	2	.313	1.531	.218
	Perceived Authenticity	.214	2	.107	.513	.599
	Fairness	.210	2	.105	.450	.638
Gender of Apologizer	Perceived Accountability	.002	1	.002	.009	.923
	Perceived Authenticity	.050	1	.050	.241	.624
	Fairness	.143	1	.143	.612	.435
Status of Apologizer	Perceived Accountability	.017	1	.017	.085	.771
	Perceived Authenticity	.119	1	.119	.570	.451
	Fairness	.039	1	.039	.165	.685
Apology Component * Gender of Apologizer	Perceived Accountability	.248	2	.124	.607	.546
	Perceived Authenticity	.719	2	.360	1.726	.180
	Fairness	.369	2	.184	.788	.456
Apology Component * Status of Apologizer	Perceived Accountability	.867	2	.434	2.123	.122
	Perceived Authenticity	.905	2	.453	2.173	.116
	Fairness	.109	2	.055	.234	.791
Gender of Apologizer * Status of Apologizer	Perceived Accountability	.145	1	.145	.708	.401
	Perceived Authenticity	.477	1	.477	2.292	.131
	Fairness	.197	1	.197	.841	.360
Apology Component * Gender of Apologizer * Status of Apologizer	Perceived Accountability	.326	2	.163	.798	.452
	Perceived Authenticity	.639	2	.319	1.534	.218
	Fairness	.713	2	.357	1.525	.220
Error	Perceived Accountability	49.245	241	.204		

	Perceived Authenticity	50.189	241	.208
	Fairness	56.335	241	.234
Total	Perceived Accountability	4155.160	255	
	Perceived Authenticity	4090.581	255	
	Fairness	4010.309	255	
Corrected Total	Perceived Accountability	76.760	254	
	Perceived Authenticity	87.680	254	
	Fairness	99.217	254	

a. R Squared = .358 (Adjusted R Squared = .324)

b. R Squared = .428 (Adjusted R Squared = .397)

c. R Squared = .432 (Adjusted R Squared = .402)

In the compensation condition, an employee apology was more effective than a CEO apology in increasing perceived authenticity (mean difference = 0.216, SE = 0.101, F (1, 253) = 4.525, p = .034).

Table 5

Pairwise Comparisons Between Status of Apologizer (by Apology Component)

Dependent Variable	Apology Component	(I) Status of Apologizer	(J) Status of Apologizer	Mean Difference (I-J)	Std. Error	Sig.[b]
Perceived Accountability	acknowledgment	CEO	employee	.064	.098	.518
		employee	CEO	-.064	.098	.518
	compensation	CEO	employee	-.185	.101	.066
		employee	CEO	.185	.101	.066
	remorse	CEO	employee	.072	.100	.476
		employee	CEO	-.072	.100	.476
Perceived Authenticity	acknowledgment	CEO	employee	.048	.099	.628
		employee	CEO	-.048	.099	.628
	compensation	CEO	employee	-.216*	.101	.034
		employee	CEO	.216*	.101	.034
	remorse	CEO	employee	.036	.101	.720
		employee	CEO	-.036	.101	.720
Fairness	acknowledgment	CEO	employee	-.032	.105	.761
		employee	CEO	.032	.105	.761
	compensation	CEO	employee	-.073	.108	.497
		employee	CEO	.073	.108	.497
	remorse	CEO	employee	.030	.107	.778
		employee	CEO	-.030	.107	.778

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

In the acknowledgment condition, an apology by a male (vs. female) CEO increased perceived authenticity (mean difference = 0.34, SE = 0.135, F (1, 253) = 6.362, p = .012).

Table 6

Pairwise Comparisons Between Status of Apologizer (by Component and Status of Apologizer)

Dependent Variable	Apology Component	Status of Apologizer	(I) Gender of Apologizer	(J) Gender of Apologizer	Mean Difference (I-J)	Std. Error	Sig.[b]
Perceived Accountability	acknowledgment	CEO	female	male	-.103	.134	.441
			male	female	.103	.134	.441
		employee	female	male	-.063	.145	.665
			male	female	.063	.145	.665
	compensation	CEO	female	male	.074	.137	.592
			male	female	-.074	.137	.592
		employee	female	male	.027	.145	.852
			male	female	-.027	.145	.852
	remorse	CEO	female	male	-.098	.137	.473
			male	female	.098	.137	.473
		employee	female	male	.197	.142	.167
			male	female	-.197	.142	.167
Perceived Authenticity	acknowledgment	CEO	female	male	-.340*	.135	.012
			male	female	.340*	.135	.012
		employee	female	male	-.016	.146	.912
			male	female	.016	.146	.912
	compensation	CEO	female	male	.120	.139	.387
			male	female	-.120	.139	.387
		employee	female	male	.008	.146	.959
			male	female	-.008	.146	.959
	remorse	CEO	female	male	-.127	.138	.359
			male	female	.127	.138	.359
		employee	female	male	.185	.143	.197
			male	female	-.185	.143	.197
Fairness	acknowledgment	CEO	female	male	-.230	.143	.109
			male	female	.230	.143	.109
		employee	female	male	-.052	.155	.737
			male	female	.052	.155	.737
	compensation	CEO	female	male	.041	.147	.780
			male	female	-.041	.147	.780
		employee	female	male	-.136	.155	.380

		male	female	.136	.155	.380
remorse	CEO	female	male	-.123	.146	.401
		male	female	.123	.146	.401
	employee	female	male	.213	.152	.162
		male	female	-.213	.152	.162

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Another MANOVA for the dependent variables (i.e., post-crisis trust and brand equity) was conducted to examine the effects of apology components (i.e., acknowledgment, remorse, compensation), gender of apologizer (i.e., male or female), status of apologizer (i.e., CEO or employee) on post-crisis trust and brand equity. No significant main or interaction effects emerged (all ps > .05). Overall, hypotheses 1a, 2a, and 3a were thus not supported.

Table 7

Tests of Between-Subjects Effects on Post-crisis Trust and Brand Equity

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Postcrisis Trust	59.065[a]	13	4.543	25.933	<.001
	Brand Equity	56.478[b]	13	4.344	12.160	<.001
Intercept	Postcrisis Trust	3.028	1	3.028	17.286	<.001
	Brand Equity	3.961	1	3.961	11.087	.001
Transgression Severity	Postcrisis Trust	3.422	1	3.422	19.533	<.001
	Brand Equity	1.526	1	1.526	4.271	.040
Brand Familiarity	Postcrisis Trust	27.813	1	27.813	158.747	<.001
	Brand Equity	28.196	1	28.196	78.917	<.001
Apology Component	Postcrisis Trust	.369	2	.184	1.052	.351
	Brand Equity	.323	2	.162	.452	.637
Gender of Apologizer	Postcrisis Trust	.451	1	.451	2.576	.110
	Brand Equity	.025	1	.025	.071	.791
Status of Apologizer	Postcrisis Trust	.421	1	.421	2.402	.122
	Brand Equity	.225	1	.225	.630	.428
Apology Component *	Postcrisis Trust	.595	2	.298	1.699	.185
Gender of Apologizer	Brand Equity	.565	2	.282	.791	.455
Apology Component *	Postcrisis Trust	.157	2	.079	.448	.639
Status of Apologizer	Brand Equity	.243	2	.122	.340	.712
Gender of Apologizer *	Postcrisis Trust	.115	1	.115	.657	.418
Status of Apologizer	Brand Equity	.023	1	.023	.065	.798
Apology Component *	Postcrisis Trust	.592	2	.296	1.689	.187
Gender of Apologizer * Status of Apologizer	Brand Equity	1.745	2	.872	2.442	.089
Error	Postcrisis Trust	42.223	241	.175		
	Brand Equity	86.106	241	.357		
Total	Postcrisis Trust	4125.480	255			
	Brand Equity	3872.438	255			
Corrected Total	Postcrisis Trust	101.288	254			
	Brand Equity	142.584	254			

a. R Squared = .583 (Adjusted R Squared = .561)

b. R Squared = .396 (Adjusted R Squared = .364)

Follow-up analyses show that in the acknowledgment condition, gender of the apologizer influenced post-crisis trust (mean differences: $Mean_{male} - Mean_{female} = 0.218$, SE = 0.091, F (1, 253) = 5.692, p = .018). Contrary to H1a, an apology conveying acknowledgment communicated by a male (vs. female) spokesperson increased post-crisis trust.

Table 8

Pairwise Comparisons Between Gender of Apologizer (by Apology Component)

Dependent Variable	Apology Component	(I) Gender of Apologizer	(J) Gender of Apologizer	Mean Difference (I-J)	Std. Error	Sig.[b]
Postcrisis Trust	acknowledgment	female	male	-.218*	.091	.018
		male	female	.218*	.091	.018
	compensation	female	male	.013	.093	.891
		male	female	-.013	.093	.891
	remorse	female	male	-.050	.091	.585
		male	female	.050	.091	.585
Brand Equity	acknowledgment	female	male	-.111	.130	.397
		male	female	.111	.130	.397
	compensation	female	male	.064	.132	.630
		male	female	-.064	.132	.630
	remorse	female	male	.107	.129	.408
		male	female	-.107	.129	.408

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 9

Univariate Tests of Gender of Apologizer (by Apology Component)

Dependent Variable	Apology Component		Sum of Squares	df	Mean Square	F	Sig.
Postcrisis Trust	acknowledgment	Contrast	.997	1	.997	5.692	.018
		Error	42.223	241	.175		
	compensation	Contrast	.003	1	.003	.019	.891
		Error	42.223	241	.175		
	remorse	Contrast	.053	1	.053	.300	.585
		Error	42.223	241	.175		
Brand Equity	acknowledgment	Contrast	.257	1	.257	.720	.397
		Error	86.106	241	.357		
	compensation	Contrast	.083	1	.083	.233	.630
		Error	86.106	241	.357		
	remorse	Contrast	.245	1	.245	.686	.408
		Error	86.106	241	.357		

Note. Each F tests the simple effects of gender of apologizer within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

For acknowledgements made by a CEO, gender had a significant effect on post-crisis trust ($Mean_{male} - Mean_{female} = 0.340$, SE = 0.124, F (1, 253) = 7.572, p = .006). When a male (vs. female) CEO acknowledged the brand crisis, more post-crisis consumer trust emerged. This result was contrary to H1a.

Table 10

Pairwise Comparisons Between Gender of Apologizer (by Component and Status of Apologizer)

Dependent Variable	Apology Component	Status of Apologizer	(I) Gender of Apologizer	(J) Gender of Apologizer	Mean Difference (I-J)	Std. Error	Sig.[b]
Postcrisis Trust	acknowledgment	CEO	female	male	-.340*	.124	.006
			male	female	.340*	.124	.006
		employee	female	male	-.096	.134	.477
			male	female	.096	.134	.477
	compensation	CEO	female	male	.107	.127	.399
			male	female	-.107	.127	.399
		employee	female	male	-.082	.134	.542
			male	female	.082	.134	.542
	remorse	CEO	female	male	-.151	.127	.235
			male	female	.151	.127	.235
		employee	female	male	.051	.131	.696
			male	female	-.051	.131	.696
Brand Equity	acknowledgment	CEO	female	male	-.342	.177	.054
			male	female	.342	.177	.054
		employee	female	male	.121	.192	.530
			male	female	-.121	.192	.530
	compensation	CEO	female	male	.241	.181	.186
			male	female	-.241	.181	.186
		employee	female	male	-.113	.192	.556
			male	female	.113	.192	.556
	remorse	CEO	female	male	.104	.181	.566
			male	female	-.104	.181	.566
		employee	female	male	.111	.188	.556
			male	female	-.111	.188	.556

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 11

Univariate Tests of Gender of Apologizer (by Component and Status of Apologizer)

Dependent Variable	Apology Component	Status of Apologizer		Sum of Squares	df	Mean Square	F	Sig.
Postcrisis Trust	acknowledgment	CEO	Contrast	1.327	1	1.327	7.572	.006
			Error	42.223	241	.175		
		employee	Contrast	.089	1	.089	.508	.477
			Error	42.223	241	.175		
	compensation	CEO	Contrast	.125	1	.125	.714	.399
			Error	42.223	241	.175		
		employee	Contrast	.065	1	.065	.373	.542
			Error	42.223	241	.175		
	remorse	CEO	Contrast	.248	1	.248	1.417	.235
			Error	42.223	241	.175		
		employee	Contrast	.027	1	.027	.153	.696
			Error	42.223	241	.175		
Brand Equity	acknowledgment	CEO	Contrast	1.342	1	1.342	3.757	.054
			Error	86.106	241	.357		
		employee	Contrast	.142	1	.142	.396	.530
			Error	86.106	241	.357		
	compensation	CEO	Contrast	.629	1	.629	1.759	.186
			Error	86.106	241	.357		
		employee	Contrast	.124	1	.124	.348	.556
			Error	86.106	241	.357		
	remorse	CEO	Contrast	.118	1	.118	.331	.566
			Error	86.106	241	.357		
		employee	Contrast	.124	1	.124	.348	.556
			Error	86.106	241	.357		

Each F tests the simple effects of Gender of Apologizer within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

Moderated Mediation

To estimate the direct and indirect effects of apology component on post-crisis trust and brand equity through the proposed parallel mediators (i.e., perceived accountability, authenticity, fairness), and the moderating effect of gender and status of apologizer, the moderated mediation

model 12 of Hayes Process Macro (Hayes, 2012) was used. Post-crisis trust and brand equity were the criteria (in two separate models), apology component was the predictor variable (coded as 1 = acknowledgment, 2 = remorse, 3 = compensation), parallel mediators M included accountability, authenticity and fairness, status of apologizer and gender of apologizer were the moderator variables, and transgression severity and brand familiarity were covariates. The conceptual model and statistical model are shown in figures 2 and 3 (Hayes, 2012).

Figure 3

Conceptual Model (PROCESS Model 12)

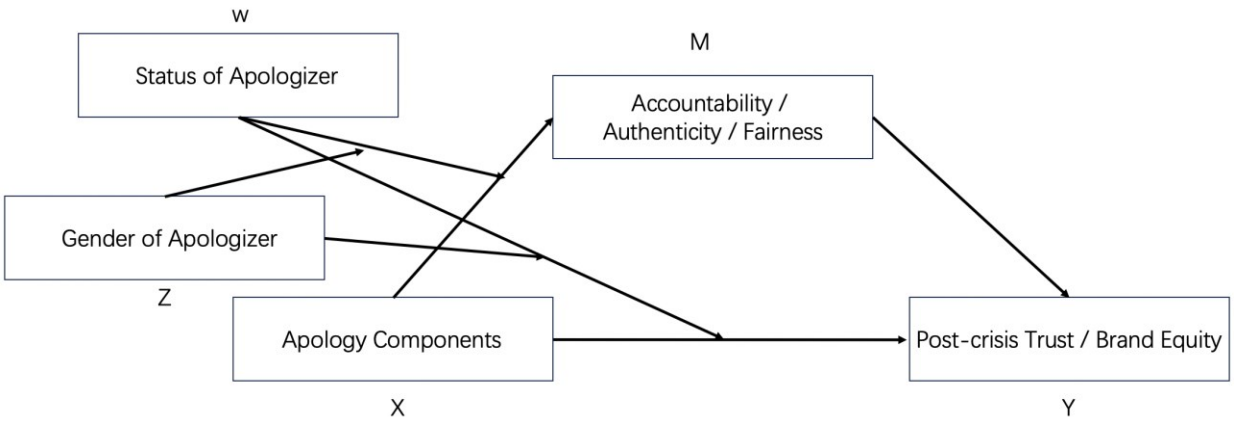
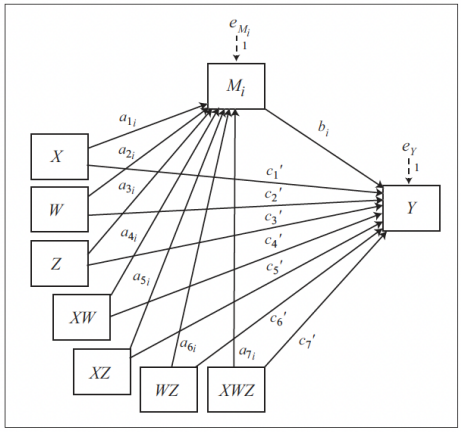


Figure 4

Statistical Model (PROCESS Model 12; Hayes, 2012)



Conditional indirect effect of X on Y through $M_i = (a_{1i} + a_{4i}W + a_{5i}Z + a_{7i}WZ)\,b_i$
Conditional direct effect of X on $Y = c_1' + c_4'W + c_5'Z + c_7'WZ$

Note: Model 12 allows up to 10 mediators operating in parallel.

The overall model for post-crisis trust was significant with $R^2 = 0.77$, $F(16, 238) = 49.71$, $p < .05$. However, no direct effect of apology components on post-crisis trust were detected, and the model showed only conditional moderated mediation through perceived authenticity by status of apologizer in male CEO compensation condition. For brand equity, the full model was also significant with $R^2 = 0.53$, $F(16, 238) = 16.62$, $p < .05$. Consistent with post-crisis trust, there were no direct effect of apology components on brand equity, and only in the male CEO compensation condition, the relationship between apology components and brand equity was mediated by perceived authenticity. Full details are shown in Appendix 3 and 4. Overall, the moderated mediation hypotheses H1b, H2b, and H3b were not supported.

Discussion

Summary and Conclusions

The research aimed to provide more insights into the corporate apology domain by investigating the interactive effects of "who" and "how" to apologize after a brand crisis and to offer both practical and theoretical contributions to the academic marketing literature. The research investigated how apology components (i.e., acknowledgment, remorse, compensation), gender (male or female) and status (CEO or employee) of the apologizer influence post-crisis trust and brand equity. It also explored the mediating mechanisms of perceived accountability, authenticity, and fairness in the relationship between apology components and post-crisis trust and brand equity. The empirical results showed that an apology conveying acknowledgment communicated by a male (vs. female) spokesperson increases post-crisis trust, especially when the spokesperson is the CEO. Apologies by a male (vs. female) CEO also increased perceived authenticity in acknowledgment conditions. As for compensation, an employee apology was more effective than a CEO apology on consumer-perceived authenticity. However, no main effect and interactions between apology components, gender of apologizer, and status of

apologizer were found. Moreover, no direct effect of apology components on post-crisis trust and brand equity were detected, and the model showed only conditional moderated mediation through perceived authenticity by status of apologizer in male CEO compensation condition.

Theoretical Contributions

Despite the lack of significant results, this study adds to the theoretical understanding of how apology sources and components may influence recovery following a brand crisis. Post-hoc comparison results suggest potential relationships between apology components, apology sources, and post-crisis outcomes. This provides valuable insights into the complexity of consumer responses to corporate apologies and highlights the need for further research to explore these relationships more comprehensively. Moreover, the study's exploration of the interactive effects of apology source and components contributes to a more nuanced understanding of the factors influencing post-crisis trust and brand equity. While the current findings deviate from previous findings (e.g., Hill & Boyd, 2015; Shao et al., 2022), they align with the notion that the interplay between apologizer attributes and components is complex and requires further investigation. By uncovering potential patterns in the data, the study offers initial evidence for future research to examine in more detail. This pertains particularly to the mechanisms by which the characteristics of the apologizer and apology components may jointly impact consumer perceptions and reactions to apologies. Furthermore, the study’s examination of the mediating roles of perceived accountability, authenticity, and fairness, as a preliminary exploration of the theoretical model proposed by Shao et al. (2022), could be the basis for investigations into their potential significance in the context of corporate apologies.

Managerial Contributions

From a managerial standpoint, although this research did not find a significant impact of status and gender of the apologizer on apology effectiveness, elements of the theoretical framework can still provide insights for managerial practice. Brand managers grappling with the aftermath of a brand crisis can benefit from understanding the potential influence of apology sources and apology components on brand trust and equity recovery. This understanding can serve as a guiding compass in the selection of an appropriate spokesperson for delivering the apology. By aligning the spokesperson's attributes with the target audience, brands can enhance the authenticity and credibility of the apology, potentially fostering more favorable consumer reactions and facilitating the restoration of brand image.

Furthermore, this study offers practical directions for brand managers who aim to craft effective apology strategies. Customizing apology messages in line with the identity of the apologizer, such as recognizing the impact of a male CEO, can potentially catalyze positive consumer responses and contribute to the process of brand equity restoration. Nonetheless, it's prudent to await further evidence that considers the combined effects of apology components and apologizer traits before drawing definitive conclusions. Despite the non-significant outcomes, this research encourages a proactive stance in fine-tuning apology strategies.

Limitations

Due to the lack of significant findings in support of the hypotheses, it is crucial to carefully examine the limitations and explore potential reasons for the observed results. Firstly, the results may have been negatively impacted by data quality. It was observed that only one-third of the participants passed the manipulation checks, indicating that successful manipulation of the independent variables (i.e., apology components, gender and status of apologizer) was

challenging. This could have diminished the statistical power of the study. Administering the manipulation checks at the end of the questionnaire might also have contributed to the high proportion of failed manipulation checks. The study design posed challenges in terms of participant recall of the apology context when they had answered a series of subsequent questions. These limitations highlighted the need for careful consideration and refinement of the experimental design in future research. For example, instead of the manipulation check questions at the end of the questionnaire, they could be presented following the experimental manipulations, although there is a risk of increased demand cues. Another direction for improvement is to improve the manipulations per se, for example, by using images and videos instead of text to reduce the cost of information acquisition and increase the likelihood of transmission of key information to participants.

Furthermore, an additional limitation might be attributed to the platform used for data collection, MTurk. It was possible that some workers might not have approached the questionnaire with sufficient attention and diligence, potentially affecting the quality of their responses. While direct proof of this assumption is not available, it is worth considering the potential impact of participant engagement and its implications on the study outcomes. Future research could explore alternative platforms or employ additional measures to enhance participant engagement and data quality, especially the study design with manipulations that would ask participants to read some text that the participants from MTurk may not pay attention to.

The sample size of the current research contains 255 participants and 12 different conditions, with cell sized of 19 to 24 in each condition. Although there appeared to be a pattern of mean differences among the groups, the sample size might not have been large enough to

yield statistically significant results at the .05 level; however, some results showed a very close probability value that was slightly larger than.05. Increasing the sample size in future studies may provide greater statistical power to detect significant effects.

It is also important to re-evaluate and analyze the independent variables in the study. First, the identification and manipulation of apology components were adapted from the study of Hill and Boyd (2015). However, in their study, there was no investigation of the effectiveness of manipulation on this variable. Furthermore, in the present study, a manipulation check of apology components revealed that most participants would consider apologies as expressing acknowledgment, even in remorse and compensation conditions. Regarding the concept of acknowledgment, it is essential to note that even when the scenario specified that the CEO or employee expressed remorse or offered compensation, they still acknowledged the occurrence of wrongdoing. This acknowledgment component might have influenced the results.

It was found through the data that a higher percentage of participants passed the manipulation check in the male and CEO apology conditions, which may indicate that people subconsciously default to the apologizer being male and CEO. This psychological expectation and stereotype may be one of the important reasons why the differences between groups do not hold.

Lastly, the complexity of the final model, which included three mediators, two moderators, and two dependent variables, could have posed challenges in achieving statistically significant results. Including multiple variables in the model might have increased the complexity and diminished the statistical power to detect significant effects. Future research may consider simplifying the model by focusing on specific variables or exploring alternative statistical approaches to address this issue.

Future Research

Future research directions could build upon the current study by addressing the abovementioned limitations. Exploring alternative experimental designs, such as incorporating real-world brand crises, may provide more ecologically valid findings. Additionally, employing different platforms for data collection and implementing strategies to enhance participant engagement and attention could help improve data quality. Furthermore, expanding the sample size to achieve greater statistical power would allow for more robust conclusions. Additionally, investigating the effects of different apology strategies, beyond the specific components examined in this study, could provide further insights into effective brand recovery after a crisis. In conclusion, this study did not yield significant findings, despite its strong grounding in previous research. It is important to consider the limitations and future research directions outlined above. Because this research failed to find significant differences across apology components and apologizer characteristics despite utilizing an adaptation of a previously validated experimental manipulation (Hill & Boyd, 2015), it also raises questions about the generalizability of previous studies. Thus, more replications are needed to establish generalizability and validity of findings in this domain and to identify potential boundary conditions. By addressing these limitations, future studies can contribute to a better understanding of the complexities surrounding corporate apologies, trust restoration, and brand equity in the aftermath of brand crises.

Reference

Aaker, J., Fournier, S., & Brasel, S. A. (2004). When good brands do bad. *Journal of Consumer Research*, *31*(1), 1–16. https://doi.org/10.1086/383419

Basford, T. E., Offermann, L. R., & Behrend, T. S. (2014). Please accept my sincerest apologies: Examining follower reactions to leader apology. *Journal of Business Ethics*, *119*(1), 99–117. https://doi.org/10.1007/s10551-012-1613-y

Bozic, B. (2017). Consumer trust repair: A critical literature review. *European Management Journal*, *35*(4), 538–547. https://doi.org/10.1016/j.emj.2017.02.007

Carrillat, F. A., d'Astous, A., & Christianis, H. (2014). Guilty by association: The perils of celebrity endorsement for endorsed brands and their direct competitors. *Psychology & Marketing*, *31*(11), 1024–1039. https://doi.org/10.1002/mar.20750

Claeys, A. S., & De Waele, A. (2022). The importance of authenticity in organizational crisis communication via social media. *Social Media and Crisis Communication*, 106-116.

Cleeren, K., van Heerde, H. J., & Dekimpe, M. G. (2013). Rising from the ashes: How brands and categories can overcome product-harm crises. *Journal of Marketing*, *77*(2), 58–77. https://doi.org/10.1509/jm.10.0414

CNN and Oscar Holland, CNN | Serenitie Wang, CNN, S. C. (2018). Dolce & Gabbana cancels China show amid "racist" ad controversy. CNN. (Pillemer et al., 2014)

Coombs, W. T. (2023). *Ongoing crisis communication: Planning, managing, and responding* (Sixth Edition). SAGE.

Cowen, A. P., & Montgomery, N. V. (2020). To be or not to be sorry? How CEO gender impacts the effectiveness of organizational apologies. *Journal of Applied Psychology*, *105*(2), 196–208. https://doi.org/10.1037/apl0000430

Cui, Y., Zhang, X., Peng, X., & Chu, J. (2018). How to use apology and compensation to repair competence-versus integrity-based trust violations in e-commerce. *Electronic Commerce Research and Applications*, *32*, 37–48. https://doi.org/10.1016/j.elerap.2018.11.001Dawar, N., & Lei, J. (2009). Brand crises: The roles of brand familiarity and crisis relevance in determining the impact on brand evaluations. *Journal of Business Research*, *62*(4), 509–516. https://doi.org/10.1016/j.jbusres.2008.02.001

Dawar, N., & Pillutla, M. M. (2000). Impact of product-harm crises on brand equity: The moderating role of consumer expectations. *Journal of Marketing Research*, *37*(2), 215–226. https://doi.org/10.1509/jmkr.37.2.215.18729

De Blasio, A., & Veale, R. (2009). Why say sorry? Influencing consumer perceptions post organizational crises. *Australasian Marketing Journal*, *17*(2), 75–83. https://doi.org/10.1016/j.ausmj.2009.05.007

De Cremer, D., & Schouten, B. C. (2008). When apologies for injustice matter: The role of respect. *European Psychologist*, *13*(4), 239–247. https://doi.org/10.1027/1016-9040.13.4.239

Dutta, S., & Pullig, C. (2011). Effectiveness of corporate responses to brand crises: The role of crisis type and response strategies. *Journal of Business Research*, *64*(12), 1281–1287. https://doi.org/10.1016/j.jbusres.2011.01.013

Eagly, A. H., & Wood, W. (2016). Social role theory of sex differences. In A. Wong, M. Wickramasinghe, R. Hoogland, & N. A. Naples (Eds.), *The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies* (pp. 1–3). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118663219.wbegss183

Frantz, C. M., & Bennigson, C. (2005). Better late than early: The influence of timing on apology effectiveness. *Journal of Experimental Social Psychology*, *41*(2), 201–207. https://doi.org/10.1016/j.jesp.2004.07.007

Glikson, E., & Asscher, O. (2023). AI-mediated apology in a multilingual work context: Implications for perceived authenticity and willingness to forgive. *Computers in Human Behavior*, *140*, 107592. https://doi.org/10.1016/j.chb.2022.107592

Greyser, S. A. (2009). Corporate brand reputation and brand crisis management. *Management Decision*, *47*(4), 590–602. https://doi.org/10.1108/00251740910959431

Ha, H.-Y., & Perks, H. (2005). Effects of consumer perceptions of brand experience on the web: Brand familiarity, satisfaction and brand trust. *Journal of Consumer Behaviour*, *4*(6), 438–452. https://doi.org/10.1002/cb.29

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling.Hill, K. M., & Boyd, D. P. (2015). Who should apologize when an employee transgresses? Source effects on apology effectiveness. *Journal of Business Ethics*, *130*(1), 163–170. https://doi.org/10.1007/s10551-014-2205-9

Hills, CNN, M. C. (2021). Three years after ad controversy, D&G is still struggling to win back China. CNN. https://www.cnn.com/style/article/dolce-gabbana-karen-mok-china/index.html

Holloway, B. B., & Beatty, S. E. (2003). Service failure in online retailing: A recovery opportunity. *Journal of Service Research*, *6*(1), 92–105. https://doi.org/10.1177/1094670503254288

Kann & Carusone (2022, November 22). In less than a month, Elon Musk has driven away half of Twitter's top 100 advertisers. Media Matters for America. https://www.mediamatters.org/elon-musk/less-month-elon-musk-has-driven-away-half-twitters-top-100-advertisers

Kapuściński, G., Zhang, N., Zeng, L., & Cao, A. (2021). Effects of crisis response tone and spokesperson's gender on employer attractiveness. *International Journal of Hospitality Management*, *94*, 102884. https://doi.org/10.1016/j.ijhm.2021.102884

Kellerman B. (2006). When should a leader apologize and when not? Harvard Business Review. 2006 Apr;84(4):72-81; 148. PMID: 16579415.

Kervyn, N., Fiske, S. T., & Malone, C. (2012). Brands as intentional agents framework: How perceived intentions and ability can map brand perception. *Journal of Consumer Psychology*, *22*(2), 166–176. https://doi.org/10.1016/j.jcps.2011.09.006

Khamitov, M., Grégoire, Y., & Suri, A. (2020). A systematic review of brand transgression, service failure recovery and product-harm crisis: Integration and guiding insights. *Journal of the Academy of Marketing Science*, *48*(3), 519–542. https://doi.org/10.1007/s11747-019-00679-1

Kiambi, D. M., & Shafer, A. (2016). Corporate crisis communication: Examining the interplay of reputation and crisis response strategies. *Mass Communication and Society*, *19*(2), 127–148. https://doi.org/10.1080/15205436.2015.1066013

Kim, Y., & Park, H. (2017). Is there still a PR problem online? Exploring the effects of different sources and crisis response strategies in online crisis communication via social media. *Corporate Reputation Review*, *20*(1), 76–104. https://doi.org/10.1057/s41299-017-0016-5

Koehn, D. (2013). Why saying "I'm sorry" isn't good enough: The ethics of corporate apologies. *Business Ethics Quarterly*, *23*(2), 239–268. https://doi.org/10.5840/beq201323216

Lee, S., & Chung, S. (2012). Corporate apology and crisis communication: The effect of responsibility admittance and sympathetic expression on public's anger relief. *Public Relations Review*, *38*(5), 932–934. https://doi.org/10.1016/j.pubrev.2012.08.006

Lewicki, R. J., & Bunker, B. B. (1996). Developing and maintaining trust in work relationships. *Trust in organizations: Frontiers of theory and research*, *114*, 139.

Li, M., & Wei, H. (2016). How to save brand after crises? A literature review on brand crisis management. *American Journal of Industrial and Business Management*, *06*(02), 89–96. https://doi.org/10.4236/ajibm.2016.62008

Liang, L. J., Choi, H. C., & Joppe, M. (2018). Understanding repurchase intention of Airbnb consumers: Perceived authenticity, electronic word-of-mouth, and price sensitivity. *Journal of Travel & Tourism Marketing*, *35*(1), 73–89. https://doi.org/10.1080/10548408.2016.1224750

Liao, H. (2007). Do it right this time: The role of employee service recovery performance in customer-perceived justice and customer loyalty after service failures. *Journal of Applied Psychology*, *92*(2), 475–489. https://doi.org/10.1037/0021-9010.92.2.475

Mattila, A. S., & Cranage, D. (2005). The impact of choice on fairness in the context of service recovery. *Journal of Services Marketing*, *19*(5), 271–279. https://doi.org/10.1108/08876040510609899

Mattila, A. S., Cho, W., & Ro, H. (2009). The joint effects of service failure mode, recovery effort, and gender on customers' post-recovery satisfaction. *Journal of Travel & Tourism Marketing*, *26*(2), 120–128. https://doi.org/10.1080/10548400902862002

Nikbin, D., Ismail, I., Marimuthu, M., & Jalalkamali, M. (2010). Perceived justice in service recovery and recovery satisfaction: The moderating role of corporate image. *International Journal of Marketing Studies*, 2(2), 47-56.

Pace, S., Balboni, B., & Gistri, G. (2017). The effects of social media on brand attitude and WOM during a brand crisis: Evidences from the Barilla case. *Journal of Marketing Communications*, *23*(2), 135–148. https://doi.org/10.1080/13527266.2014.966478

Patterson, P. G., Cowley, E., & Prasongsukarn, K. (2006). Service failure recovery: The moderating impact of individual-level cultural value orientation on perceptions of justice. *International Journal of Research in Marketing*, *23*(3), 263–277. https://doi.org/10.1016/j.ijresmar.2006.02.004

Pillemer, J., Graham, E. R., & Burke, D. M. (2014). The face says it all: CEOs, gender, and predicting corporate performance. *The Leadership Quarterly*, *25*(5), 855–864. https://doi.org/10.1016/j.leaqua.2014.07.002

Racine, M., Wilson, C., & Wynes, M. (2020). The value of apology: How do corporate apologies moderate the stock market reaction to non-financial corporate crises? *Journal of Business Ethics*, *163*(3), 485–505. https://doi.org/10.1007/s10551-018-4037-5

Radu, A. G., Arli, D., Surachartkumtonkun, J., Weaven, S., & Wright, O. (2019). Empathy and apology: The effectiveness of recovery strategies. *Marketing Intelligence & Planning*, *37*(4), 358–371. https://doi.org/10.1108/MIP-03-2018-0080

Ridgeway, C. L. (2001). Small-group interaction and gender. In *International Encyclopedia of the Social & Behavioral Sciences* (pp. 14185–14189). Elsevier. https://doi.org/10.1016/B0-08-043076-7/03999-1

Root, B. L., & Exline, J. J. (2011). Gender differences in response to experimental forgiveness prompts: Do men show stronger responses than women? *Basic and Applied Social Psychology*, *33*(2), 182–193. https://doi.org/10.1080/01973533.2011.568850

Roschk, H., & Kaiser, S. (2013). The nature of an apology: An experimental study on how to apologize after a service failure. *Marketing Letters*, *24*(3), 293–309. https://doi.org/10.1007/s11002-012-9218-x

Shao, W., Moffett, J. W., Quach, S., Surachartkumtonkun, J., Thaichon, P., Weaven, S. K., & Palmatier, R. W. (2022). Toward a theory of corporate apology: Mechanisms, contingencies, and strategies. *European Journal of Marketing*, *56*(12), 3418–3452. https://doi.org/10.1108/EJM-02-2021-0069

Srinivasan, R., & Sarial-Abi, G. (2021). When algorithms fail: Consumers' responses to brand harm crises caused by algorithm errors. *Journal of Marketing*, *85*(5), 74–91. https://doi.org/10.1177/0022242921997082

Tang, S., & Gray, K. (2018). CEOs imbue organizations with feelings, increasing punishment satisfaction and apology effectiveness. *Journal of Experimental Social Psychology*, *79*, 115–125. https://doi.org/10.1016/j.jesp.2018.06.002

ten Brinke, L., & Adams, G. S. (2015). Saving face? When emotion displays during public apologies mitigate damage to organizational performance. *Organizational Behavior and Human Decision Processes*, *130*, 1–12. https://doi.org/10.1016/j.obhdp.2015.05.003

Trump, R. K. (2014). Connected consumers' responses to negative brand actions: The roles of transgression self-relevance and domain. *Journal of Business Research*, *67*(9), 1824–1830. https://doi.org/10.1016/j.jbusres.2013.12.007

Trump, R. K., & Newman, K. P. (2017). When do unethical brand perceptions spill over to competitors? *Marketing Letters*, *28*(2), 219–230. https://doi.org/10.1007/s11002-016-9409-y

Tsarenko, Y., & Tojib, D. (2015). Consumers' forgiveness after brand transgression: The effect of the firm's corporate social responsibility and response. *Journal of Marketing Management*, *31*(17–18), 1851–1877. https://doi.org/10.1080/0267257X.2015.1069373

Verhoeven, J. W. M., Van Hoof, J. J., Ter Keurs, H., & Van Vuuren, M. (2012). Effects of apologies and crisis responsibility on corporate and spokesperson reputation. *Public Relations Review*, *38*(3), 501–504. https://doi.org/10.1016/j.pubrev.2012.02.002

Walfisch, T., Van Dijk, D., & Kark, R. (2013). Do you really expect me to apologize? The impact of status and gender on the effectiveness of an apology in the workplace: Impact of status and gender on apology effectiveness. *Journal of Applied Social Psychology*, *43*(7), 1446–1458. https://doi.org/10.1111/jasp.12101

Wei, C., Liu, M. W., & Keh, H. T. (2020). The road to consumer forgiveness is paved with money or apology? The roles of empathy and power in service recovery. *Journal of Business Research*, *118*, 321–334. https://doi.org/10.1016/j.jbusres.2020.06.061

Wei, H., & Ran, Y. (2019). Male versus female: How the gender of apologizers influences consumer forgiveness. *Journal of Business Ethics*, *154*(2), 371–387. https://doi.org/10.1007/s10551-017-3440-7

Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*, *52*(1), 1–14. https://doi.org/10.1016/S0148-2963(99)00098-3

Appendix 1
Brand Crisis Scenario

VoltMax Power Outage Blamed on Distracted Employee

June 13, the hot summer evening took an unexpected turn as homes experienced a disruptive power outage that lasted for three hours. Residents were left in the dark, missing their favorite TV programs, having to eat in dimly lit conditions, and unable to complete important work due the following day.

Investigations revealed that the outage was caused by a distracted engineer from VoltMax, the renowned electricity brand in North America. While overseeing electricity demand at a regional center, the engineer's attention was diverted by a captivating TV show. The resulting lapse in focus led to the widespread power disruption, specifically impacting households from 7 to 10 pm.

Appendix 2
Apology Manipulations

	On June 15, 2023, VoltMax Corporate held a public conference to respond to the recent power outage that caused widespread disruption and damage. The CEO of the company / the employee involved in the incident, James Anderson / Emily Johnson, attended the conference. He / she said …
CEO acknowledgment	The 3-hour outage you experienced was unacceptable and should not have happened. We deserve any criticism we receive. We know we failed yesterday.
Employee acknowledgment	The 3-hour outage you experienced was unacceptable and should not have happened. I deserve any criticism I receive. I know I failed yesterday.
CEO remorse	We are sorry and embarrassed. But most of all, we are deeply sorry. Words cannot express how truly sorry we are for the anxiety, frustration, and inconvenience that you experienced.
Employee remorse	I am very sorry and embarrassed. But most of all, I am deeply sorry. Words cannot express how truly sorry I am for the anxiety, frustration, and inconvenience that you experienced.
CEO compensation	We are committed to you, our valued customers, and are taking immediate corrective steps to regain your confidence in us. We have begun putting in place a comprehensive plan to provide better and more timely information to you, more tools and resources for our employees, and improved procedures for handling operational difficulties. Most importantly, in collaboration with our employees, we have posted the Customer Bill of Rights on our website—our official commitment to you of how we will handle operational interruptions going forward—including details of compensation.
Employee compensation	I and the company I work for are committed to you, our valued customers, and are taking immediate corrective steps to regain your confidence in us. We have begun putting in place a comprehensive plan to provide better and more timely information to you, more tools and resources for our employees, and improved procedures for handling operational difficulties. Most importantly, I, in collaboration with my supervisors, have posted the Customer Bill of Rights on our website—our official commitment to you of how we will handle operational interruptions going forward—including details of compensation.

Appendix 3
PROCESS Model Output for Post-crisis Trust

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 12
    Y  : trust
    X  : Compo
   M1  : account
   M2  : authen
   M3  : fairness
    W  : S_1C0E
    Z  : G_1M0F

Covariates:
 Severity BF

Sample
Size:  255

Coding of categorical X variable for analysis:
  Compo     X1     X2
  1.000   .000   .000
  2.000  1.000   .000
  3.000   .000  1.000

**************************************************************************
OUTCOME VARIABLE:
 account

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .5987      .3585      .2043    10.3580    13.0000   241.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.7862      .2349     7.6025      .0000     1.3234     2.2490
X1            .2326      .1450     1.6043      .1099     -.0530      .5181
X2            .1732      .1474     1.1750      .2411     -.1171      .4635
S_1C0E        .0437      .1401      .3116      .7556     -.2324      .3197
Int_1        -.1195      .1992     -.5996      .5493     -.5119      .2730
Int_2        -.2057      .2017    -1.0197      .3089     -.6031      .1917
G_1M0F        .0629      .1450      .4339      .6648     -.2227      .3486
Int_3        -.2595      .2020    -1.2847      .2001     -.6575      .1384
Int_4        -.0899      .2051     -.4385      .6614     -.4938      .3140
Int_5         .0401      .1969      .2038      .8387     -.3478      .4280
Int_6         .2546      .2796      .9105      .3635     -.2962      .8054
Int_7        -.0869      .2803     -.3099      .7569     -.6390      .4653
Severity      .2208      .0360     6.1317      .0000      .1499      .2917
BF            .2212      .0507     4.3597      .0000      .1213      .3212

Product terms key:
 Int_1    :        X1       x        S_1C0E
 Int_2    :        X2       x        S_1C0E
 Int_3    :        X1       x        G_1M0F
 Int_4    :        X2       x        G_1M0F
```

```
 Int_5    :        S_1C0E   x        G_1M0F
 Int_6    :        X1       x        S_1C0E   x        G_1M0F
 Int_7    :        X2       x        S_1C0E   x        G_1M0F

Test(s) of highest order unconditional interaction(s):
        R2-chng          F        df1        df2          p
X*W*Z      .0042      .7975     2.0000   241.0000      .4516

**************************************************************************
OUTCOME VARIABLE:
 authen

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6539      .4276      .2083    13.8482    13.0000   241.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    1.4364      .2372     6.0562      .0000      .9692     1.9037
X1           .1710      .1463     1.1682      .2439     -.1173      .4592
X2           .2031      .1488     1.3648      .1736     -.0900      .4962
S_1C0E      -.1137      .1415     -.8038      .4223     -.3924      .1650
Int_1       -.0059      .2011     -.0293      .9766     -.4021      .3903
Int_2       -.0459      .2037     -.2252      .8220     -.4470      .3553
G_1M0F       .0162      .1464      .1106      .9120     -.2722      .3046
Int_3       -.2015      .2039     -.9878      .3242     -.6032      .2003
Int_4       -.0237      .2070     -.1145      .9090     -.4315      .3841
Int_5        .3238      .1988     1.6289      .1046     -.0678      .7154
Int_6       -.0118      .2823     -.0418      .9667     -.5678      .5442
Int_7       -.4364      .2830    -1.5421      .1244     -.9938      .1210
Severity     .1646      .0363     4.5289      .0000      .0930      .2362
BF           .3869      .0512     7.5526      .0000      .2860      .4878

Product terms key:
 Int_1    :        X1       x        S_1C0E
 Int_2    :        X2       x        S_1C0E
 Int_3    :        X1       x        G_1M0F
 Int_4    :        X2       x        G_1M0F
 Int_5    :        S_1C0E   x        G_1M0F
 Int_6    :        X1       x        S_1C0E   x        G_1M0F
 Int_7    :        X2       x        S_1C0E   x        G_1M0F

Test(s) of highest order unconditional interaction(s):
        R2-chng          F        df1        df2          p
X*W*Z      .0073     1.5337     2.0000   241.0000      .2178

**************************************************************************
OUTCOME VARIABLE:
 fairness

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6574      .4322      .2338    14.1112    13.0000   241.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    1.2037      .2513     4.7900      .0000      .7087     1.6987
X1           .1230      .1550      .7935      .4283     -.1824      .4284
X2           .0482      .1576      .3060      .7599     -.2623      .3588
S_1C0E      -.1208      .1499     -.8057      .4212     -.4161      .1745
Int_1       -.0169      .2131     -.0795      .9367     -.4367      .4028
Int_2        .1364      .2158      .6322      .5279     -.2886      .5614
G_1M0F       .0523      .1551      .3369      .7365     -.2533      .3578
```

```
Int_3        -.2652      .2161    -1.2276      .2208     -.6908      .1604
Int_4         .0841      .2193      .3834      .7018     -.3479      .5161
Int_5         .1773      .2106      .8419      .4007     -.2376      .5922
Int_6         .1587      .2991      .5306      .5962     -.4304      .7478
Int_7        -.3548      .2998    -1.1834      .2378     -.9453      .2358
Severity      .1418      .0385     3.6833      .0003      .0660      .2177
BF            .4745      .0543     8.7436      .0000      .3676      .5815

Product terms key:
 Int_1    :        X1       x        S_1C0E
 Int_2    :        X2       x        S_1C0E
 Int_3    :        X1       x        G_1M0F
 Int_4    :        X2       x        G_1M0F
 Int_5    :        S_1C0E   x        G_1M0F
 Int_6    :        X1       x        S_1C0E   x        G_1M0F
 Int_7    :        X2       x        S_1C0E   x        G_1M0F

Test(s) of highest order unconditional interaction(s):
         R2-chng          F        df1        df2          p
X*W*Z      .0072     1.5255     2.0000   241.0000      .2196

*************************************************************************
OUTCOME VARIABLE:
 trust

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .8773      .7697      .0980    49.7106    16.0000   238.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -.1273      .1830     -.6958      .4872     -.4879      .2332
X1            .1286      .1010     1.2735      .2041     -.0703      .3274
X2           -.0129      .1026     -.1261      .8998     -.2151      .1892
account      -.0973      .0541    -1.7992      .0732     -.2039      .0092
authen        .3347      .0591     5.6655      .0000      .2183      .4511
fairness      .3891      .0504     7.7194      .0000      .2898      .4884
S_1C0E        .0716      .0974      .7344      .4634     -.1204      .2635
Int_1        -.0741      .1381     -.5367      .5920     -.3463      .1980
Int_2         .1854      .1404     1.3206      .1879     -.0912      .4620
G_1M0F        .0761      .1005      .7572      .4497     -.1219      .2741
Int_3        -.0016      .1406     -.0117      .9907     -.2786      .2753
Int_4        -.0472      .1422     -.3322      .7400     -.3273      .2329
Int_5         .0710      .1373      .5170      .6056     -.1995      .3415
Int_6        -.0756      .1943     -.3892      .6975     -.4583      .3071
Int_7        -.1583      .1954     -.8101      .4187     -.5431      .2266
Severity      .0585      .0269     2.1731      .0308      .0055      .1116
BF            .2994      .0410     7.2976      .0000      .2186      .3802

Product terms key:
 Int_1    :        X1       x        S_1C0E
 Int_2    :        X2       x        S_1C0E
 Int_3    :        X1       x        G_1M0F
 Int_4    :        X2       x        G_1M0F
 Int_5    :        S_1C0E   x        G_1M0F
 Int_6    :        X1       x        S_1C0E   x        G_1M0F
 Int_7    :        X2       x        S_1C0E   x        G_1M0F

Test(s) of highest order unconditional interaction(s):
         R2-chng          F        df1        df2          p
X*W*Z      .0006      .3282     2.0000   238.0000      .7205
```

```
****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Relative conditional direct effects of X on Y
      S_1C0E     G_1M0F     Effect         se          t          p       LLCI
ULCI
X1      .0000      .0000      .1286      .1010     1.2735      .2041
-.0703      .3274
X1      .0000     1.0000      .1269      .0985     1.2890      .1986
-.0670      .3209
X1     1.0000      .0000      .0544      .0949      .5737      .5667
-.1325      .2413
X1     1.0000     1.0000     -.0228      .0932     -.2451      .8066
-.2063      .1607
X2      .0000      .0000     -.0129      .1026     -.1261      .8998
-.2151      .1892
X2      .0000     1.0000     -.0602      .0994     -.6051      .5457
-.2561      .1357
X2     1.0000      .0000      .1725      .0967     1.7840      .0757
-.0180      .3629
X2     1.0000     1.0000     -.0330      .0930     -.3553      .7227
-.2162      .1502

Relative conditional indirect effects of X on Y:

INDIRECT EFFECT:
 Compo       ->    account     ->    trust

      S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X1      .0000      .0000     -.0226      .0250     -.0812      .0170
X1      .0000     1.0000      .0026      .0243     -.0286      .0736
X1     1.0000      .0000     -.0110      .0256     -.0802      .0236
X1     1.0000     1.0000     -.0105      .0153     -.0496      .0108

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
     -.0248      .0427     -.1367      .0352

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000      .0116      .0283     -.0510      .0700
     1.0000     -.0131      .0320     -.1081      .0192

      S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X2      .0000      .0000     -.0169      .0199     -.0640      .0137
X2      .0000     1.0000     -.0081      .0191     -.0472      .0350
X2     1.0000      .0000      .0032      .0190     -.0416      .0408
X2     1.0000     1.0000      .0204      .0225     -.0149      .0724

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
      .0085      .0330     -.0564      .0840

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000      .0200      .0276     -.0295      .0825
     1.0000      .0285      .0307     -.0280      .0949

INDIRECT EFFECT:
 Compo       ->    authen      ->    trust

      S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X1      .0000      .0000      .0572      .0503     -.0312      .1657
X1      .0000     1.0000     -.0102      .0595     -.1379      .1032
```

```
X1     1.0000      .0000      .0553      .0541     -.0432      .1727
X1     1.0000     1.0000     -.0161      .0315     -.0832      .0432

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
     -.0040      .0923     -.1806      .1892

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000     -.0020      .0687     -.1392      .1360
     1.0000     -.0059      .0673     -.1386      .1355

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X2      .0000      .0000      .0680      .0401     -.0024      .1536
X2      .0000     1.0000      .0600      .0453     -.0312      .1522
X2     1.0000      .0000      .0526      .0551     -.0518      .1727
X2     1.0000     1.0000     -.1014      .0523     -.2134     -.0145

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
     -.1461      .0913     -.3387      .0179

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000     -.0154      .0660     -.1514      .1130
     1.0000     -.1614      .0725     -.3122     -.0311

INDIRECT EFFECT:
 Compo       ->    fairness    ->    trust

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X1      .0000      .0000      .0479      .0487     -.0420      .1507
X1      .0000     1.0000     -.0553      .0821     -.2273      .1023
X1     1.0000      .0000      .0413      .0659     -.0722      .1948
X1     1.0000     1.0000     -.0002      .0490     -.1061      .0937

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
      .0617      .1191     -.1866      .2859

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000     -.0066      .0778     -.1531      .1610
     1.0000      .0551      .0956     -.1348      .2463

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X2      .0000      .0000      .0188      .0467     -.0736      .1109
X2      .0000     1.0000      .0515      .0658     -.0785      .1782
X2     1.0000      .0000      .0718      .0587     -.0194      .2129
X2     1.0000     1.0000     -.0335      .0434     -.1209      .0509

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
     -.1380      .1110     -.3891      .0459

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000      .0531      .0735     -.0666      .2173
     1.0000     -.0850      .0767     -.2422      .0606

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
```

```
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Appendix 4
PROCESS Model Output for Brand Equity

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 12
    Y  : BE
    X  : Compo
   M1  : account
   M2  : authen
   M3  : fairness
    W  : S_1C0E
    Z  : G_1M0F

Covariates:
 Severity BF

Sample
Size:  255

Coding of categorical X variable for analysis:
  Compo     X1     X2
  1.000   .000   .000
  2.000  1.000   .000
  3.000   .000  1.000

**************************************************************************
OUTCOME VARIABLE:
 account

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .5987      .3585      .2043    10.3580    13.0000   241.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.7862      .2349     7.6025      .0000     1.3234     2.2490
X1            .2326      .1450     1.6043      .1099     -.0530      .5181
X2            .1732      .1474     1.1750      .2411     -.1171      .4635
S_1C0E        .0437      .1401      .3116      .7556     -.2324      .3197
Int_1        -.1195      .1992     -.5996      .5493     -.5119      .2730
Int_2        -.2057      .2017    -1.0197      .3089     -.6031      .1917
G_1M0F        .0629      .1450      .4339      .6648     -.2227      .3486
Int_3        -.2595      .2020    -1.2847      .2001     -.6575      .1384
Int_4        -.0899      .2051     -.4385      .6614     -.4938      .3140
Int_5         .0401      .1969      .2038      .8387     -.3478      .4280
Int_6         .2546      .2796      .9105      .3635     -.2962      .8054
Int_7        -.0869      .2803     -.3099      .7569     -.6390      .4653
Severity      .2208      .0360     6.1317      .0000      .1499      .2917
BF            .2212      .0507     4.3597      .0000      .1213      .3212

Product terms key:
 Int_1    :        X1       x        S_1C0E
 Int_2    :        X2       x        S_1C0E
 Int_3    :        X1       x        G_1M0F
 Int_4    :        X2       x        G_1M0F
 Int_5    :        S_1C0E   x        G_1M0F
```

```
 Int_6    :        X1       x        S_1C0E   x        G_1M0F
 Int_7    :        X2       x        S_1C0E   x        G_1M0F

Test(s) of highest order unconditional interaction(s):
        R2-chng          F        df1        df2          p
X*W*Z      .0042      .7975     2.0000   241.0000      .4516

**************************************************************************
OUTCOME VARIABLE:
 authen

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6539      .4276      .2083    13.8482    13.0000   241.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.4364      .2372     6.0562      .0000      .9692     1.9037
X1            .1710      .1463     1.1682      .2439     -.1173      .4592
X2            .2031      .1488     1.3648      .1736     -.0900      .4962
S_1C0E       -.1137      .1415     -.8038      .4223     -.3924      .1650
Int_1        -.0059      .2011     -.0293      .9766     -.4021      .3903
Int_2        -.0459      .2037     -.2252      .8220     -.4470      .3553
G_1M0F        .0162      .1464      .1106      .9120     -.2722      .3046
Int_3        -.2015      .2039     -.9878      .3242     -.6032      .2003
Int_4        -.0237      .2070     -.1145      .9090     -.4315      .3841
Int_5         .3238      .1988     1.6289      .1046     -.0678      .7154
Int_6        -.0118      .2823     -.0418      .9667     -.5678      .5442
Int_7        -.4364      .2830    -1.5421      .1244     -.9938      .1210
Severity      .1646      .0363     4.5289      .0000      .0930      .2362
BF            .3869      .0512     7.5526      .0000      .2860      .4878

Product terms key:
 Int_1    :        X1       x        S_1C0E
 Int_2    :        X2       x        S_1C0E
 Int_3    :        X1       x        G_1M0F
 Int_4    :        X2       x        G_1M0F
 Int_5    :        S_1C0E   x        G_1M0F
 Int_6    :        X1       x        S_1C0E   x        G_1M0F
 Int_7    :        X2       x        S_1C0E   x        G_1M0F

Test(s) of highest order unconditional interaction(s):
        R2-chng          F        df1        df2          p
X*W*Z      .0073     1.5337     2.0000   241.0000      .2178

**************************************************************************
OUTCOME VARIABLE:
 fairness

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6574      .4322      .2338    14.1112    13.0000   241.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.2037      .2513     4.7900      .0000      .7087     1.6987
X1            .1230      .1550      .7935      .4283     -.1824      .4284
X2            .0482      .1576      .3060      .7599     -.2623      .3588
S_1C0E       -.1208      .1499     -.8057      .4212     -.4161      .1745
Int_1        -.0169      .2131     -.0795      .9367     -.4367      .4028
Int_2         .1364      .2158      .6322      .5279     -.2886      .5614
G_1M0F        .0523      .1551      .3369      .7365     -.2533      .3578
Int_3        -.2652      .2161    -1.2276      .2208     -.6908      .1604
```

```
Int_4         .0841      .2193      .3834      .7018     -.3479      .5161
Int_5         .1773      .2106      .8419      .4007     -.2376      .5922
Int_6         .1587      .2991      .5306      .5962     -.4304      .7478
Int_7        -.3548      .2998    -1.1834      .2378     -.9453      .2358
Severity      .1418      .0385     3.6833      .0003      .0660      .2177
BF            .4745      .0543     8.7436      .0000      .3676      .5815

Product terms key:
 Int_1    :        X1       x        S_1C0E
 Int_2    :        X2       x        S_1C0E
 Int_3    :        X1       x        G_1M0F
 Int_4    :        X2       x        G_1M0F
 Int_5    :        S_1C0E   x        G_1M0F
 Int_6    :        X1       x        S_1C0E   x        G_1M0F
 Int_7    :        X2       x        S_1C0E   x        G_1M0F

Test(s) of highest order unconditional interaction(s):
         R2-chng          F        df1        df2          p
X*W*Z      .0072     1.5255     2.0000   241.0000      .2196

*************************************************************************
OUTCOME VARIABLE:
 BE

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .7264      .5277      .2830    16.6186    16.0000   238.0000      .0000

Model
             coeff         se          t          p       LLCI       ULCI
constant      .3723      .3110     1.1973      .2324     -.2403      .9849
X1           -.0481      .1715     -.2802      .7796     -.3860      .2899
X2           -.2066      .1743    -1.1854      .2370     -.5501      .1368
account      -.2255      .0919    -2.4535      .0149     -.4065     -.0444
authen        .3111      .1004     3.0994      .0022      .1134      .5089
fairness      .4475      .0856     5.2250      .0000      .2788      .6162
S_1C0E       -.1597      .1655     -.9650      .3355     -.4858      .1664
Int_1         .3504      .2347     1.4929      .1368     -.1120      .8127
Int_2         .4389      .2385     1.8401      .0670     -.0310      .9088
G_1M0F       -.1350      .1708     -.7905      .4300     -.4714      .2014
Int_3         .1331      .2388      .5571      .5780     -.3374      .6035
Int_4         .1834      .2416      .7590      .4486     -.2926      .6593
Int_5         .2919      .2333     1.2511      .2121     -.1677      .7516
Int_6        -.4663      .3301    -1.4126      .1591    -1.1165      .1840
Int_7        -.5419      .3319    -1.6325      .1039    -1.1957      .1120
Severity      .0335      .0458      .7316      .4651     -.0567      .1236
BF            .3132      .0697     4.4937      .0000      .1759      .4505

Product terms key:
 Int_1    :        X1       x        S_1C0E
 Int_2    :        X2       x        S_1C0E
 Int_3    :        X1       x        G_1M0F
 Int_4    :        X2       x        G_1M0F
 Int_5    :        S_1C0E   x        G_1M0F
 Int_6    :        X1       x        S_1C0E   x        G_1M0F
 Int_7    :        X2       x        S_1C0E   x        G_1M0F

Test(s) of highest order unconditional interaction(s):
         R2-chng          F        df1        df2          p
X*W*Z      .0063     1.5770     2.0000   238.0000      .2088


****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************
```

```
Relative conditional direct effects of X on Y
       S_1C0E     G_1M0F     Effect         se          t          p       LLCI
ULCI
X1      .0000      .0000     -.0481      .1715     -.2802      .7796
-.3860      .2899
X1      .0000     1.0000      .0850      .1673      .5081      .6119
-.2446      .4146
X1     1.0000      .0000      .3023      .1612     1.8756      .0619
-.0152      .6199
X1     1.0000     1.0000     -.0309      .1583     -.1952      .8454
-.3427      .2809
X2      .0000      .0000     -.2066      .1743    -1.1854      .2370
-.5501      .1368
X2      .0000     1.0000     -.0233      .1690     -.1379      .8905
-.3562      .3096
X2     1.0000      .0000      .2323      .1642     1.4142      .1586
-.0913      .5558
X2     1.0000     1.0000     -.1262      .1580     -.7989      .4251
-.4375      .1850

Relative conditional indirect effects of X on Y:

INDIRECT EFFECT:
 Compo       ->    account     ->    BE

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X1      .0000      .0000     -.0524      .0442     -.1545      .0160
X1      .0000     1.0000      .0061      .0450     -.0741      .1143
X1     1.0000      .0000     -.0255      .0419     -.1043      .0676
X1     1.0000     1.0000     -.0244      .0267     -.0851      .0203

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
     -.0574      .0836     -.2726      .0587

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000      .0269      .0595     -.0665      .1786
     1.0000     -.0305      .0561     -.1723      .0567

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X2      .0000      .0000     -.0391      .0355     -.1203      .0143
X2      .0000     1.0000     -.0188      .0356     -.0860      .0672
X2     1.0000      .0000      .0073      .0382     -.0634      .0986
X2     1.0000     1.0000      .0472      .0385     -.0128      .1365

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
      .0196      .0640     -.1312      .1390

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000      .0464      .0572     -.0378      .1839
     1.0000      .0660      .0529     -.0355      .1737

INDIRECT EFFECT:
 Compo       ->    authen      ->    BE

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X1      .0000      .0000      .0532      .0501     -.0268      .1712
X1      .0000     1.0000     -.0095      .0585     -.1413      .0985
X1     1.0000      .0000      .0514      .0594     -.0346      .2002
```

```
X1     1.0000     1.0000     -.0150      .0308     -.0840      .0425

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
     -.0037      .0922     -.1971      .1793

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000     -.0018      .0697     -.1292      .1569
     1.0000     -.0055      .0653     -.1321      .1407

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X2      .0000      .0000      .0632      .0404     -.0006      .1567
X2      .0000     1.0000      .0558      .0490     -.0244      .1701
X2     1.0000      .0000      .0489      .0595     -.0371      .2011
X2     1.0000     1.0000     -.0942      .0577     -.2274     -.0078

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
     -.1358      .1066     -.3976      .0108

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000     -.0143      .0641     -.1279      .1357
     1.0000     -.1500      .0841     -.3411     -.0200

INDIRECT EFFECT:
 Compo       ->    fairness    ->    BE

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X1      .0000      .0000      .0551      .0564     -.0512      .1753
X1      .0000     1.0000     -.0636      .0951     -.2681      .1128
X1     1.0000      .0000      .0475      .0753     -.0752      .2224
X1     1.0000     1.0000     -.0002      .0569     -.1196      .1133

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
      .0710      .1387     -.2209      .3442

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000     -.0076      .0895     -.1683      .1911
     1.0000      .0634      .1109     -.1494      .3023

       S_1C0E     G_1M0F     Effect     BootSE   BootLLCI   BootULCI
X2      .0000      .0000      .0216      .0552     -.0833      .1351
X2      .0000     1.0000      .0592      .0778     -.0781      .2320
X2     1.0000      .0000      .0826      .0656     -.0187      .2363
X2     1.0000     1.0000     -.0385      .0502     -.1425      .0606

      Index of moderated moderated mediation
      Index     BootSE   BootLLCI   BootULCI
     -.1588      .1303     -.4578      .0526

      Indices of conditional moderated mediation by W
     G_1M0F      Index     BootSE   BootLLCI   BootULCI
      .0000      .0610      .0838     -.0832      .2483
     1.0000     -.0977      .0924     -.3052      .0599

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000
```

```
Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```