

Systemic Attribution Explanation for Negative Crisis Spillover

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Abstract

The purpose of this study is to explain the process of negative spillover effects of organizational crisis within the same industry. Previous research explains the spillover effects of organizational crises primarily through the lens of organizational similarity, yet it overlooks how similarity can lead to both positive and negative spillover effects, failing to account for a specific directional impact. Addressing this gap, the current research proposes systemic attribution as a driving factor of *negative spillover* and investigates its effects through two experiments, each conducted in integrity and capability crisis context. Additionally, drawing on two elements of attribution theory, consistency and consensus, this study examined the effects of prior crisis history of the crisis-stricken organization and crisis prevalence within the industry on systemic attribution and subsequent negative spillover. The findings indicate that systemic attribution indeed drives negative spillover effects. Furthermore, prior crisis history weakens spillover by lowering systemic attribution, whereas crisis prevalence strengthens spillover by enhancing systemic attribution. The findings were consistent across both integrity-related and capability-related crisis contexts.

Introduction

Organizational crises can have profound implications that go beyond the confines of the affected organization and can spill over to other entities within the same industry, resulting in a negative spillover effect that tarnishes the reputation of other organizations and undermines public confidence. The Volkswagen emission scandal, for instance, illustrates how the installation of “defeat devices” in diesel cars to circumvent emissions tests led to a decline in the company’s reputation and financial performance, as well as a loss of trust in other automobile brands, particularly German ones (Bachmann et al., 2019). Similarly, during the 2018 romaine lettuce *E. coli* outbreak in Yuma, consumers refrained from buying other types of leafy greens until the source of the contamination was identified and restricted to the affected regions (Gray, 2018).

As shown by real-world cases, the spillover effect resulting from organizational crises has drawn much attention from researchers. Scholars in management and public relations have examined how a crisis in one organization affects other organizations with various relationships, such as competitors, partners, or those in the same industry (Bourdeau et al., 2007; Lee & Rim, 2017; Roehm & Tybout, 2006; Zhang & Lim, 2020). The prevailing viewpoint is that the negative impact of one organization’s crisis spills over to other neighboring organizations. Based on the associative network theory (Anderson, 1983), previous studies presumed that negative spillover occurs because organizations are cognitively associated with their similarity. That is, if organizations have a high degree of similarity, a crisis in one organization is more likely to activate associations with other organizations, leading to stronger negative spillover effects. In this framework, these studies have highlighted factors such as market commonality, structural equivalence, or proximity as core drivers of spillover effects (Borah & Tellis, 2016; Jonsson et

al., 2009; Paruchuri et al., 2019; Piazza & Jourdan, 2018). However, recent studies have shown that higher similarity can lead to both intensified positive and negative spillover effects (Naumovska & Lavie, 2021). This indicates that inter-organizational similarity does not dictate whether the effect will be positive or negative, suggesting that similarity alone is insufficient to explain negative spillover. What is missing in the literature is a comprehensive understanding of the contextual factors that determine the negative spillover effects that warrant further investigation.

To address this gap, the current study proposes the concept of “systemic attribution” and empirically examined whether the public attributes the cause of a crisis as part of a “systemic” issue within the industry (Han et al., 2023), serving as a key determinant of negative spillover effects. In doing so, the study adopts two elements of attribution theory, consistency and consensus, from Kelley’s principle of covariance (1973). By operationalizing them as the crisis-stricken organization’s prior crisis history (i.e., consistency) and the prevalence of similar crises within the industry (i.e., consensus), this study investigates how these two factors influence systemic attribution and subsequent negative spillover. In so doing, Study 1 employs an experiment within a fictitious integrity-related crisis context. Additionally, acknowledging previous research suggesting that the impact of systemic attribution on negative spillover may vary by crisis type (Han et al., 2023), Study 2 replicated the experiment in a capability-related crisis context to examine whether the effects of systemic attribution are consistent across different crisis types.

By examining crisis spillover through the lens of attribution, the current study offers a novel explanation for how and why negative spillover occurs, providing insight into when a crisis will extend its impact beyond the originating organization. Public relations scholarship has

increasingly acknowledged that organizations within an industry often share reputational interdependence, meaning a crisis at one company can erode trust in its peers by association (Veil & Dillingham, 2020). Such industry-wide reputational threats are a growing concern in the field (Coombs et al., 2021) and underscore the need for a deeper theoretical understanding of crisis spillover dynamics. The current study broadens traditional crisis communication theories, such as Situational Crisis Communication Theory (Coombs, 2007), by moving beyond a single-organization focus and offering a framework that accounts for how public perceptions of one crisis can shape the reputation of an entire industry.

Literature review

Spillover Effect

Spillover effect of organizational crisis has been studied in various fields, including crisis communication, marketing, and management. Foxman et al. (1992) identified the spillover effect as an error that occurs in the reasoning process about a crisis, where beliefs about entities or attributes that are not directly related to the crisis are formed based on beliefs about the crisis related entity or attribute. Grounded in this notion, some researchers focused on the negative aspects of spillover. For example, Coombs et al. (2021) considered the spillover effect as a type of sticky crisis and characterized the phenomenon as publics' perception that organizations not directly involved in the crisis are also tainted as the crisis-stricken organization is. Veil et al. (2016) also considered spillover effect as a distinct type of crisis, defining "events in an external organization create concern, uncertainty, or perceptions of harm for another organization (p. 317)." Likewise, Paruchuri and Misangyi (2015), and Poroli and Huang (2018) highlighted the negative impact of the spillover effect, defining the spillover effect as "generalized culpability

within the industry bystander firms (p. 169),” and the publics’ perception that non-culpable organizations as “also being subject to a problem (p. 1132),” respectively.

Another line of research defined spillover in a broader scope without explicitly identifying its valence. For example, Ahluwalia et al. (2000) defined spillover effect as “the extent to which a message influences beliefs related to attributes that are not contained in the message (p. 458).” Similarly, Raufeisen et al. (2019) did not specify the direction of spillover effect by defining it as “a change in beliefs regarding one entity due to the evaluation of another associated entity (p. 249).” One step further, Eckert (2020) explicitly incorporated positive and negative directions, defining spillover effect as “the sum of two offsetting effects: the competitive effect and the contagion effect (pp. 75-76).” The competitive effect is when a neighboring organization benefits from another organization’s crisis, while the contagion effect refers to a situation where a neighboring organization is damaged by the crisis-stricken organization (Lang & Stulz, 1992).

Building on the understanding that spillover can occur in either a negative or positive direction, this study defines spillover as a shift in beliefs and evaluations of cognitively linked entities or a group of entities, triggered by an event in one organization. Under this definition, the study distinguishes between negative and positive spillover while exploring the mechanisms driving negative spillover and its influencing factors. Additionally, traditional crisis literature has shown that an organizational crisis negatively impacts the public’s perceptions or beliefs, including reputation, attitude, and trust toward an organization (Coombs & Holladay, 1996, 2001; Hegner et al., 2016; Ki & Brown, 2013). In line with this, spillover studies have focused on trust and attitude, identifying spillover effects as changes in beliefs and perceptions toward related entities (Dahlén & Lange, 2006; Gao et al., 2015; Shin et al., 2016; Zhang & Lim, 2021).

For example, Dahlén and Lange (2006) investigated the effect of an online bank's crisis on the brand attitude, brand trust, and brand choice of other online banks, while Gao et al. (2015) focused on the trust spillover effect across the Chinese dairy industry following the 2008 milk contamination crisis. Likewise, the literature on the response to the spillover also investigated the similar variables. In investigating the effect of national headquarters of a restaurant on a crisis in one of local chains, Shin et al. (2016) focused on the brand trust and brand avoidance. Chang (2023) and Zhang and Lim (2021) examined the response to the spillover effect on brand attitude. Therefore, based on previous literature on crises and spillover effects, this study considers trust and attitude as indicators of crisis spillover, along with the perceived likelihood of a similar crisis occurring at the industry level, which captures stakeholders' generalized expectations that such crises may occur in other organizations and directly reflects the core mechanism of systemic attribution.

Spillover Effect: Similarity Approach

The spillover effect is a cognitive process where associated memories are retrieved and beliefs and evaluations of existing memories are updated (Lei et al., 2008). This process is grounded in the way in which humans represent mental associations. To gain a better understanding of how these mental associations are formed and how attributes are transferred in the spillover context, Raufeisen et al. (2019) emphasize the importance of utilizing the categorization theory (Fiske & Taylor, 1991; Loken & Ward, 1990) and associative network theory (Anderson, 1983; Collins & Loftus, 1975).

To manage uncertainty and complexity, people often simplify their world by categorizing objects and events based on proximity or similarity, a process known as categorization (Dovidio & Gaertner, 2010; Hamilton & Sherman, 1994). According to categorization theory (Cohen &

Basu, 1987; Sujana, 1985), people do not evaluate external stimuli independently. Instead, they relate these stimuli to existing knowledge schemas stored in memory, enabling them to make sense of their environment more efficiently. Mervis and Rosch (1981) propose that categorization occurs almost instantaneously and unconsciously, organizing information systematically in one's knowledge structure. For instance, when individuals receive information about an organization, they strive to reduce ambiguity by classifying the organization based on pre-existing knowledge, such as its industry. If new information is perceived as similar to previously stored objects, it is grouped within the same category (Peracchio & Tybout, 1996). As a result, stimuli are understood as belonging to a broader category rather than being remembered for their individual characteristics.

Category inferences, which use categories to process external stimuli, depend on whether a category can be activated by external cues and meet a threshold of similarity (Moskowitz, 2005). This activation is influenced by how closely the external stimulus aligns with a category (Aaker & Keller, 1990), serving as a heuristic for judgment and decision-making. However, while category-based processing is efficient, it may not always be accurate since it prioritizes evaluating categories over individual entities. Consequently, the spillover effect can emerge as a byproduct of this biased processing, where judgments about an entire category are shaped by a single entity within it.

Associative network theory describes how human memory retrieval is based on mental representations of external reality (Anderson, 1983). These representations consist of encoded information about objects, people, and events, stored as interconnected nodes in the mind (Smith, 1998). Nodes represent specific objects, and associations, or links, connect these nodes. The strength of these links influences memory retrieval, where strongly linked nodes are more easily

activated (Collins & Loftus, 1975). In an organizational crisis context, organizations act as nodes within consumers' memory networks. External stimuli activate these nodes, retrieving related memories by spreading activation through associative links. This process helps explain how beliefs about new and stored information interact, often influencing the evaluation of new stimuli based on existing memory or vice versa (Fazio, 1986; Anderson, 1996).

The categorization theory and associative network theory provides a framework for explaining the mechanisms underlying crisis spillover effects. Categorization theory explains how individuals group similar entities into shared categories based on perceived commonalities, which in turn guides their evaluations and judgments (Bruner, 1957; Feldman & Lynch, 1988). Associative network theory complements this perspective by detailing how information about these entities is encoded and stored in memory as interconnected nodes, and later retrieved when related cues are encountered (Anderson, 1983). Together, these theories describe a dual process: information is first encoded into memory through category-based associations, and later decoded in relation to similar category members through the activation of networked links.

The central premise of the two theories is that similarity plays a critical role in the encoding–decoding process of information. Greater similarity results in a more cohesive category or network, which aligns with the similarity mechanism (Feldman & Lynch, 1988) and category accessibility (Bruner, 1957). In other words, when an external stimulus closely resembles existing category members, it is more likely to trigger the activation of that category and retrieve associated nodes from memory, thereby influencing how individuals interpret and evaluate related entities.

Drawing from associative network theory and categorization effects, existing research on spillover effects has focused on the similarity between a crisis-stricken organization and

neighboring organizations. In studies examining the negative spillover of a crisis, common category membership or competitive overlap are identified as significant factors leading to negative spillover effects (Jonsson et al., 2009; Naumovska & Lavie, 2021; Paruchuri et al., 2019). However, more recent studies have found that similarity between organizations can also increase positive spillover effects. For instance, Naumovska and Lavie (2021) illustrated that the larger the market overlap between the crisis-stricken organization and neighboring organizations, the more dominant the negative spillover, but beyond a certain point, positive spillover effects on competitors begin to prevail. Such conflicting results suggest that the similarity-based approach might not adequately explain the onset of negative spillover effects.

Negative Spillover Effect: Systemic Attribution

These mixed results suggest that similarity alone may not fully account for why crises often lead to widespread negative spillover across an industry. To address this gap, the current study introduces the concept of systemic attribution, grounded in attribution theory and Kelley's principle of covariance (1973), as a complementary mechanism that explains the directional spread of reputational harm.

Attribution Theory

The fundamental premise of attribution theory is that when confronted with an incident, individuals actively seek causes behind these events, formulating causal explanations or making attributions (Heider, 1958; Paruchuri et al., 2019; Weick, 1995). Yet, these attributions tend to be “far from logical and thorough” (Fiske & Taylor, 1991, p.553), as individuals frequently make quick judgments, even in the absence of detailed information regarding the actual causes and consequences (Bundy & Pfarrer, 2015; Lange & Washburn, 2012). Notably, a primary consideration during the attribution process is determining whether the cause appears to originate

from the individual's internal or external factors (Eberly et al., 2011; Kelley & Michela, 1980). Where one places the attribution can significantly influence their judgments and behaviors (Heider, 1958).

Attribution theory posits a causal sequence in which antecedents (e.g., available information, existing beliefs, and motivational states) shape how individuals infer perceived causes, and these attributions in turn drive consequences such as behavioral responses, affective reactions, and expectancy judgments (Kelley & Michela, 1980). In other words, attribution functions as a mediating link that translates how people process situational cues into downstream evaluations and actions, underscoring the central role of causal reasoning in shaping public responses during crises.

Recognizing its potential, scholars in crisis management have integrated attribution theory to classify crisis types and recommend suitable response strategies. A notable instance of this integration is the SCCT (Coombs, 2014), which underscores that the intensity of the threat to an organization depends on whether the public attributes the crisis's origin as internal or external to the organization. SCCT applies the degree of internal or external causal attribution as a foundation for classifying crisis types and suggesting appropriate response strategies accordingly (Coombs, 2014).

Kelley's Principle of Covariance

Building on attribution theory, which explains how individuals seek causal explanations for events, Kelley's Principle of Covariance further specifies the key informational cues people rely on when deciding whether to attribute actions to internal or external causes (Kelley, 1973). When individuals decide whether to attribute actions to internal or external causes, they take into account three elements: consistency, distinctiveness, and consensus. Consistency pertains to

whether an actor's behavior is consistently demonstrated regardless of time or circumstance. A high consistency implies the behavior is attributed to the individual's intrinsic nature (internal factors), as repeated criminal behavior is attributed to a person's character. Distinctiveness deals with whether a particular behavior is exclusive to a specific stimulus or if it emerges in response to various other stimuli. A high distinctiveness means the behavior is likely caused by a unique situation or stimulus (external attribution). For instance, if a customer complains only about one shop, it's likely due to the shop's service (external attribution), but if the customer complains everywhere, it's likely due to the customer's expectations (internal attribution). Consistency pertains to whether the organization has a similar history of crises, while distinctiveness is operationalized in terms of relationship history or prior reputation in SCCT (Coombs, 2007). Consensus refers to how widely a behavior is displayed across different people, indicating that the actions of surrounding entities are considered when attributing causes (Kelley, 1973). If a problem appears in multiple individuals, it is less likely to be internally attributed. For example, if one student is late, it's likely due to their behavior, but if many are late, the cause might be a situational factor such as a traffic jam.

Systemic Attribution

In traditional crisis communication research, SCCT has effectively transferred attribution theory's internal–external distinction to assess organizational responsibility. However, when examining spillover effects, this approach falls short of capturing how publics position a crisis-stricken organization within a broader network of related entities. To address this limitation, the current study extends the framework by introducing the isolated–systemic distinction.

The process of attribution is fundamentally relational, implying that when individuals make attributions, they take into account not just the entity and its behavior, but also the

contextual circumstances surrounding it (Coombs & Holladay, 2004). Thus, in the spillover context, publics try to discern whether other neighboring organizations share the cause (Eberly et al., 2011; Lange & Washburn, 2012). This relational dimension explains the phenomenon of crisis spillovers affecting seemingly unrelated other organizations, either positively or negatively. When confronted with a crisis, publics often question the vulnerability of other organizations to similar issues, leading them to speculate about potential similar crises elsewhere (Paruchuri & Misangyi, 2015). Thus, publics are also driven to determine if the cause of the crisis, whether it comes from inside or outside the organization, is unique to the crisis-stricken organization or indicative of a wider systemic issue among a broader set of entities, which aligns with the consensus principle found in Kelley's (1973) covariance theory. In other words, while the "internal vs. external" distinction focuses on determining the culpability of the crisis-stricken organization, the "isolated vs. systemic" distinction is relevant to the potential culpability of industry counterparts or neighboring organizations, indicating potential negative spillover impacts.

Building on this, in explaining the negative spillover effects, the current study adopts isolated-systemic attribution (Han et al., 2023). Isolated (organization) attribution refers to the perception that the cause of a crisis and its effects are primarily due to internal factors specific to the crisis-stricken organization itself. When individuals attribute a crisis as being isolated to the organization, they believe that the crisis is a result of the actions, decisions, or characteristics unique to that particular organization. Thus, negative spillover effects of the crisis on other organizations are less likely. On the other hand, systemic (industry) attribution represents how people attribute the cause of the crisis to industry-level factors rather than attributing it solely to the crisis-stricken organization. It includes perceptions related to the industry's structure (e.g.,

supply chains and networks), system (e.g., regulatory environment and industry-wide standards), and shared values and culture (e.g., norms and ethical practices) that contribute to the crisis.

When an organizational crisis is interpreted as systemic, publics do more than register blame; they generalize from the focal event to the broader category. In particular, systemic attributions prompt publics to scrutinize industry-level features, shared routines and interdependencies, regulatory environments, and cross-organization cultural norms, and to treat the crisis as diagnostic evidence of category-wide vulnerability (Desai, 2011; Greve et al., 2016; Han & Pollock, 2021). This generalization process increases the perceived base rate of similar failures among peer organizations and widens the boundary of suspicion beyond the crisis-stricken organization (Paruchuri & Misangyi, 2015), thereby enhancing the likelihood of spillover and eroding trust and attitudes toward the industry as a whole. In more severe cases, such diffusion can even contribute to the delegitimation of the entire category (Jonsson et al., 2009).

H1a-c. As publics perceive higher systemic attribution, it would (a) increase the perceived likelihood of spillover to the industry, (b) reduce trust, and (c) induce a more unfavorable attitude toward the industry.

Kelley's Principle of Covariance in the Spillover Context

In the context of the spillover effect, the current study focused on consistency and consensus from Kelley's principle of covariance (1973). Consistency, as in SCCT, is applied as the crisis history of the crisis-stricken organization. The frequency of a particular type of failure within a crisis-stricken organization can shape the publics' perceptions regarding the cause of the crisis (Vaughan, 1999). If the organization has a history of recurring issues, such behaviors can become deeply rooted in its day-to-day operations, resulting in the "institutionalization of

deviance within organizational cultures” (Greve et al., 2010, p.73). Consequently, the organization’s internal standards may become distorted, potentially causing the whole system to collapse (Starbuck & Milliken, 1988), which amplifies perceptions of its culpability, distinguishing it from other organizations. Furthermore, if the organization continually repeats the same mistake, it can cast doubt on its ability to reform (Desai, 2011), suggesting that the organization may be a “bad apple” distinct from its industry peers (Han et al., 2023). In other words, when similar crises recur within the same organization, publics are more inclined to view the failures as institutionalized and embedded within that particular organization, rather than as symptoms of systemic vulnerabilities across the industry (Paruchuri & Misangyi, 2015). This recurring pattern reduces the likelihood that publics will generalize blame to peer organizations, thereby lowering systemic attribution and weakening the potential for negative spillover. This logic is consistent with Kelley’s principle of covariance, in which high consistency of behavior, such as repeated misconduct or recurring failures, leads observers to attribute the cause to enduring, internal dispositions rather than to external or situational factors.

In addition to consistency, the isolated-systemic attribution framework suggests that consensus, another element from attribution theory, can also be applied to the spillover context (Han et al., 2023). Consensus in Kelley’s principle of covariance refers to the extent to which an event is commonly observed across multiple actors (Kelley, 1973). Applied to the spillover context, where the actors are organizations and the events are crises, consensus can be operationalized as the perceived prevalence of crises within the industry. The organization operates alongside other organizations that may engage in various actions, some of which might have faced similar crises in the past. In this situation, the prevalence of crises within the industry places the affected organization in a broader social context. If other organizations frequently

experience similar crises, it provides “social proof” (Cialdini, 2021; Pollock et al., 2008) that these crises might reflect systemic issues, which can be reinforced through the individuals’ tendency to establish patterns from recurring stimuli (Rindova, et al., 2010). The scope of such crisis prevalence can range from industry-specific issues, such as overbooking in the airline industry, to cross-industry problems, such as data breaches or financial fraud (Dewan & Jensen, 2020). Nevertheless, as similar crises become more widespread among organizations, it becomes harder to distinguish the crisis-stricken organization from others in the same category. Consequently, the public is more likely to attribute the crisis to systemic causes rather than incidents isolated to the crisis-stricken organization.

It should be noted that the two elements from the principle of covariance serve as ‘antecedents’ of systemic attribution rather than moderating its effects, which differs from the premise of SCCT, but aligns with the original conceptualization of attribution processes as proposed by Kelley and Michela (1980). SCCT suggests a two-phase approach utilizing these three elements to gauge the potential damage to reputation. The first step focuses on determining the initial crisis responsibility, referring to the perceived extent to which the organization is seen as responsible for the crisis. In the second step, the two elements, prior crisis history and relationship history/prior reputation, are considered when assessing the threat level, labeling these elements as modifiers (Coombs, 2007). However, the Kelley’s principle of covariance originally proposed that three elements (i.e., consistency, distinctiveness, and consensus) serve as antecedents of attribution. Moreover, considering that SCCT also acknowledges that these modifiers “can have a direct effect on the crisis responsibility as well” (Coombs, 2006, p.284) in crisis situations, this study positions the prior crisis history of the affected organization and the

perceived crisis prevalence as antecedents influencing systemic attribution, rather than as moderators.

Indeed, as attribution theory suggests (Kelley & Michela, 1980), prior research in crisis contexts has supported the role of attribution as a mediating factor linking crisis-related antecedents to public responses. For example, in traditional crisis contexts, Ham and Kim (2019) found that crisis type influenced behavioral intentions indirectly through crisis responsibility. Similarly, Kim (2019) showed that crisis type affected post-crisis reputation indirectly through a sequential pathway of preventability and blame, as well as separately through trust. In addition, Jeong (2009) reported that internal-external attributions mediated the relationship between distinctiveness information and punitive opinions. Zhang and Zhou (2020) demonstrated that perceived threat harmed reputation via crisis responsibility.

Building on this logic, the study hypothesizes that the prior crisis history of the crisis-stricken organization will lead the public to make fewer systemic attributions, resulting in less negative spillover. In contrast, perceived crisis prevalence is expected to prompt more systemic attributions, leading to stronger negative spillover.

H2a-c. When the crisis-stricken organization has a prior history of crises, it leads to lower level of systemic attribution, which, in turn, results in a lower likelihood of spillover, higher trust, and a more favorable attitude toward the industry, compared to the control group.

H3a-c. When a similar crisis is prevalent across the industry, it leads to higher levels of systemic attribution, which, in turn, results in a greater likelihood of spillover, lower trust, and a less favorable attitude toward the industry, compared to the control group.

[Figure 1 here]

Study 1

Overview of Study 1

The study conducted a web-based experiment using a single-factor design with three conditions (control vs. prior history vs. perceived prevalence). Initially, 218 participants were recruited through Cloud Research. To improve response quality, the study excluded respondents who provided incorrect answers to the two attention checks, which asked about the type of company and crisis in the experimental stimuli. As a result, nine participants were excluded, leaving a total of 209 responses for analysis. The sample consisted of 124 males (59.3%) and 84 females (40.2%), with an average age of 39.76 years ($SD = 11.99$).

Experimental Stimuli

Given that participants' perceptions and knowledge of well-known organizations and familiar industries may bias the results, fictitious organization names were used in unfamiliar industry contexts to mitigate this potential influence. This approach has been widely adopted in crisis literature to enhance internal validity (e.g., Chang, 2023; Puzakova et al., 2013; Whelan & Dawar, 2016; Zhang & Lim, 2021). Taking these considerations into account, this study selected the solar panel industry and BrightMingle as the company name. A pilot test using a one-sample t-test with the midpoint (1 = not at all familiar, 5 = extremely familiar) confirmed that the industry ($M = 2.38$, $SD = 1.02$, $t(129) = -6.96$, $p < .001$) and the fictitious company name ($M = 1.22$, $SD = .613$, $t(129) = -14.44$, $p < .001$) were relatively unfamiliar to participants.

For the experimental stimuli, three different news articles were used: one on BrightMingle's recent crisis, one on prior crisis history, and one on crisis prevalence. These

news articles were presented in the format of The Wall Street Journal. To reduce potential confounding effects, the study blurred information such as reporters' names and photographs.

The news article about BrightMingle's recent crisis reported that the company was facing serious allegations of intentionally misrepresenting the power-generation efficiency of its new solar panels, claiming an efficiency of 32% when it was actually only 13%. The article on prior crisis history provided a brief explanation of BrightMingle's previous intentional misrepresentation of power-generation efficiency, which had occurred several months earlier, along with information on the recurrence of similar issues within the company over several years. The article on crisis prevalence described the intentional misrepresentation of power-generation efficiency as a widespread problem across the solar panel industry (See Appendix 1, 2 & 3).

To ensure that the news articles about prior crisis history and crisis prevalence appeared to have been published earlier, participants were informed that these articles were released several months ago. In contrast, participants were told that the article about BrightMingle's recent crisis was newly published. Participants in the prior crisis history and crisis prevalence conditions read their assigned news articles before reading the article on BrightMingle's recent crisis.

Procedure

After agreeing to the consent form, participants answered pretest questions and were then randomly assigned to one of three conditions: control ($n = 69$), prior crisis history ($n = 70$), or crisis prevalence ($n = 70$). Participants in the prior crisis history condition read a news article published a few months earlier, highlighting repeated efficiency degradation issues at BrightMingle, a solar panel company. In contrast, participants in the crisis prevalence condition

read a news article stating that efficiency degradation issues are widespread in the solar panel industry. Subsequently, all participants, including those in the control condition, were instructed to read a recent news article about the efficiency degradation crisis that BrightMingle had recently faced. In other words, participants in the control condition read only the news article about BrightMingle's recent crisis, whereas participants in the prior crisis history and crisis prevalence conditions were exposed to an additional article, about BrightMingle's past crises or the prevalence of similar crises in the industry, before reading the recent crisis article. After completing the readings, participants answered post-test questions. Finally, they were debriefed that all crises and companies mentioned in the experiment were fictitious.

Measures

Systemic attribution refers to the extent to which individuals attribute the cause of a crisis to industry-level factors rather than to the specific organization involved. Although this study focuses on systemic attribution, prior research that conceptualized isolated-systemic attribution argues that "these attributions reflect the opposite ends of a single continuum, rather than two categorical outcomes" (Han et al., 2023, p. 39). This is because publics may vary in the degree of certainty with which they assign responsibility and may perceive the crisis as stemming from both organizational and systemic factors, rather than neatly categorizing it as one or the other. Reflecting this conceptualization, the present study measured isolated-systemic attribution using a 7-point bipolar scale with five items: distinctive characteristics of BrightMingle – structural problem within the industry, operational failures of BrightMingle – prevailing trends in in the industry, unique practice of BrightMingle – common operational practices within in the industry, distinctive decision of BrightMingle – decisions that have been normalized across the industry, reflective of BrightMingle's unique culture – reflective of the industry's culture ($M = 4.06$, $SD =$

1.61, $\alpha = .95$). Confirmatory factor analysis indicated that the items loaded onto a single factor ($\chi^2(5) = 2.636, p = .756, CFI = 1, RMSEA = 0 [.000 - .067], SRMR = 0.005$), with standardized factor loadings ranging from .850 to .923 (Kline, 2023).

Likelihood of spillover was assessed using a scale comprising three pairs of bipolar adjectives. Participants were prompted with the question: “In your opinion, how likely is it that other solar panel companies have or will face similar issues to those experienced by BrightMingle?” They were then asked to rate their response using a 7-point semantic differential scale, which included pairs such as unlikely - likely, improbable - probable, and impossible – possible ($M = 4.77, SD = 1.41, \alpha = .93$)¹.

Trust toward the solar panel industry was measured using four pairs of bipolar adjectives, which were adopted from Darke et al. (2010): not credible-credible, unreliable-reliable, untrustworthy-trustworthy, and inexpert-expert (7-point semantic differential scale; ($M = 4.39, SD = 1.29, \alpha = .94$).

Attitude toward the industry was gauged using four pairs of bipolar adjectives: negative-positive, not likable-likable, unfavorable-favorable, unpleasant-pleasant, and bad-good. These adjectives, also rated on a 7-point semantic differential scale, are derived from Spears and Singh (2004) ($M = 4.51, SD = 1.38, \alpha = .97$).

Results

Manipulation check

¹ To assess potential measurement overlap between isolated–systemic attribution and spillover likelihood, the study conducted a confirmatory factor analysis (CFA) comparing a two-factor model with a single-factor alternative. For Study 1, the two-factor model showed excellent fit ($\chi^2(19) = 38.75, p = .005, CFI = .989, TLI = .983, RMSEA = .071 [90\% CI .038, .103], SRMR = .029$), whereas the single-factor model performed substantially worse ($\chi^2(20) = 279.57, p < .001, CFI = .852, TLI = .793, RMSEA = .250, SRMR = .073$). For Study 2, the two-factor model likewise demonstrated excellent fit ($\chi^2(19) = 33.16, p = .023, CFI = .992, TLI = .988, RMSEA = .060 [90\% CI .022, .093], SRMR = .025$), whereas the single-factor model showed substantially poorer fit ($\chi^2(20) = 427.59, p < .001, CFI = .763, TLI = .668, RMSEA = .313, SRMR = .106$).

Manipulation checks for the prior crisis history of the crisis-stricken organization and crisis prevalence within the industry were conducted to determine if participants perceived the manipulations as intended. Perceived prior crisis history was measured with three 7-point bipolar items assessing the extent to which BrightMingle had experienced similar issues in the past (“uncommon – common,” “rare – prevalent,” “infrequent – frequent”). Perceived crisis prevalence was measured with four 7-point bipolar items evaluating the extent to which similar issues occurred within the solar panel industry, employing the same response anchors as above along with one additional item (“confined to a few companies – widespread across the industry”).

Participants in the prior crisis history condition reported that BrightMingle had encountered a similar crisis more frequently ($t(137) = -2.76, p = .007$), and those in the crisis prevalence condition indicated that the similar crisis was more prevalent within the industry ($t(137) = -2.28, p = .024$), compared to the control condition. These results suggest that the manipulations for prior crisis history and crisis prevalence were successful.

Randomization check

The randomization checks confirmed successful randomization across industry familiarity and demographic variables. Industry familiarity ($F(2, 206) = .68, p = .509$), gender distribution ($\chi^2(4, 209) = 2.18, p = .702$), race distribution ($\chi^2(10, 209) = 11.85, p = .295$), and age ($F(2, 206) = .14, p = .871$), education ($F(2, 209) = .314, p = .731$), and income ($F(2, 209) = 1.16, p = .315$) showed no significant differences between experimental conditions.

Hypothesis tests

H1 predicted that higher systemic attribution would lead to negative spillover. To examine H1, the study conducted three simple linear regressions for the likelihood of spillover,

trust, and attitude toward the industry. The results showed that systemic attribution had a positive relationship with the likelihood of spillover to the industry ($b = .65$, $SE = .04$, $F(1, 207) = 249.13$, $p < .001$, $R^2 = .55$), while it had a negative relationship with trust ($b = -.29$, $SE = .05$, $F(1, 207) = 46.32$, $p < .001$, $R^2 = .14$) and attitude ($b = -.32$, $SE = .06$, $F(1, 207) = 54.91$, $p < .001$, $R^2 = .14$) toward the industry. These results highlight systemic attribution as a critical factor driving negative spillover, as the study suggested, supporting H1a-c.

H2 and H3 examined the effects of the prior crisis history of the crisis-stricken organization and the crisis prevalence within the industry, respectively, on the negative spillover effect through systemic attribution. More specifically, H2a–c proposed that the prior crisis history of the crisis-stricken organization would lead to lower levels of systemic attribution, which, in turn, would result in a lower likelihood of spillover, higher trust, and a more favorable attitude toward the industry compared to the control group. In contrast, H3a–c suggested that the prevalence of the crisis within the industry would lead to higher systemic attribution, which, in turn, would result in a higher likelihood of spillover, lower trust, and a less favorable attitude toward the industry compared to the control group.

To examine H2 and H3, the study utilized PROCESS Model 4. Given the multi-categorical nature of the hypotheses, the study created two dummy-coded independent variables using the multi-categorical option in PROCESS: Pair 1 for H2a-c (0 = control vs. 1 = prior crisis history condition) and Pair 2 for H3a-c (0 = control vs. 1 = crisis prevalence condition). Mediation models were conducted separately for the three dependent variables (likelihood of spillover, trust, and attitude toward the industry).

The path analysis for Pair 1 showed that the prior crisis history of the crisis-stricken organization was associated with greater systemic attribution ($b = -.67$, $SE = .26$, $t = -2.60$, p

= .010). Moreover, systemic attribution was positively associated with the likelihood of spillover ($b = .63, SE = .04, t = 14.49, p < .001$), while it was negatively associated with trust ($b = -.27, SE = .05, t = -4.90, p < .001$) and attitude ($b = -.29, SE = .06, t = -4.88, p < .001$). The mediation tests indicated that prior crisis history had significant indirect effects on the likelihood of spillover ($b = -.42, Boot SE = .17, 95\% CI = [-.771, -.099]$), trust ($b = .18, Boot SE = .09, 95\% CI = [.028, .380]$), and attitude ($b = .19, Boot SE = .09, 95\% CI = [.035, .388]$) toward the industry through systemic attribution. Given that the direct effects of prior crisis history on the likelihood of spillover ($b = -.09, SE = .16, t = -.53, p = .600$), trust ($b = .06, SE = .21, t = .27, p = .787$), and attitude ($b = .05, SE = .22, t = .22, p = .829$) were not significant, the results suggest a full mediation effect, with isolated-systemic attribution fully accounting for the relationship between prior crisis history and the dependent variables, supporting H2a-c. More specifically, the crisis-stricken organization's prior crisis history leads to the perception that similar crises are less likely to occur in other organizations within the industry by lowering systemic attribution. On the other hand, the prior crisis history, compared to the absence of such a history, mitigates the decline in trust and fosters a less unfavorable attitude toward the industry by reducing systemic attribution.

Unlike prior crisis history, crisis prevalence within the industry increased systemic attribution ($b = .60, SE = .26, t = 2.33, p = .021$). The mediation tests for Pair 2 showed significant indirect effects of crisis prevalence on the likelihood of spillover ($b = .38, Boot SE = .16, 95\% CI = [.067, .703]$), trust ($b = -.16, Boot SE = .08, 95\% CI = [-.323, -.023]$), and attitude ($b = -.17, Boot SE = .08, 95\% CI = [-.336, -.025]$) toward the industry. Moreover, the insignificant direct effects of crisis prevalence on the likelihood of spillover ($b = .13, SE = .16, t = .81, p = .418$), trust ($b = -.26, SE = .21, t = -1.24, p = .216$), and attitude ($b = -.37, SE = .22, t =$

-1.69, $p = .093$) toward the industry indicate full mediation effects, supporting H3a-c. The findings suggest that crisis prevalence led to the perception that similar crises are more likely to occur in other organizations within the industry, decreased trust, and fostered a more unfavorable attitude toward the industry by enhancing systemic attribution.

[Table 1 here]

Discussion of Study 1

Study 1 explored the concept of systemic attribution as a novel framework for understanding negative spillover effects during crises. Additionally, this study investigates how modifiers such as the prior crisis history of the crisis-stricken organization and the perceived crisis prevalence within the industry influence systemic attribution.

As predicted in Hypothesis 1, the more people attributed the cause of an organization's crisis to systemic issues within the industry, the more they believed that a similar crisis was likely to occur in other organizations within the same industry. This attribution also led to reduced trust in the industry and fostered a more unfavorable attitude toward it. This discovery complements the traditional focus on organizational similarity to explain negative spillover effects. Grounded in associative network theory (Anderson, 1983), previous studies suggest that a crisis in one organization is more likely to trigger associations with others, resulting in stronger negative spillover effects as organizations become more similar (Borah & Tellis, 2016; Paruchuri et al., 2019; Piazza & Jourdan, 2018). However, the similarity perspective has limitations in explaining the direction of the spillover effect, as organizational similarity can lead to both negative and positive spillover effects from a crisis (Naumovska & Lavie, 2021). In this context, the findings of this study suggest that systemic attribution plays a vital role in understanding the underlying mechanism of why negative spillover occurs.

Hypotheses 2 and 3 examined how the prior crisis history of a crisis-stricken organization and the prevalence of similar crises within the industry influence systemic attribution and subsequent negative spillover effects. The findings indicate that a crisis-stricken organization's prior crisis history tends to reduce systemic attribution, leading to less negative spillover. Conversely, crisis prevalence within the industry promotes stronger systemic attribution, resulting in more pronounced negative spillover effects. The findings provide a more comprehensive understanding of spillover effects by examining two factors that influence systemic attribution and subsequent spillover. Moreover, by demonstrating that two elements (consistency and consensus) from principle of covariance affected publics' attribution, this study extends attribution theory beyond its traditional application in individual organizational crises, as represented in SCCT, into the broader context of industry-wide spillover effects.

Despite the findings suggesting a noble explanation for the negative spillover effect, the study examined it in a limited context with one type of crisis (i.e., integrity-related crisis). Drawing from social psychology and social evaluations, *capability* and *integrity* are two primary dimensions when evaluating others (Fiske et al., 2007; Mishina et al., 2012). These two dimensions have also been widely adopted to evaluate organizations, especially in crisis situations (e.g., Dawar & Pillutla, 2000; Sohn & Lariscy, 2014). Although publics take both types of failures seriously, previous research has shown that integrity failures have more severe impact on the crisis-stricken organization (Mishina et al., 2012; Paruchuri et al., 2021) because violations of societal norms and values are often interpreted by publics as deliberate acts of misconduct by the firm. Moreover, integrity failures result in moral evaluations, often linked to the values and culture of the organization (Bundy & Pfarrer, 2015; Pollock, et al., 2019). Consequently, publics are more inclined to question whether such integrity failures reflect

broader deficiencies in the norms and value system shared among the organizations in the same industry, as challenges to established norms can quickly spread fear and anxiety among publics (Harmon, 2019). On the other hand, capability evaluation tends to be individuating. Although shortcomings in performance or execution can pose challenges, such failures may not be perceived as a result of the organization's intentions (Paruchuri et al., 2021). As a result, capability evaluations are more likely to be specific to the individual organization in question, rather than reflecting general traits. Given this possibility, the effect of systemic attribution on negative spillover may have been observed only in the integrity-related crisis used as stimuli in Study 1. Therefore, this research conducted a second experiment in Study 2 to verify whether the results from Study 1 can be replicated in the context of a capability-related crisis.

Study 2

Overview of Study 2

Study 2 employed a single-factor design with three conditions (control, prior history, and perceived prevalence). A total of 221 participants were initially recruited through CloudResearch. Participants from Study 1 were not included in the data collection for Study 2. Using the same exclusion criteria as in Study 1, 13 participants were removed for failing to correctly identify the company type (one participant) or crisis type (11 participants). This resulted in a final sample of 209 valid responses for analysis. The final sample comprised 106 males (50.7%), 101 females (48.3%), and two participants identifying as other (1%), with an average age of 40.81 years ($SD = 12.58$).

Since the aim of Study 2 was to investigate whether the effects observed in Study 1 would differ based on crisis type, Study 2 employed a capability-related crisis scenario centered around efficiency degradation, as opposed to the integrity-related crisis of intentional

misrepresentation used in Study 1. The experimental stimuli described a recent crisis at BrightMingle, reporting a significant drop in the efficiency of the company's latest solar panel model from 32% to 12% within a single year, underscoring a severe performance issue.

Two pilot tests were conducted to validate the experimental stimuli and manipulations prior to the main studies. Pilot Study 1 aimed to ensure that the two crisis scenarios, capability versus integrity, were perceived as distinct crisis types but with comparable levels of severity. Participants consist of 28 male and 35 female, age with a mean age of 26.19 ($SD = 10.43$). Crisis types were measured using a 7-point bipolar scale with four items: "primarily due to operational issues – primarily due to ethical issues," "a failure in effective management – a failure in maintaining integrity," "operational failures – breach of trust or moral standards," and "company's capacity-related – company's integrity-related," where higher scores indicated stronger perceptions of the crisis as integrity-related. Findings of one-sample t-tests with midpoint (4) showed that participants rated the intentional misrepresentation issue from Study 1 as an integrity-related crisis ($M = 6.17$, $SD = 1.04$, $t(34) = 12.34$, $p < .001$), while the efficiency degradation issue used in Study 2 was identified as a capability-related crisis ($M = 2.88$, $SD = 1.17$, $t(28) = -5.14$, $p < .001$).

For the severity (Laufer et al., 2005), the results showed that both crises were perceived to have similar levels of severity (capability crisis: $M = 5.72$, $SD = 1.17$; integrity crisis: $M = 6.08$, $SD = .87$; $t(62) = -1.38$, $p = .173$). Moreover, findings of one-sample t-tests with midpoint (4) showed that participants rated the intentional misrepresentation issue from Study 1 as an integrity-related crisis ($M = 6.17$, $SD = 1.04$, $t(34) = 12.34$, $p < .001$), while the efficiency degradation issue used in Study 2 was identified as a capability-related crisis ($M = 2.88$, $SD = 1.17$, $t(28) = -5.14$, $p < .001$).

Pilot Study 2 was conducted to pretest the manipulation of prior crisis history. Pilot Study 2 was conducted to pretest the manipulation of prior crisis history. A total of 136 participants took part in this study (male = 69, female = 65, others = 2), with an average age of 40.21 years ($SD = 12.18$). Results indicated no significant difference was found between the prior crisis history condition and the control condition regarding perceived prior crisis history ($t(134) = -1.19, p = .238$). Consequently, in the main experiment, the news articles about BrightMingle's crisis used in the control and prevalence conditions were modified to include the statement, "This marks the first instance in the company's history where such a significant decline in power generation efficiency had been observed" (See Appendix 4, 5 & 6). The identical experimental design and measurement scales used in Study 1 were also employed in Study 2 to ensure consistency and comparability across both experiments (control: $n = 69$, prior crisis history: $n = 70$, crisis prevalence: $n = 70$).

Results

Manipulation check

Manipulation check tests confirmed that participants in the prior crisis history condition perceived similar crises as having occurred more frequently within the company ($t(139) = -5.65, p < .001$), while those in the crisis prevalence condition perceived similar crises as more widespread within the industry ($t(137) = -5.43, p < .001$) compared to the control condition, indicating successful manipulation.

Randomization check

The randomization checks confirmed successful randomization across industry familiarity and demographic variables. Industry familiarity ($F(2, 206) = .89, p = .413$), gender distribution ($\chi^2(4, 209) = 4.21, p = .378$), race distribution ($\chi^2(12, 209) = 10.53, p = .570$), and

age ($F(2, 206) = .77, p = .467$), education ($F(2, 209) = .224, p = .800$), and income ($F(2, 209) = .644, p = .526$) showed no significant differences between experimental conditions.

Hypothesis tests

H1a-c predicted that systemic attribution has positive relationship with (a) likelihood of spillover and negative relationships with (b) trust and (c) attitude toward the industry. The findings of simple linear regressions showed that greater systemic attribution was significantly associated with an increased likelihood of spillover to the industry ($b = .62, SE = .05, F(1, 207) = 157.12, p < .001, R^2 = .66$), lower trust ($b = -.23, SE = .05, F(1, 207) = 20.54, p < .001, R^2 = .09$), and a more unfavorable attitude toward the industry ($b = -.20, SE = .06, F(1, 207) = 13.03, p < .001, R^2 = .06$), indicating that H1a, H1b, and H1c were supported.

H2 and H3 examined the mediation effects of prior crisis history and crisis prevalence on negative spillover through systemic attribution, respectively. Similar to Study 1, PROCESS Model 4 was used with a multi-categorical variable function to generate two pairs: Pair 1 for H2 (0 = control vs. 1 = prior crisis history condition) and Pair 2 for H3 (0 = control vs. 1 = crisis prevalence condition). Three mediation tests were conducted for the likelihood of spillover, trust, and attitude toward the industry.

The path analysis findings indicated that systemic attribution had a significant positive relationship with the likelihood of spillover ($b = .58, SE = .06, t = 10.02, p < .001$) and a significant negative relationship with trust ($b = -.20, SE = .06, t = -3.29, p = .001$) and attitude toward the industry ($b = -.19, SE = .07, p = .005$).

The findings for Pair 1 (i.e., control vs. prior organizational crisis history) showed that prior crisis history led to lower levels of systemic attribution ($b = -.53, SE = .23, p = .021$). Additionally, there was a significant negative indirect effect of prior crisis history on the

likelihood of spillover through isolated-systemic attribution ($b = -.14$, Boot $SE = .07$, 95% $CI = [-.298, -.016]$) and positive indirect effects on the trust ($b = .11$, Boot $SE = .06$, 95% $CI = [.010, .254]$) and attitude ($b = .10$, Boot $SE = .06$, 95% $CI = [.006, .251]$). Moreover, the absence of direct effects of prior crisis history on the likelihood of spillover ($b = .17$, $SE = .19$, $t = .89$, $p = .376$), trust ($b = .15$, $SE = .20$, $t = .77$, $p = .444$) and attitude ($b = .07$, $SE = .22$, $t = .31$, $p = .754$) toward the industry suggests a full mediation effects. This implies that a crisis-stricken organization's prior crisis history makes it less likely for the crisis to be attributed to systemic features of the industry, thereby reducing the perceived likelihood of similar crises occurring across the industry and having a less negative impact on trust and attitude toward the industry. The findings supported H2a-c.

For Pair 2 (i.e., control vs. crisis prevalence within industry), crisis prevalence was positively associated with systemic attribution ($b = 1.51$, $SE = .23$, $p < .001$). The study found significant indirect effects of crisis prevalence on likelihood of spillover ($b = .88$, Boot $SE = .14$, 95% $CI = [.605, 1.166]$), trust ($b = -.30$, Boot $SE = .11$, 95% $CI = [-.540, -.103]$), and attitude ($b = -.28$, Boot $SE = .12$, 95% $CI = [-.528, -.063]$) toward the industry through systemic attribution. Additionally, there were no significant direct effects on the likelihood of spillover ($b = .34$, $SE = .21$, $t = 1.61$, $p = .108$), trust ($b = -.10$, $SE = .22$, $t = -.44$, $p = .661$) attitude ($b = -.03$, $SE = .24$, $t = -.15$, $p = .883$) toward the industry, indicating a full mediation effect of crisis prevalence on three dependent variables. In other words, when a crisis is perceived as prevalent within an industry, there is a greater tendency toward systemic attribution compared to when it is not. Consequently, people are more likely to assess that similar crises could occur in other organizations within the industry and foster lower trust and less favorable attitude toward the industry as a whole. Thus H3a-c were supported.

[Table 2 here]

Discussion of Study 2

The findings of Study 2 mirrored those of Study 1, reaffirming the critical role of systemic attribution in driving negative spillover effects. Greater systemic attribution was linked to an increased likelihood of spillover, lower trust, and a more unfavorable attitude toward the industry. Additionally, systemic attribution mediated the effects of prior crisis history and crisis prevalence. Prior crisis history reduced systemic attribution, lowering spillover perceptions and mitigating negative impacts on trust and attitude. In contrast, crisis prevalence heightened systemic attribution, increasing spillover likelihood and negative industry perceptions. The absence of direct effects further highlights systemic attribution as the key driver of negative spillover outcomes.

In Study 2, we initially considered the possibility that crisis types might have different impacts on negative spillover, with integrity failures prompting a stronger negative spillover effect through systemic attribution compared to capability failures. This expectation was based on the notion that integrity failures lead people to question the organization's intentions and motivations, which play a crucial role in evaluating failure and determining its consequences (Coombs, 2014). Additionally, integrity failures often result in moral evaluations tied to broader norms and values shared across organizations within the industry (Harmon, 2019). Nevertheless, the findings revealed identical patterns across the two studies despite the differing crisis types (integrity vs. capability), highlighting the robustness of systemic attribution as a fundamental mechanism driving spillover effects in crisis situations. However, since this study did not directly compare the effects of crisis types on systemic attribution, the extent to which crisis

types influence this attribution remains unclear. Future research could conduct a direct comparison to better understand the differential impacts of crisis types on systemic attribution.

General Discussion

The findings of this research emphasize the role of systemic attribution as a key factor in driving negative spillover effects, influencing not only the likelihood of similar crises occurring across organizations within the same industry but also public trust and attitudes toward the industry. This effect was observed consistently across both Study 1 and Study 2, highlighting that systemic attribution can complement traditional organizational similarity perspectives by explaining the negative direction of spillover effects. However, it is essential to note that systemic attribution does not replace the similarity perspective. This study acknowledges that spillover effects originate from cognitive networks, where the public categorizes organizations based on perceived similarities. Thus, rather than serving as an alternative, systemic attribution complements the similarity perspective by specifically addressing the negative directionality of spillover effects. Moreover, although this study conceptualized systemic attribution primarily at the industry level, publics may also perceive systemic responsibility through broader societal or institutional lenses, such as shared supply chains, regulatory frameworks, or cross-sectoral norms. Future research could examine these alternative sources of systemic attribution to better understand spillover dynamics beyond industry boundaries.

Additionally, this study examined how prior crisis history and crisis prevalence influence systemic attribution across the two studies. The results extend attribution theory beyond its traditional application in individual organizational crises, as seen in SCCT, to encompass broader industry-wide spillover effects. SCCT, grounded in attribution theory, highlights the role of attribution in assessing reputational threats and incorporates elements, consistency and

distinctiveness from Kelley's principle of covariance (1973). SCCT traditionally uses these elements as modifiers, specifically, prior crisis history and relationship history/prior reputation, to gauge the level of reputational threat posed to an organization (Coombs, 2014). In a similar vein, this study demonstrates that consistency and consensus from Kelley's framework are also relevant in spillover contexts, indicating that attribution theory and SCCT could apply to industry-level crises as well. This finding broadens the theoretical scope of attribution theory to encompass interconnected organizations and industry-level crisis implications.

However, a critical distinction should be noted in how SCCT and this study interpret consistency and distinctiveness. While SCCT treats these elements as modifiers that influence reputational threats alongside attribution, this study positions them as antecedents that shape systemic attribution. This approach aligns with original notion of Kelley's principle of covariance (1973), which views these elements as foundational in forming causal attributions rather than as moderating factors. This distinction implies that the reputational impact of a crisis on both the crisis-stricken organization and the broader industry operates through different mechanisms. While SCCT can be extended to apply to spillover contexts, it should be adapted carefully considering these nuanced differences.

This study offers a new perspective on crisis communication by moving beyond the traditional approach that interprets crises at the level of individual organizations and instead emphasizes the importance of understanding crises within increasingly interconnected environments. As networked reputational interdependence becomes more salient in today's society (Veil & Dillingham, 2020), negative spillover has emerged as one of the most difficult types of crises for organizations to manage (Coombs et al., 2021). Within this context, the proposed framework provides a theoretical foundation for classifying crisis types based on their

potential to generate spillover effects and for developing effective response strategies that address not only the organization directly involved but also other organizations at risk by association. By incorporating attribution theory, this study bridges traditional crisis communication research with spillover scholarship and offers a more strategic and comprehensive approach to understanding crisis effects at the industry level.

These insights go beyond the scope of crisis communication and contribute to a broader understanding of public relations theory. Traditionally, public relations research has focused on individual organizations, analyzing the dynamics between an individual organization and its publics. Yet in today's media and social landscape, publics are less likely to view an organization's actions as isolated events. Instead, they often interpret them as part of broader industry trends. This shift in perception highlights the need for public relations theory to move beyond organization-specific strategies and consider how reputational interdependence within interorganizational networks shapes outcomes (Saffer & Yang, 2023). By shifting the unit of analysis from individual organizations to entire industries, this study introduces a more structural and macro-level approach to public relations research. It helps advance public relations theory toward a more accurate and interconnected understanding of how public perceptions and reputational dynamics function in today's complex environment.

From a practical standpoint, this study offers implications for public relations and crisis communication professionals seeking to manage crises and their potential spillover effects. The study underscores the importance of maintaining organizational isolation to prevent a single-organization crisis from being interpreted as evidence of a broader industry-wide problem. In the event of a crisis, organizations not directly involved should act quickly to frame the incident as a unique case tied to the specific circumstances of the affected organization, rather than as a signal

of systemic failure. By reinforcing that the event does not reflect a structural flaw in the industry as a whole, organizations can help contain reputational damage. Additionally, they should proactively communicate their own preventive measures and points of differentiation to “fence off” the incident and avoid being implicated by association (Veil et al., 2016).

At the industry level, this study demonstrates that systemic attribution can trigger spillover effects, with the perceived prevalence of similar crises across an industry serving as a key amplifier of this process. These findings suggest that effective spillover management requires collective efforts that can go beyond framing responsibility at the individual organizational level. Specifically, organizations within an industry can enhance their safeguards and crisis-prevention capacity, for example, by implementing rigorous safety standards, obtaining third-party certifications, and participating in cross-industry initiatives designed to build shared resilience. Furthermore, organizations can engage in industry-wide risk inoculation, proactively communicating strong regulatory compliance and collaborative crisis-monitoring efforts before crises occur. Such coordinated strategies can help prevent crises from being perceived as widespread or systemic issues, thereby reducing the likelihood of systemic attributions and mitigating potential reputational spillover across the industry.

Limitations and Directions for Future Research

Although the study provides valuable insights into the spillover effects of crises and organizational responses, it has several limitations. First, while the study conducted two experiments to examine whether systemic attribution serves as a driving factor for negative spillover effects across different crisis types, both experiments used the solar panel industry as the experimental context. This choice may limit the generalizability of the findings to other

industries. Therefore, future research should explore whether these findings hold across a diverse range of industries.

Furthermore, the study used a well-known national news outlet, The Wall Street Journal, as the source of the experimental stimuli to enhance external validity. However, this choice may have introduced potential source effects based on participants' pre-existing perceptions of the outlet. Future research should examine whether the results hold when using varied news sources.

Moreover, although the study found that prior crisis history and crisis prevalence each influence systemic attribution and subsequent negative spillover, it did not examine the potential interaction effects between these factors. Future studies should investigate how these elements interact in shaping public perceptions about spillover effects.

In addition, this study focused specifically on crisis-related factors when examining attribution processes. Accordingly, among the three components proposed in Kelley's principle of covariance, we examined only consensus and consistency, while excluding distinctiveness, which is often conceptualized as organization-related factor (relationship history / prior reputation) in the organizational crisis context (Coombs, 2007). However, we acknowledge that distinctiveness may meaningfully influence whether publics perceive a crisis as isolated or systemic. Future research should explore this possibility by incorporating distinctiveness as a potential determinant of attribution direction in spillover contexts.

While this study treated responsibility attribution as a continuum to capture nuanced judgments between organizational and systemic levels (Han et al., 2023), it is possible that perceptions of responsibility toward the organization and the system could also form as partially independent evaluations. Future research should consider developing multidimensional measures to account for this possibility.

Additionally, this study tested mediation effects separately for each dependent variable. This approach aligns with the study's objective of examining the mediating role of isolated-systemic attribution in the spillover context. However, testing all three dependent variables simultaneously could offer the advantage of capturing them within a unified model, allowing researchers to account for the interrelationships among the outcomes and evaluate the mediation mechanism in a more integrated manner. Therefore, future research may consider testing multiple spillover-related outcomes in a single integrated model to provide a more holistic assessment of the mediation process.

Lastly, while this study introduced systemic attribution as a mechanism for explaining negative spillover effects, it also acknowledges that organizational similarity remains a key factor in understanding spillover. Since this research focused solely on systemic attribution, future studies should explore how organizational similarity interacts with isolated-systemic attribution to influence spillover outcomes in order to better understand their combined impact on spillover dynamics.

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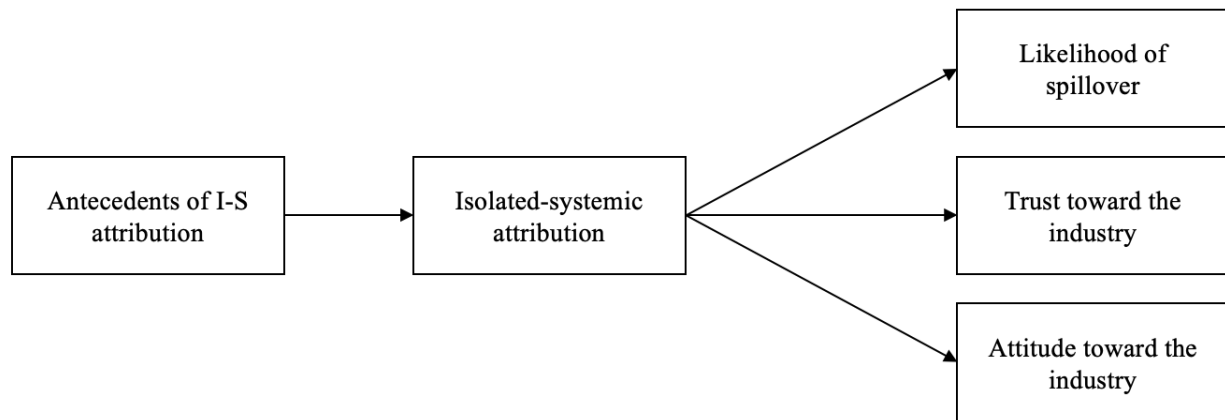
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Figures

Figure 1. Conceptual Model



Tables

Table 1. Indirect Effects of Study 1

Independent variable	Dependent variable	<i>b</i>	<i>SE</i>	95% Bootstrap <i>CI</i>	
				LL	UL
Control	Likelihood of spillover	-.42	.17	-.771	-.099
vs.	Trust toward industry	.18	.09	.028	.380
Prior crisis history	Attitude toward industry	.19	.09	.035	.388
Control	Likelihood of spillover	.38	.16	.067	.703
Vs.	Trust toward industry	-.16	.08	-.323	-.023
Crisis prevalence	Attitude toward industry	-.17	.08	-.336	-.025

Table 2. Indirect effects of Study 2

Independent variable	Dependent variable	<i>b</i>	<i>SE</i>	95% Bootstrap <i>CI</i>	
				LL	UL
Control	Likelihood of spillover	-.31	.14	-.592	-.049
vs.	Trust toward industry	.11	.06	.010	.254
Prior crisis history	Attitude toward industry	.10	.06	.006	.251
Control	Likelihood of spillover	.88	.14	.605	1.166
Vs.	Trust toward industry	-.30	.11	-.540	-.103
Crisis prevalence	Attitude toward industry	-.28	.12	-.528	-.063

Appendix

Appendix 1. Crisis information in Study 1

THE WALL STREET JOURNAL.

Latest World Business Politics Economy Tech Finance Opinion Arts & Culture Lifestyle Health Sports 

BrightMingle Accused of Misrepresenting Panel Efficiency



By [\[Author Name\]](#)
Feb 20, 2025 at 5:30 am ET

In recent developments within the renewable energy sector, BrightMingle, a well-known entity in the field, is confronting serious allegations of having intentionally misrepresented the power-generation efficiency of its new solar panels.

Recent findings have brought to light a discernible discrepancy between the reported and actual efficiency of the company's latest solar technology. The reports have unearthed an exaggeration of the initial efficiency, claimed to be 32%, while in reality, it stands at 13%.

Investigations have revealed that the discrepancies stem from an intentional misrepresentation of the company, casting shadows of doubt and raising serious questions about the integrity and reliability of BrightMingle Solar's new panels.

Appendix 2. Prior crisis history information in Study 1

THE WALL STREET JOURNAL.

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Efficiency Deception: BrightMingle's Repeated Misconduct Exposed

By [\[Author Name\]](#)

Sep 20, 2024 at 8:40 am ET

BrightMingle, a leading name in solar technology, is currently facing scrutiny for the intentional misrepresentation of their panels' power-generation efficiency.

Similar challenges have previously tarnished the reputation of BrightMingle. In both the 2021 and 2023 product lines, BrightMingle misrepresented their power-generation efficiency, and now, these issues have resurfaced with their latest 2024 offerings.

The recurring nature of these lapses suggests significant oversights in BrightMingle's ethical and operational standards. It raises questions about the company's integrity, despite previous assurances of improved standards. Customers and industry analysts are increasingly worried about the integrity of BrightMingle's products.

Appendix 3. Prevalence information in Study 1

THE WALL STREET JOURNAL.

Latest World Business Politics Economy Tech Finance Opinion Arts & Culture Lifestyle Health Sports 

Concerns Grow Over Efficiency Misrepresentation in Solar Panels

By 
Sep 20, 2024 at 8:40 am ET

The solar panel industry is currently grappling with the challenge of companies' intentional misrepresentation of power-generation efficiency. Reports from various manufacturers are revealing that solar panels are not performing as advertised.

This issue highlights serious concerns about the integrity of solar panel companies. Several leading firms have admitted to these deliberate misrepresentations of efficiency intended to deceive customers in their recent product lines.

Industry experts are now urging for stricter oversight, increased transparency, and a commitment to higher ethical standards. As the world shifts more towards renewable energy, the need for transparent and efficient solar panels has become crucial for the industry's future.

Appendix 4. Crisis information in Study 2

THE WALL STREET JOURNAL.

Latest World Business Politics Economy Tech Finance Opinion Arts & Culture Lifestyle Health Sports 

BrightMingle Confronts Challenges as Panel Efficiency Declines

By 
Feb 20, 2025 at 5:30 am ET

In recent developments within the renewable energy sector, BrightMingle, a well-known entity in the field, is confronting challenges related to the diminishing efficiency of its new solar panels over time.

This marks the first instance in the company's history where such a significant decline in power generation efficiency has been observed.

Recent findings have brought to light a discernible decline in the efficiency of the company's latest solar technology. The reports indicate a shift from an initial efficiency of 32% down to 13% over the course of a single year.

Investigations have revealed that the discrepancies stem from product defects, casting shadows of doubt and raising serious questions about the long-term reliability and viability of BrightMingle's new panels.

Appendix 5. Prior crisis history information in Study 2

THE WALL STREET JOURNAL.

Latest World Business Politics Economy Tech Finance Opinion Arts & Culture Lifestyle Health Sports 

Efficiency Woes Hit BrightMingle Again

By 
Sep 20, 2024 at 8:40 am ET

BrightMingle, a leading name in solar technology, is under scrutiny as their solar panels are facing declining efficiency. This downturn is attributed to product defects.

Similar challenges have tarnished the reputation of BrightMingle in the past. Both the 2021 and 2022 product lines experienced an efficiency decline due to product defects, and now, these issues have resurfaced in their latest 2024 offerings.

The recurring nature of these defects suggests significant oversights in BrightMingle's production processes. It raises questions about the company's ability to maintain quality control, despite previous assurances of improved standards. Customers and industry analysts are increasingly worried about the reliability of BrightMingle's products.

Appendix 6. Prevalence information in Study 2

THE WALL STREET JOURNAL.

Latest World Business Politics Economy Tech Finance Opinion Arts & Culture Lifestyle Health Sports 

Concerns Grow Over Efficiency Issues in Solar Panels

By 
Sep 20, 2024 at 8:40 am ET

The solar panel industry is currently grappling with the challenge of declining panel efficiency due to product defects. Across various manufacturers, reports are surfacing of solar panels failing to meet their promised performance benchmarks soon after installation.

This problem highlights potential lapses in quality control and manufacturing processes. Several leading companies have acknowledged these efficiency shortcomings in their recent product lines.

Industry experts are calling for stringent quality checks and improved manufacturing standards. As the world increasingly turns to renewable energy, ensuring the reliability and efficiency of solar panels has become crucial for the industry's future.

Appendix 7. Measurement

Variable	Measurement
Perceived crisis types	The crisis... primarily due to operational issues – primarily due to ethical issues a failure in effective management – a failure in maintaining integrity operational failures – breach of trust or moral standards company’s capacity-related – company’s integrity-related
Perceived severity	Please rate company’s crisis on each of the following attributes. Not at all serious – Extremely serious Not at all bad – Extremely bad Not at all severe – Extremely severe
Crisis history of the crisis-stricken organization	Following questions are about BrightMingle. The issue of deceiving about their power-generation efficiency in BrightMingle is... Uncommon – Common Rare – Prevalent Infrequent – Frequent
Crisis prevalence within the industry	Following questions are about solar panel industry. The issue of deceiving about their power-generation efficiency in solar panel industry is... Uncommon – Common Rare – Prevalent Infrequent – Frequent Confined to a few companies – Widespread across the industry
Isolated-systemic attribution	The following questions are about BrightMingle’s deception regarding power-generation efficiency. The cause of crisis primarily is... distinctive characteristics of BrightMingle – structural problem within the industry operational failures of BrightMingle – prevailing trends in in the industry unique practice of BrightMingle – common operational practices within in the industry distinctive decision of BrightMingle – decisions that have been normalized across the industry reflective of BrightMingle’s unique culture – reflective of the industry’s culture
Likelihood of spillover	In your opinion, how likely is it that other solar panel companies have or will face similar issues to those experienced by BrightMingle? unlikely – likely improbable – probable impossible – possible
Trust	Please rate general solar panel companies on each of the following attributes.

not credible-credible
unreliable-reliable
untrustworthy-trustworthy
inexpert-expert

Attitude

Please rate general solar panel companies on each of the following attributes.

negative-positive
not likable-likable
unfavorable-favorable
unpleasant-pleasant
bad-good

Appendix 8. Participant Demographics.

		Pilot test 1	Pilot test 2	Main study 1	Main study 2
Experimental Conditions	Capability	29	-	-	-
	Integrity	39	-	-	-
	Control	-	68	69	71
	Prior crisis history	-	68	70	70
	Crisis prevalence	-	-	70	68
	Race	White/Caucasian	42	106	152
	Black, African, or African American	8	14	27	31
	Asian	7	9	11	14
	Hispanic or Latino	4	2	16	13
	American Indian or Alaska Native	0	0	1	3
	Middle Eastern or North African	0	2	0	1
	Native Hawaiian or other Pacific Islander	0	1	0	0
	Others	2	2	2	5
Education	high school diploma or equivalent	7	15	24	22
	some college without a degree	9	20	43	42
	associate's degree	11	22	15	27
	bachelor's degree	25	63	97	91
	master's or professional degree	11	12	24	23
	Ph.D. or equivalent	1	4	6	4
Annual income	less than \$14,999	4	5	13	7
	\$15,000 - \$29,999	3	14	20	15
	\$30,000 - \$44,999	8	20	39	31
	\$45,000 - \$59,999	12	23	21	33

\$60,000 - \$74,999	9	14	17	24
\$75,000 - \$89,999	2	8	22	19
\$90,000 - \$104,999	9	15	25	18
\$120,000 - \$134,999	0	9	0	24
\$135,000 - \$149,999	5	9	18	0
\$150,000 or more	0	9	10	15
