

Matching Consequences and Causes in Crisis Public Relations

Douglas Wilbur

University of Texas at San Antonio, San Antonio, USA

This exploratory study examines the phenomenon of consequence cause matching, which is based on the representativeness heuristic, from cognitive psychology, upon crisis management and public relations. A 2(Large Scale Crisis vs. Small Scale Crisis) \times 2(Large Scale Cause vs. Small Scale Cause) mixed factorial design experiment was conducted based upon a hypothetical crisis scenario. This study found initial evidence that consequence cause matching is a phenomenon that can impact the process of attribution for a crisis. It highlights a potential new area of theoretical growth for the situational crisis communication theory.

Keywords: Public Relations, Crisis Communication, Situational Crisis Communication Theory, Representativeness Heuristic.

Matching Consequences and Causes in Crisis Public Relations

Imagine that a food processing plant in your hometown has an explosion that kills five workers. It causes severe traffic problems as well as toxic and smelly smoke for several days as fire crews work to resolve the situation. The cause of the accident is unknown, but several rumors start to float around. The first is that a worker accidentally tightened a valve too tight, causing the explosion. The second is a conspiracy that the pipes were too old and needed to be replaced, but management refused to make needed upgrades. Which cause is the public most likely to believe? According to consequence cause matching, the public will likely assume that large consequences are more likely to have large causes. They are consequently also likely to ascribe a small cause to a small consequence (LeBeouf & Norton, 2012). Even if the cause really was the overtight valve, the public is theoretically more likely to believe the willful negligence by management.

The situational crisis communication theory, the dominant crisis theory, holds that the public attributes blame for a crisis based on their perception of who or what is responsible. Once this attribution is made then it determines how publics will likely respond and what repair strategies are most likely to work (Coombs, Frandsen, Holladay, & Johansen, 2010). What happens if consequence cause matching skews the public's attribution for the crisis? An overtight valve would fall into the accidental cluster crisis type, where an organization has a lower level of responsibility. Willful negligence by management cause would fall into the preventable cluster crisis type, and the company would face a much greater level of attribution for the crisis.

Despite the potentially significant impact of consequence cause matching for crisis and other forms of communication research, there is currently a sparse amount of literature on the topic. A single paper examines the phenomenon in a communication context (LeBeouf & Norton, 2012), the remainder are in the discipline of psychology. None of the literature examines this phenomenon in public relations and crisis communication

Douglas Wilbur, Ph.D., Visiting Researcher, University of Texas at San Antonio, San Antonio, USA.

context. Thus, the purpose of this paper is to provide an initial and exploratory examination of the consequence causing matching as a factor that public relations scholars and practitioners must account for in dealing with crisis management.

Review of Literature

Consequence Cause Matching and the Representative Heuristic

Consequence cause matching is rooted in the representativeness heuristic. The representativeness heuristic happens because people estimate the probability of an event based on how similar it is to a known situation. For instance, people compare situation A, to situation B, because they already have situation B in mind. People make a judgement about probabilities by the degrees to which A is representative or resembles B (Tversky & Kahneman, 1974). Research has shown that people often believe that medical symptoms should resemble their perceived causes. For decades the medical profession believed that ulcers were caused by stress because stressed people often formed ulcers. Medical researchers challenged this false belief and provide the ulcers are caused by bacteria (Gilovich & Savitsky, 1996). The representativeness heuristic even extends to randomness. Events that do not appear to have any logical sequence are regarded as representing of randomness. In this case, people don't have any other similar event to compare the experienced one with, so they regard it as a random event, even though an investigation of the event could prove it is not random (Tversky & Kahneman, 1974).

Consequence cause matching extends upon the representativeness heuristic. Thus, a big cause, such as major bridge collapse, is representative of a big consequence, multiple deaths and horrible traffic jams, in terms of size and scope. Numerous studies show that highly educated professionals make decisions guided by the representativeness heuristic. Politicians routinely rely upon the representativeness heuristic in making policy decisions by comparing political phenomenon that appear similar (Stolwijk & Vis, 2020). Doctors have been shown to make medical diagnoses, such as schizophrenia, on the basis of the representativeness heuristic (Garb, 1996). Therefore, it is reasonable to conclude that the general public would be even more reliant upon the representativeness heuristic when making decisions about crises.

Consequence cause matching is predicated on the principle that people are motivated to live in a predictable situation, which leads to the belief that the world works in predictable ways. Thus, people believe that causes and consequences are systematically related (Kay, Gaucher, McGregor, & Nash, 2010). Specifically, people are more inclined to endorse a chain causes and consequences when they are similar in terms of scope and consequentiality. Therefore, psychologically people are more likely to match high consequence events with large causes. This occurs even when there is no legitimate reason to make these connections (Einhorn & Hogarth, 1986).

LeBeouf and Norton (2012) found across a series of four experiments that participants were more likely to pick large consequences for large events. Participants were also more confident that these causal relationships were predictable and stable. This is despite the fact that the scenarios were written so as to present no evidence that the causes and the consequences were related. A similar study used two experiments to discover participants matched high magnitude events with high magnitude consequences. This study however, discovered that this matching process was done using very simple reasoning processes without much rational deliberation. This is what one would expect from a heuristic processes (Ebel-Lam, Fabrigar, MacDonald, & Jones, 2010). van Prooijen and van Dijk (2014) found that when participants associated harmful consequences with big causes, it increased belief about conspiracies. The literature is clear that the representativeness heuristic can lead to some fairly false and possibly irrational explanations to actual crises.

Situational Crisis Communication Theory

The core of the theory is that public attribute blame for a crisis based on their perception of who or what is responsible. This has a direct impact upon an organization's reputation, which they ideally want to preserve and enhance. SCCT research identified 13 crisis types that are grouped into three clusters: the victim, accidental, and preventable clusters. Victim cluster crises happen when the public attributes victimhood to the organization itself. These include natural disasters, product tampering by rogue employee's and malicious rumors. The optimal response strategies for the victim cluster are: attack the accuser, deny the crisis, and find a scapegoat (Coombs, 2007).

The second cluster is accidental and happens when public ascribe lower levels of responsibility for the crisis to the organization. These can be caused by unintentional technical errors, like an aviation parts failure, that causes an airplane to crash. The optimal strategies for the accidental cluster are minimizing intent to do harm, and to justify or minimize perceptions of damage (Coombs, 2007). Thus, if the aircraft company can increase efforts to identify and eliminate these defective parts, they can prevent the manifestation of accident risks into an airplane crash. The preventable cluster is when public attribute a high degree of responsibility to the organization. These include human error and misdeeds that are mostly the result of intention or willful negligence. For instance, if an industrial mechanic fails to follow preventative maintenance procedures on a piece of factory equipment, it might fail causing harm to workers. The best response strategy for preventable crises is to offer an apology and compensation to the victims (Coombs, 2007).

SCCT has been validated by an extensive body of literature. However, there is a dearth of crisis and public relations literature applying findings from psychology about how and why people make these casual attributions for crises beyond the tenants of attribution theory. Incorporating the influence of decision-making heuristics, like the representativeness heuristic, can enrich this body of literature and expand its ability to explain, predict, and control crises. If consequence cause matching can be shown to influence casual attributions for crises, it represents a new potential growth area for SCCT.

Hypotheses

Based upon the review of literature the following hypotheses are offered. To clarity we define a large-scale crisis seriously that threatens many sectors of the affected areas economy, can involve the loss of multiple human lives, and seriously threatens the health and welfare of many individuals (Ezzahid, Firano, Ennouhi, Laaroussi, & Anbari, 2022). There is no appropriate definition of a large scale for a crisis in the literature. Here we will operationalize significant cause as any significant triggering event, such as a hurricane or act of war, that causes serious harm to many sectors of the affected areas economy, involves the loss of multiple human lives, and threatens the health and welfare of many individuals. A significant cause may or may not be intentional.

H1: Participants exposed to a large-scale crisis scenario will endorse a large vs. small cause for that crisis.

H2: Participants exposed to a small-scale crisis scenario will endorse a small vs. large cause for that crisis.

H3: Participants exposed to the large scale crisis scenario will rate the crisis as being more severe than participants in the small scale crisis condition.

H4: Participants exposed to the large scale crisis scenario will rate the company as being more responsible for the crisis than participants in the small scale crisis condition.

H5: Participants exposed to the large scale crisis scenario will rate the company' reputation as worse than for the crisis than participants in the small scale crisis condition.

Methods

To answer the hypotheses, a 2(Large Scale Crisis vs. Small Scale Crisis) \times 2(Large Scale Cause vs. Small Scale Cause) mixed factorial design experiment was conducted. Participants were randomly assigned to either the large- or small-scale crisis conditions. In both conditions, where the crisis was described, no information about the cause of the crisis was offered. Each participant then read two possible explanations, large and small, both are described as being equally likely to have caused the crisis. They were then asked to rate which cause scenario was more likely to be the cause of the crisis.

Stimulus Material

The large-scale crisis was described as an explosion at food processing plant that killed five workers and injured twelve. It also caused traffic closure due to smoke and debris. The small-scale crisis was described as an industrial fire, with no injuries, where the smoke and leaking chemicals were going to close down the state highway for several days. The road closure would cause hardships for the local community that needs the road. In both scenarios, it was stated that the cause of incident was still unknown. The large-scale cause was described as a lighting strike on pipes that were vulnerable to such strikes. It was stated that the company knew beforehand that a lightning strike on the pipes was possible. This crisis would fall into the preventable crisis cluster. The small-scale cause was ascribed to a technician unintentionally over-tightening two valves that caused pressure to build within the pipes to dangerous levels. This eventually led to an explosion. Participants were instructed that both scenarios were equally likely to have caused the crisis.

Measures

Direct attribution for crisis. Participants' assessment of the cause for the crisis scenario they were exposed to was measured in two ways. First, they were given a binary choice question asking them to pick either the largeor small-scale cause. Second, they were presented with a seven-point Lickert scale asking them to rate likelihood of each the large and small-scale crisis with one being not likely and seven being completely likely. Scale reliability, ($\alpha = 0.86$), was good.

Crisis responsibility. The crisis responsibility scale (Brown & Ki, 2013) measured the degree to which participants ascribe blame to the organization for the crisis. It has five items measured, ($\alpha = 0.92$), on a seven-point Likert scale ranging from one (strongly disagree) to seven (strongly agree). This scale was administered after participants read the scenario condition they were assigned to. It was re-administered after participants rate direct attribution for the crisis.

Organizational reputation. The organization's reputation was measured using an organizational reputation scale (Coombs & Holladay, 2002). It has twelve items, ($\alpha = 0.93$), measured on a seven-point Likert scale ranging from one (strongly disagree) to seven (strongly agree). This scale was administered after participants read the scenario condition they were assigned to. It was re-administered after participants rate direct attribution for the crisis.

Perception of crisis severity. The participant's perception about the seriousness of the presented crisis was measured with a modified crisis perception scale (Billings, Millburn, & Schaalman, 1980). This scale has four items, ($\alpha = 0.72$), measured on a seven-point Lickert scale that evaluated participants' perceived disruptiveness posed by the accident. This scale was administered after participants read the scenario condition they were assigned to. It was re-administered after participants rate direct attribution for the crisis.

Findings

A total sample of (N = 200) participants from Amazon M-Turk were used. The first hypotheses stated, participants exposed to a large-scale crisis scenario will endorse a large vs. small cause for that crisis. Using a MANOVA, s significant interaction effect was found between the small and large crisis conditions and attribution for the crisis, F(3,198) = 160.569, p < 0.01, $\eta_p^2 = 0.709$. Participants in the large cause condition almost unanimously, 98 percent, endorsed the large cause, intentional neglect, as the cause. Rating the likelihood of intentional neglect as the cause they answered, (M = 6.0, SD = 0.802), that it was likely. Therefore H1 is supported.

The second hypothesis stated, participants exposed to a small-scale crisis scenario will endorse a small vs. large cause for that crisis. Most participants in the small-scale crisis condition, 88 percent, endorsed the overtight valve as the cause of the crisis. When asked to rate the likelihood of an overtight valve as the cause of crisis they answered, (M = 5.35, SD = 0.122), that it was somewhat likely. Therefore H2 is supported.

The third hypothesis stated, participants exposed to the large scale crisis scenario will rate the crisis as being more severe than participants in the small scale crisis. Since this scale was administered right after exposure to the crisis scenario and then again after exposure to both of the possible causes, a repeated measure MANOVA was used. Significant differences were found, F(1,199) = 4.512, p < 0.05, $\eta_p^2 = 0.0.22$, between the conditions in terms of mean scores on the crisis severity scale. In the first administration of the scale the mean scores for the large scale crisis, (M = 5.38, SD = 0.816), were higher than the small scale crisis, (M = 4.32, SD = 1.015). For the second administration of the scale the large crisis, (M = 4.99, SD = 1.079), was still slightly smaller. There appear to be no major differences from time one to time two administrations of the scale. Thus, H3 is supported.

The fourth hypothesis stated, participants exposed to the large scale crisis scenario will rate the company as being more responsible for the crisis than participants in the small scale crisis. A repeated measure MANOVA was used and significant differences were found, F(1,200) = 26.000, p < 0.01, $\eta_p^2 = 0.115$, between the conditions in terms of mean scores on the crisis responsibility scale. In the first usage of the scale the mean scores for the large crisis, (M = 5.58, SD = 0.492), were higher than the small crisis, (M = 4.34, SD = 1.139). For the second administration of the scale, the gap between the large crisis, (M = 6.21, SD = 0.602), and the small crisis, (M = 4.33, SD = 1.300), grew. In terms of time one and two administrations there was a 0.63 increase in the mean score. The small crisis mean scores were barely changed over the administrations. Therefore, H4 is supported.

Hypothesis five states, participants exposed to the large scale crisis scenario will rate the company' reputation as worse than for the crisis than participants in the small scale crisis. A repeated measure MANOVA discovered significant differences, F(1,200) = 5.13, p < 0.05, $\eta_p^2 = 0.0.34$, between the conditions in terms of mean scores on the corporate reputation scale. In the first administration the mean scores for the large crisis, (M = 3.83, SD = 0.913), were slightly lower than the small crisis, (M = 4.12, SD = 1.122). For the second administration of the scale means scores of the large crisis, (M = 3.56, SD = 0.992), dipped further compared to the small crisis, (M = 4.24, SD = 1.126). The mean score fell by 0.27 from the first to second administration. H5 is supported.

Discussion

The results of this study found support for all five hypothesis. Participants in the large scale crisis identified the management's failure to preemptively fix the problem as the cause of the problem. Participants in the small

scale crisis condition mostly identified the over-tight valve as the cause. Furthermore, participants in the large scale crisis endorsed higher mean scores for crisis severity, crisis responsibility, and lower scores for corporate reputation compared to the small scale crisis condition. The mean score for crisis responsibility rose from time one to time two in the large scale crisis condition. Mean scores for corporate reputation fell from time one to time two in the large scale crisis. This implies there was some kind of amplification effect by exposure to the perspective cause in the large scale crisis condition.

For hypotheses three to five the mean scores for the small scale crisis were somewhere in four range, which on a seven-point scale is a neutral rating. This indicates that the small scale crisis didn't have much of an impact on participants' opinion. Perhaps they saw the small scale crisis as not being serious enough. For crisis severity the large scale crisis were in the five range for mean scores, which indicates they perceived it as being slightly more severe. However, in terms of responsibility, they were in the six range during the second administration of the test. This indicates a firm but not solid attribution of responsibility for the crisis to the company. For corporate reputation, participants in the large scale crisis condition answered in the three range. This indicates a slightly bad opinion of the company.

These results indicate that the size of a crisis can impact attribution for its cause as well as the reputation of the parties involved. Depending upon the size of the crisis and how it framed the representativeness heuristic could theoretically move a crisis in the accidental cluster into the preventable cluster in the minds of the public. When a crisis is large, people are more likely to ascribe a correspondingly larger cause for that crisis. When a cause for a large crisis is not apparent, people may search out a large and more malevolent cause for the crisis in accordance with previous literature (LeBeouf & Norton, 2012). The theoretical implication is that there exist other unexplored factors of a crisis that can influence people at the psychological level that can change how they attribute crisis responsibility that are not currently accounted for. These need to be explored and formally integrated into the theory to keep it robust and relevant. Practically, this indicates that public relations practitioners need to be very accurate and persistent in describing the causes of the crisis. When the crisis is large, they are more likely to have to combat misinformation and even conspiracy theories.

Limitations and Conclusion

Limitations

Like all studies, this one has some limitations. The first is that the crisis examples used may not have been impactful enough to trigger more variance in respondents' answers. The fact that participants in the small crisis condition gave predominantly neutral answers may also indicate ambivalence towards the crisis that would not exist if they were personally impacted by it. It is also possible that they were satisfying to finish as quickly as possible. Additionally, the sample size of (N = 200) was adequate, but it could have been larger.

Conclusion

The results provide evidence that consequence cause matching is a legitimate phenomenon that should be accounted for in the management of a crisis. The representativeness heuristic is a cognitive factor that will impact how participants perceive a crisis. This may be more impactful for larger scale crises that have more serious repercussions for society. Theoretically, the situational crisis communication theory is ripe for development in terms of more recently discovered psychological causes that impact attribution. Practically, PR practitioners need to incorporate factors like the representativeness heuristics in their pre-crisis planning and post crisis recovery.

References

- Billings, R., Milburn, T., & Schaalman, M. L. (1980). A model of crisis perception: a theoretical and empirical analysis. *Administrative Science Quarterly*, 25(2), 300-316.
- Brown, K. A., & Ki, E. J. (2013). Developing a valid and reliable measure of organizational crisis responsibility. *Journalism & Mass Communication Quarterly*, 90(2), 363-384.
- Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, *10*, 1-14. doi:10.1057/palgrave.crr.1550049
- Coombs, W. T. (2014). Ongoing crisis communications: Planning, managing and responding. London: Sage Publications.
- Coombs, W. T., & Holladay, S. J. (2002). Helping crisis managers protect reputational assets initial tests of the situational crisis communication theory. *Management Communication Quarterly*, 16(2), 165-186.
- Coombs, W. T., Frandsen, F., Holladay, S. J., & Johansen, W. (2010). Why a concern for apologia and crisis communication? *Corporate Communications: An International Journal, 15*(4), 337-349.
- Ebel-Lam, A., Fabrigar, L., MacDonald, T., & Jones, S. (2010). Balancing causes and consequences: The magnitude-matching principle in explanations for complex social events. *Basic & Applied Social Psychology*, 32(4), 348-359. doi:10.1080/01973533.2010.519245
- Einhorn, H. J., & Hogarth, R. M. (1986). Judging probable cause. Psychological Bulletin, 99, 3-19. doi:10.1037/0033-2909.99.1.3
- Ezzahid, E., Firano, Z., Ennouhi, J., Laaroussi, A., & Anbari, A. S. (2022). Countries' readiness to deal with large-scale crises: Analysis, measure, and world classification. *Policy Sciences: Integrating Knowledge and Practice to Advance Human Dignity*, 55(3), 555-572. Retrieved from https://doi-org:10.1007/s11077-022-09464-4
- Garb, H. N. (1996). The representativeness and past-behavior heuristics in clinical judgment. Professional Psychology: Research and Practice, 27(3), 272-277. doi:10.1037/0735-7028.27.3.272
- Gilovich, T., & Savitsky, K. (1996). Like goes with like: The role of representativeness in erroneous and pseudo-scientific beliefs. *Skeptical Inquirer*, 20(2), 34-40. doi:10.1017/CBO9780511808098.036
- Kay, A. C., Gaucher, D., McGregor, I., & Nash, K. (2010). Religious belief as compensatory control. *Personality and Social Psychology Review*, 14(1), 37-48.
- LeBeouf, R. A., & Norton, M. I. (2012). Consequence-cause matching: Looking to the consequences of events to infer their causes. Journal of Consumer Research, 39(1), 128-141. doi:10.1086/662372
- Stolwijk, S., & Vis, B. (2020). Politicians, the representativeness heuristic and decision-making biases. *Political Behavior*, 43(4), 1411-1432. doi:10.1007/s11109-020-09594-6
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. Science, 185(4157), 1124-1131.
- Van Prooijen, J.-W., & van Dijk, E. (2014). When consequence size predicts belief in conspiracy theories: The moderating role of perspective taking. *Journal of Experimental Social Psychology*, 55, 63-73. doi:10.1016/j.jesp.2014.06.006