Learning from Past Crises:

Evaluating Hotels' Online Crisis Responses to a Health Crises

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Abstract

Organizational learning is an important function of tourism crisis management. By examining and evaluating hotels' responses to the 2010 bed bug crisis on social media, the purpose of this study was to provide insights into how to establish effective crisis responses. Situational Crisis Communication Theory (SCCT) was used as the theoretical framework and a total of 136 management responses were included in the sample. Content analysis and co-occurrence analysis were conducted. The results revealed a learning curve of crisis management for hotels. Enhancing and bolstering were the most commonly used strategies within the sample. Further analysis showed the inconsistencies between hotels' crisis response strategies and the SCCT guidelines, where instructing information were seldom included. Based on the findings, this study discussed the importance of creating effective crisis responses and future research directions.

Key Words. Crisis Response and Recovery, Crisis Communication, Health Crisis, Organizational Learning, Social Media

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Introduction

Increasingly, the hospitality and tourism industry is facing challenges brought by incidents involving risks for both tourists and hospitality organizations. This includes a wide variety of issues, ranging from political unrest, terrorist attacks, natural disasters, to health-related incidents. Without proper management, a risk may develop into a crisis, which can negatively affect tourism business, tourism organizations, and destinations (Paraskevas & Quek, 2019; Pennington-Gray, 2018). As an important sector of the tourism and hospitality industry, hotels are also vulnerable to these unexpected, adverse events. Particularly, the onset of a tourism crisis can threaten the safety and well-being of hotel guests and employees, and lead to service failure, customer dissatisfaction, revenue loss, as well as reputational damages (Brown, Rovins, Feldman-Jensen, Orchiston, & Johnston, 2017).

Organizational learning is another important function of tourism crisis management (Ghaderi, Mat Som, & Wang, 2014). As Faulkner (2001) pointed out, "crisis and disasters have transformational connotations, with each such event having potential positive (e.g., stimulus to innovation, recognition of new market, etc.), as well as negative outcomes (p. 137)". Therefore, tourism organizations and business should not be afraid of challenging existing mental models, instead, they should carefully review past crisis situations, assess the impact of alternatives, and constantly improve their crisis management practices to prepare for future complications (Brown et al., 2017Blackman & Ritchie, 2008; Ghaderi et al., 2014;).

Situational Crisis Communication Theory (SCCT) is one of the most widely applied theoretical frameworks in crisis communication that guide the development of crisis response (Kim & Sung, 2014). The SCCT features a situational approach and suggests that an effective crisis response should contain three components: (1) instructing information, (2) adjusting information, and (3) reputational management strategies (Coombs, 2014). Depending on the situation and the attribution level, a specific combination of reputational strategies shall be used (Coombs, 2014). In addition to the content, Sigala (2011) suggest that social media, as a new medium, play an evolutionary role in crisis communication. Social media offers an interactive platform where organizations can communicate with the stakeholders/public in a timely fashion. The conversation on social media is also available to the public, and such open access not only enables stakeholders to locate the information quickly, but also have the potential to shape other audiences' perception, attitude, and evaluations (Ott & Theunissen, 2015).

Effective crisis communication involves the right message and the right medium (Cheng, 2018; Coombs & Laufer, 2018; Sigala, 2011; Ott & Theunissen, 2015). Despite the advancement of academics, it remains unclear if the industry's current practices are aligned with theoretical guidelines. The effectiveness of the industry's crisis response strategies has not been critically examined, either (Mair, Ritchi, & Walters, 2016; Zhai & Luo, 2018). Thus, guided by the SCCT, the purpose of this study was to examine and evaluate hospitality and tourism organizations' crisis responses on social media. In doing so, this study not only aims at providing insights into the state-of-the-art in tourism crisis communication, but also tries to shed lights on improving practitioners' practices and contributing to the existing body of knowledge.

Study Context

This study focused on the case of bed bug crisis in New York City (NYC) and paid specific attention to the lodging industry. New York City (NYC) is a popular destination in the United States and has the third-largest hotel market in the nation (Office of New York State Comptroller, 2017). Notably, with a 22% increase in the number of available rooms online between 2012 and 2016, the Internet has become an important distribution channel for most NYC hotels (Office of New York State Comptroller, 2017). The increasing dependence on the Internet requires hotels to maintain positive presences online and effective communications with tourists. This holds special truth for crisis management and communication, as the Internet (e.g., websites, OTA, social media) are the primary information sources for most tourists and can be used as a powerful tool to mobilize relief efforts and accelerate service recovery during crisis times (Liu, Pennington-Gray, Donohoe, & Omodior, 2015).

Since 2008, NYC has seen a resurgence of bed bug infestations, which had reached its highest level in 2010 when 13,140 bed bug complaints were reported and over 7000 cases were confirmed (Liu et al., 2015). It was not until 2013 that the number of bed bug violations and complaints started to decline and eventually, the city had returned to normalcy. Hotel rooms are one of the most frequent locations reported for bed bug encounters; and some of the negative effects associated with the bed bug encounters include economic losses, liability issues, guest complaints, and bad publicity (Liu et al., 2015). Additionally, bed bug encounters negatively affect the reputation of hotels via eWOM. It is reported that nearly 11% of all US hotel reviews on TripAdvisor complained about bed bug infestation in hotel rooms in 2010. The soaring number of reviews not only reported the crisis situation from a citizen journalism perspective, but has also led to a general perception that bed bug infestations are closely associated with NYC hotels (Liu et al., 2015).

Despite its potentially catastrophic impact, crisis times represent an opportunity for organizational learning, which not only enhances an organization's crisis management and communication skills, but also fosters organizational resilience in coping with crises (Paraskevas & Quek, 2019). Thus, by examining hotels' responses on social media regarding an emerging health issue, we can obtain a clear understanding of the industry's current practices. This study also evaluated the responses using the SCCT. The comparison between theory and practice will also provide valuable lessons for organizational learning and improvement.

Methods

Research Questions

This study aims to understand how hotels responded to an emerging health issue on TripAdvisor. Specifically, this study tried to address the following two research questions:

- How did hotels respond to bed bug related reviews on TripAdvisor?
- Are hotels' crisis responses consistent with the SCCT guidelines?

Data Collection

The dataset was built by scraping the TripAdvisor website using keywords such as "bed bug(s)" and "bedbug(s)" for the period between 2002 and 2013. A total of 176 management responses were collected; A preliminary analysis of the sample showed that 40 responses were irrelevant for the study purpose and were not included in the subsequent analysis. One hundred and thirty-

six (136) management responses were included in the final sample. Each management responses serves as a unit of analysis in this study.

Data Analysis

The analytical process is divided into three steps. Firstly, descriptive analyses were conducted to reflect the overall trend of hotels' response behavior. Secondly, guided by the SCCT, a coding scheme was developed (See Table 1). Each hotel response, as the unit of analysis, was coded "1" for present and "0" for absent corresponding to each communication strategy. The data were coded by two trained coders and inter-coder reliability was found to be acceptable for statistical analysis (Krippendorff's alpha > .838). The frequency of each theme was reported in Table 1.

[Insert Table 1 Here]

Lastly, following Stepchenkova, Kim, and Kirilenko (2015)'s practice, co-occurrence analysis was conducted to examine what strategies were used simultaneously by hotel managers. A previous study (Liu et al., 2015) suggested that hotel guests tend to attribute the responsibility of bed bug encounters in hotel rooms to the hotel property. The SCCT suggests that an ideal response to this scenario should include (1) instructing information, (2) adjusting information, and (3) the reputation management strategies of Rebuilding and Bolstering. Thus, co-occurrence analysis can be used to analyze if the usage of strategies is consistent with the SCCT guidelines.

Co-occurrence analysis aims to test a hypothesis that the actual and expected probability of any random two strategies co-occur are statistically different at the significant level of 0.001, 0.01, and 0.05, respectively. To test the hypothesis, the z-score for the actual co-occurrence was compared to the critical z-scores for non-directional hypothesis at the significant level of 0.001, 0.05, and 0.01 (zcrit=3.5, 2.58 and 1.96). Large and positive z-score indicates a positive statistical link between two strategies, suggesting that hotel managers tend to use the two strategies at the same time.

A z-score for actual co-occurrence is calculated as

$$z = \frac{f_{s1s2} - E}{\sqrt{Var}}$$

Where

- The probability of Strategy 1 (P_{s1}) and Strategy 2 (P_{s1}) is $p_{s1} = \frac{f_{s1}}{N}, p_{s2} = \frac{f_{s2}}{N}$
- The probability of S1 and S2 co-occurrences $P_{s1} P_{s2} = p_{s1} \times p_{s2}$
- The number of S1 and S2 co-occurrences $f_{s1s2} = f_{s1} \times f_{s2}$
- Expected value $E = Np_{s1}p_{s2}$
- Variance $Var = NP_{s1}P_{s2}(1 - p_{s1}p_{s2})$

Note
- S1 and S2 represent Strategy 1 and Strategy 2 respectfully.
- *P*s1 and *P*s2 represent the probability of S1 and S2 appear independently in the management responses.
- *f*s1 and *f*s2 represent the frequencies of S1 and S2 appear independently in the management responses
- N represents the sample.

Results

RQ1. How did hotels respond to the Bed Bug related reviews on TripAdvisor?

To answer the first research question, this study undertook two approaches: (1) examining the overall trend and (2) analyzing the specific crisis communication strategy used in the response. As shown in Table 2, the response rate is positively related to the year (Υ= .929, p < .01), suggesting that as time goes by, the hotels are more likely to respond tourists' comments/concerns. Also, with an average rating of less than 3, it seems that most of the reviews that received managerial responses were negative in nature.

{Insert Table 2 Here}

Regarding the content of the response, as shown in Table 1, all information elements (i.e., instructing information, adjusting information, reputation management strategies) can be found in the management responses. Particularly, Bolstering (n = 113, 83.09%), Enhancing (n = 87, 64.0%) and Adjusting Information (n=77, 56.62%) were the most used strategies within the sample.

RQ2: Are hotels' crisis responses consistent with the SCCT guidelines?

Based on the content of the responses, A conceptual map is generated and presented in Figure 1.

[Insert Figure 1 Here]

Interestingly, the primary results showed that each strategy is organically connected to one another. There is no stand-alone strategy. The following correlations have been noted: (1) instructing information is positively related to diminishing posture (n = 27, z-score = 4.36, p < .001); (2) adjusting information is positively related to all reputational management and the instructing information; (3) bolstering posture is positively related to instructing information (n= 62, z-score = 3.56, p < .001) and adjusting information (n = 62, z-score = 3.56, p < .001); (4) enhancing posture is positively related to the bolstering posture (n = 78, z-score = 5.66, p < .001).

Discussion and Conclusions

The purpose of this study was to examine and evaluate hoteliers' response to an emerging health issue on social media. From the general trend of the sample's response behavior, it seems that most hotel properties assume a responsive crisis management approach and wouldn't take actions until the issue has been escalated into a situation. Their behaviors over time also reflect a learning curve where most organizations learn from the situation and improve their crisis management efforts gradually. Contemporary crisis management literature has repeatedly stressed the importance of using a proactive approach, where issue identification and signal diction should receive equal attention as crisis response and recovery (Coombs & Laufer, 2018; Paraskevas & Quek, 2019).

This study also concerns about the content of the response and the consistency between practice and theatrical guidelines. The findings are assuring at first glance, as all the recommended information elements are presented in the management response. A closer examination, however, has revealed differences. Positive relationships among instructing information, adjusting information, Rebuilding and Bolstering postures were expected, but not observed. To begin with, the responses in the sample largely rely on the use of adjusting information and the postures of bolstering and enhancing. Regarding the adjusting information, some empirical studies (e.g.,

Coombs & Holladay, 2008) found that compassion is effective for non-victims, but not victims who are actually sharing their experience via social media. While for the postures of Bolstering and Enhancing, they are recommended to be used as supplementary strategies rather than the main strategies. The lack of a main reputation management strategy may result in adverse effects that are contradictory to hoteliers' expectations (Perez-Aranda, Vallespin, & Molinillo, 2019).

Additionally, the importance of instructing information has been overlooked. Instructing information explains the crisis situation and educates the public on preventative measures. This type of information is extremely useful as it can lower public anxiety (Kim & Sung, 2014). Despite its importance, it is noted that practitioners have not been able to incorporate this type of information in their response (Liu & Pennington-Gray, 2015). Such ignorance may reduce the effectiveness of these responses, as the audience may still feel worried and anxious about the problem (Kim & Sung, 2014). Lastly, the rebuilding posture, which involves compensation and apology, is found more suitable for the current situation. This is consistent with the findings of previous studies (Liu et al., 2015), but unfortunately, not noted in the current findings.

In summary, hoteliers have made great progress in managing the bed bug issue. They have adopted extensive treatment and preventative measures on site, and have become more responsive online. They also realized the importance of providing timely and comforting messages to their guests. However, the findings of the current analysis showed that most hoteliers did not have a proper understanding of the situation, which may have limited their ability to provide an accurate and effective response. Improper responses may have resulted in public doubt, where individuals do not think that hotels have the ability to control the situation and the situation remains risky. This misperception can be further translated into reputational damages as well as tarnished brand images, both of which directly affect customers' purchasing/revisiting intentions. Similarly, some hoteliers have the tendency to largely rely on secondary crisis response strategies. This may also reduce the effectiveness of crisis response, as the audience needs clear messages that justify the hotel's actions and attitude regarding the situation.

Future Studies

Through an analysis of NYC hotels' online management responses to guests' bed bug concerns, the findings of this study revealed an urgent issue, which involves hoteliers' improper understanding of health crises and their inability of creating effective responses. This is evidenced by the inconsistencies between current hoteliers' practices and theoretical guidelines. In the meantime, this finding challenges the efficacy of the traditional tourism crisis management model. Tourism organizations should maximize the organizational learning function through the process and enhance their dynamic capability to manage health crises (Liu et al., 2015; Mansour, Holmes, Butler, & Ananthram, 2019). The role of social media, in particular, needs to be addressed. Future studies should test the effects of different messages and mediums on people's attitude, perception, and purchasing/visiting intentions. An integrated and innovative conceptual tourism crisis management should also be developed and tested.

Additionally, crises offers a unique learning opportunity for organizations to improve their management skills, but this has been overlooked by the practitioners as reflected in the current case. By revealing the current gaps, this study particularly stresses the importance of organizational earning in tourism crisis management, which echoes scholars' advocacy both in tourism and public relations studies (e.g., Blackman & Ritchie. 2008; Coombs & Laufer, 2018;

Paraskevas & Quek, 2019). In the same vein, the linkage between issue management, risk management, crisis management, organizational learning, and organizational resilience should be acknowledged and studied in tourism management. Both conceptual and empirical studies are needed to demonstrate the relationship among these key concepts. Theory-driven and evidence-based guidelines can be further developed and presented to the practitioners.

Furthermore, when analyzing the content of hotels' response strategies, specific hotel information was not included. This is mainly due to methodology considerations. Every hotel has its own policy and the utilization of strategy may vary. Thus, future studies should consider this and incorporate hotels' insights into analyses.

Lastly, extending this line of inquiries, future research can examine practitioners' crisis response behaviors in different sectors, ranging from food and beverage, destinations, and airlines. Evaluating and comparing the crisis response behavior across various context not only can provide important theoretical insights, but also can be useful for practical implications. Another line of inquiry involves epical studies that can actually test the effects of different crisis response strategies on customers' reactions. Experimental studies, in particular, will be useful in this context.

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