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Dire Straits: How tourists on the Diamond Princess cruise endured the COVID-19 crisis

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ABSTRACT

Despite insights about tourists’ health risk perception, crisis management literature still lacks understanding of how tourists actually experience ongoing crises and how their in situ perception evolves. Drawing on the unique case of the quarantine of the Diamond Princess at the Port of Yokohama in early February 2020, this study investigates how tourists intuitively and affectively enact the scene of a crisis in their concurrent discourses. A unique dataset covering 2259 social media entries by tourists during the quarantine were compiled manually and examined. Tourists’ concerns and emotions demonstrate two salient characteristics of the enactment of the crisis scene: expressing cautious optimism and crafting realistic lifestyle. Findings demonstrate the resilience of tourists under extreme circumstances, elucidate similarities and differences of tourists’ experience mediated by language, and show their supportive attitude toward tourist industry players. Service providers can strategically use of tourists’ sensemaking and psychological resilience to improve market images.

1. Introduction

When the Diamond Princess, the well-known international cruise ship in Japan, started her round Pacific journey from the Port of Yokohama on January 20, 2020, the 2666 tourists as well as 1045 crew members onboard the ship could not have imagined that their trip would have ended up with a total of 712 symptomatic and asymptomatic people testing positive for COVID-19. All of the tourists were confined to their cabins in a bid to halt the spread of the novel coronavirus for 14 days as the luxury cruise ship was quarantined at her home port from February 3rd to 18th 2020, after it emerged that a man suffering from COVID-19 spent a few days onboard.

What was the onboard experience like for tourists during such an unprecedented and extreme event? Did it really feel like being trapped in a “ghost town” as depicted by social media? Investigating this question may help achieve a more nuanced understanding of the impact of COVID-19 on the tourists in a real-time manner. The sweeping and unparalleled effects of coronavirus can be seen as a disaster and a crisis as the same time (Zenker & Kock, 2020). It can be considered as a disaster because of the external and unexpected nature of epidemics, over which tourism providers have nearly no control. It is also a crisis because tourist providers are not well equipped to cope with sudden changes by usual routine procedures at place, posing great challenges for the tourism industry and affecting its existential core (Faulkner, 2001; Ritchie & Jiang, 2019). This dual nature of COVID-19 is especially salient in the case of the Diamond Princess because of the physical structure and service setup of the cruise ship.

This particular setting of the Diamond Princess provides a rare and unique opportunity to observe how tourists in the middle of a health crisis made sense of their limited social surroundings, attached different meanings to objects, people, and acts onboard, and elaborated their perception of the cruise service. Conceptually, this study provides a rare account of service experience from a crisis management angle and sheds light on how physical, social and psychological constraints can affect the interaction between customers and suppliers (Elliott et al., 2005). Seeing crises as scenes for tourists’ thoughts and acts, this paper explores how tourists intuitively and affectively enact the scene of a health crisis in their concurrent discourses.

Motivated by the considerations above, this research attempts to reveal the sociocognitive dynamics of the tourists onboard the Dimond Princess during her lockdown. Specifically, the passenger composition – half Japanese and half international (1285 out of 2666 onboard were Japanese citizens), constitutes a unique sample for examining how and why tourists intuitively and affectively enact the scene of a health crisis in their concurrent discourses.
unique dataset covering 2259 social media entries by tourists during the lockdown was manually compiled and computational textual analytic tools – topic modeling and sentiment analysis – were used to investigate tourists’ real-time discourses in an extreme tourism locale.

2. Literature review

The tourism industry is vulnerable to crises, as they can disrupt operations of service providers and experience of tourists related to geographic destinations or means of mobility. Since crises can be recurrent and nonpreventable (Glocio & Michael, 2007; Perrow, 2011; Pfarr & Hosie, 2008), effective crisis management is regarded as an essential strategic asset for minimizing losses, resuming and sustaining operations, and learning lessons to become better prepared for future crises (Bundy et al., 2017). Managers are often required to leverage cognitive abilities in detecting signals, make proper decisions and allocate various resources as the crisis evolves (Paraskevas & Alitini, 2013). Consequently, crisis management in the tourism industry is essential because it provides rationales, principles and tools for tour operators, tourists’ confidence and make destinations and service options attractive and worthy of economic and temporal investment (see Berbeka et al., 2021 and Wu et al., 2021 for reviews of crisis management research in the tourism industry).

Among crises that differ in nature, scale, time horizon, and magnitude (Ritchie & Jiang, 2019), health-related crises are particularly impactful. For example, the foot-and-mouth outbreak in 2001 badly disrupted the inbound tourism of Scotland and Britain (Frisby, 2003; Yeoman et al., 2005). The outbreak of SARS in parts of Asia in 2003 had adverse impact on international arrivals and domestic leisure activities (Dombey, 2004; Henderson, 2004; Kuo et al., 2008). The swine flu significantly decreased visitor arrivals in the UK in 2008 and 2009 (Page et al., 2012). The ongoing COVID-19 crisis is posing unprecedented challenges for the tourism industry at a global scale (Hall et al., 2020; Sigala, 2020; Ugur & Akbıyık, 2020; Skare et al., 2021). A forecasted scenario for international tourism demand suggests a significant drop in tourist arrivals ranging from 30.8 to 76.3 percent, which will persist at least until June 2021 (Fotiadis et al., 2021).

Previous research has primarily focused on how tourism actors deal with crises through preparedness and planning, response and recovery, and resolution and reflection before, during and after the occurrence of crises (Ritchie & Jiang, 2019). While some studies have investigated how tourists – the demand side of the tourism industry – view and perceive health crises, most of them use surveys, questionnaires or experiments to investigate what would-be tourists do after crises, such as travel intentions, destination choices and behavior changes. Thus, it is not clear how tourists feel and think when they directly face extreme and constraining circumstances and intimately experience ongoing crises, such as in a physically isolated and constrained locale – cruise ships. Tourists’ situational understanding and reactions to crises are critical because they can provide relevant and real-time information and help improve tourism providers’ responses and knowledge building.

2.1. Tourists’ perception of health crises

Broadly speaking, two groups of literature are concerned with tourists’ perception of health crises. The first group takes the standpoint of tourists, investigating how tourists perceive health issues and risks, which can have significant effects on their travel behaviors, such as decision making, travel intention, destination choice, and satisfaction (Cui et al., 2016; Reisinger & Mavondo, 2006). This subjective-oriented view underlines how psychological processes such as personality, emotion and cognition influence tourists’ risk perception. Travelers’ level of worry can increase the level of their perceived travel risk and self-protective behavior (Chien et al., 2017), which in turn affect their choices and decisions in accommodation (Pappas & Glyptou, 2021) and restaurants (Chuo, 2014). The disease threat level, mediated by their risk aversion level, can increase tourists’ emotional negative reaction to disadvantaged prices inequality (Zhang et al., 2020). The threat severity and susceptibility can cause travel fear, which leads to protective travel behaviors after the pandemic outbreak (Zheng et al., 2021b). Even in a short period of time as within two weeks after the outbreak of the COVID-19, travelers’ risk perception changed dramatically and their willingness to change or cancel travel plans significantly increased (Neuburger & Egger, 2021). Health crises can also induce anxiety and cause distress (Chua et al., 2021), which in turn can activate travel-related phobia and lead to decreasing travel intention (Zenker et al., 2021) and threat-avoiding behavior related to crowding perception, group travel preference and destination loyalty (Kock et al., 2020).

The second group of literature takes a different angle and emphasizes actions and strategies of tourism providers, underlining how tourists’ health concerns can be addressed, and their risk perception shaped and changed. In particular, some studies have highlighted the role of crisis communication in addressing tourists’ health concerns during ongoing crises. Over an observation period of 21 months, Novelli and colleagues (2018) studied how The Gambian government formulated a containment and recovery strategy under resource constraints when facing the Ebola Virus Disease Epidemic. It was suggested that the communication strategy could have been more vocal and effective in disassociating with Ebola. By contrast, to appeal to tourists during the SARS crisis, Singapore delivered a strong counter message to modify the country’s perceived unsafe image (Avrahm & Ketter, 2017). By content-analyzing 57 CEO letters published by hospitality companies, Im et al. (2021) revealed different narrative strategies with defensive and assertive tactics to appeal to customers and the general public. In an experimental study, Hang et al. (2020) found that hotels can share emotions with tourists and build emotional attachment, so that tourists intend to visit hotels after the crisis. In the cruise travel context, while health crises in general decrease their travel intention, perceived crisis management by service providers and proper crisis communication through traditional and new media can mitigate the negative relationship and positively affect tourists’ perceived safety (Liu et al., 2016; Pan et al., 2021).

Despite their different emphases, both groups of literature suggest that health crises not only refer to objective risk, but are subjective and socially constructed. Tourists’ beliefs about the potential uncertainty and assessment of adverse outcomes are consequential for service providers (Holland et al., 2021). They recognize the importance of bonding with tourists, cultivating a positive image and generating favorable impressions when encountering health crises. The customer-centric orientation is crucial, because tourists are the primary audience who care about service providers’ correctness, consistency, and trustworthiness (Elsbach, 2003). The unexpected and uncertain nature of crises can generate negative perception of social interactions among customers and amplify disconfirming reactions to providers. Moreover, tourists’ perception of crises may change over time as conditions and situations evolve and some tourists are more resilient or crisis-resistant than the others (Hajibaba et al., 2015). Thus, service providers should not only attend to the service delivery process per se, but should also carefully grapple with interactions between customers and suppliers and among customers (Elliott et al., 2005; Laing et al., 2002).

However, while the first group of studies provides valuable insights on tourists’ feelings and perceptions, they primarily focus on tourists’ future and make plans after the occurrence of health crises without paying enough attention to tourists’ actual experience during ongoing crises. While the second group of studies touches on how crises unfold, they focus more on service providers’ strategies and tactics, leaving tourists’ responses in the background of health crises. Taken together, this paper aims to address the lack of first-hand in situ observation of tourists during crises and foreground their real-time experience of crises and perception dynamics.
2.2. Tourists’ experience and social media in crisis management

Tourists use storytelling and narratives to reconstruct their embodied experience and engage with given tourism settings (Park & Santos, 2017; Tung & Ritchie, 2011). They insert their interpretation and value when sharing the lived experience and evaluated experience (Bosangit et al., 2015; Ryan, 2010). These experiences cover physical, social and product/service aspects and demonstrate tourists’ knowledge, memory, perception, emotion and self-identity (Cutler & Carmichael, 2010). Tourists’ experiences and evaluations are valuable for actors to manage crisis. Henderson (2004) analyzed Singapore Airlines’ communication strategies during the early stages following the crash of SQ006 and pointed out the benefits of audience-tailored strategies, including accepting responsibility, making amends and offering reassurance. Garnett and Kozmin (2007, p. 171) proposed that “Hurricane Katrina was as much a communication disaster as it was a natural and bureaucratic disaster” because of information gaps and bias. Highlighting the role of tourists as the primary audience even more, Sano and Sano (2019) showed that consumer-to-consumer communication, in addition to business-to-consumer communication, plays at least an equally important role in the decision-making processes of tourists. In their study on the humanitarian crisis in the Rio Grande Valley region of South Texas, Cruz-Milán et al. (2016) used online questionnaires and suggested that increasing security forces deployment had a significant positive impact on tourists’ attitude toward the destination.

As an interactive communication channel between tourism service providers and consumers, social media is transforming the tourism and allows better capture audiences’ experience and evaluation (Zeng & Gerritsen, 2014). Social media transcends temporal and geographical boundaries and can help collect, disseminate and update information from multiple sources. It can also serve to coordinate different stakeholders, actions and resources, and initiate collective actions to manage crises more effectively. Social media acts also as archives and databases recording experience and memory for further analysis and future research (Sigala, 2011). Different datapoints are present in social media, such as rich user-generated contents reporting tourists’ experience and emotions and geospatial data documenting tourists’ behavior and mobility patterns (Park et al., 2020; Vu et al., 2019; Zhang et al., 2020). These datapoints can be used to better understand tourists’ planning processes (Amaro et al., 2016), customer expectations (Naranagavama et al., 2017) and attitude change linked with political incidents (Luo & Zhai, 2017), satisfaction (Naranagavama Kaosiri et al., 2019), develop a destination’s brand identity (Lim et al., 2012), and value co-creation (Dolan et al., 2019).

The public and interactive nature coupled with the speed and amplifying effect of spreading information makes social media particularly relevant in health crises (Schroeder et al., 2013). In this context, social media use is affected by tourists’ risk perception, previous social media use, demographics and travel related factors (Schroeder et al., 2013; Schroeder & Pennington-Gray, 2015). When facing a health crisis such as bed bugs, hotels differ in their social media strategies, including denial, scapegoat, attacking the accuser, or excuse (Liu et al., 2015). An effective use of social media to timely respond to crisis events can positively affect tourists’ perception of the cruise line’s reputation (Ryschka et al., 2016).

While these studies provide initial insights into the impact of tourists’ sociocognitive processes in perceiving crises through social media, they primarily focus on how potential customers use analytical reasoning and make deliberate decisions when recollecting and recounting their experiences (Kahneman, 2011). Under hypothesized and simulated scenarios, would-be customers make evaluative judgments by weighing costs and benefits, thinking through features and outcomes of decisions, and comparing services to be delivered with their expectation (Bae & Chang, 2021). As an ongoing crisis is uncertain and constraining, customers’ information processing tends to be impressionistic and intuitive, and operates “automatically and quickly, with little or no effort and no sense of voluntary control” (Kahneman, 2011, p. 20). Thus, tourists’ sociocognitive processes during a crisis reflected in their intuitive and affective information processing are more heuristic and satisfaction-oriented (Bundy & Pfarrer, 2015). Tourists’ social media use provides a unique opportunity to track and follow their real-time construction and presentation of their personal and collective experiences.

How customers experience and make sense of a concurrent crisis heuristically depends on the scene – the background or situation, which serves as the base to form their opinions and provide assessments. As Burke (1969) explained, to understand the motives of people’s actions, it is critical to examine the scene. “It is a principle of drama that the nature of acts and agents should be consistent with the nature of the scene” (Burke, 1969, p. 3). In turn, customers’ knowledge of the scene is useful for tourism providers to analyze crises attributes, build their knowledge repertoire, and improve their response strategy. Tourism crises are scenes that reflect the course of crises and symbolize them. Examining such scenes can provide an angle to observe how customer experience in crisis situations evolves in general and to which extent customers converge or diverge in experiencing the same crisis. In practice, it can sensitize tourism practitioners in perceiving customer reactions and assist in guiding the crisis management response. Therefore, this paper explores how tourists intuitively and affectively enact the scene of a health crisis in their concurrent discourses.

3. Research design and methods

To answer the research question, the real-time development on the cruise ship Diamond Princess during its lockdown is chosen to develop deeper theoretical understanding of tourists’ evaluation of crises in situ (Eisenhardt & Graebner, 2007). The cruise industry is particularly intriguing, because it combines proximity and distance at the same time. While a cruise can take people thousands of miles away to ports, islands, and cities, it is also characterized by physically isolated and limited onboard social space. Using an extreme case, this paper aims to empirically capture how cruise tourists make sense of their experience in the course of the coronavirus crisis and generate transparent and novel insights from complex challenges (Eisenhardt et al., 2016).

3.1. Case background

On January 20, 2020, the Dimond Princess set sail from the Port of Yokohama for her ‘Southeast Asia Spring Festival Journey’ with 2666 tourists and 1045 crew members onboard the ship. Unexpectedly, on February 1, 2020, the Hong Kong Government reported that a man who had disembarked in Hong Kong had been diagnosed with COVID-19. When the ship finally sailed back to Yokohama, she was immediately held for 24 h while Japanese health authorities planned to assess the risk. On February 4, 2020, Princess Cruises said it had placed 3711 tourists and 1045 crew members onboard the ship. Unexpectedly, on February 10, 2020, 14 passengers died. Of the 712 people infected, 14 passengers died. When the ship finally sailed back to Yokohama, she was immediately held for 24 h while Japanese health authorities planned to assess the risk. On February 4, 2020, Princess Cruises said it had placed 3711 tourists and 1045 crew members onboard the ship. Unexpectedly, on February 10, 2020, 14 passengers died. Of the 712 people infected, 14 passengers died. Thus, the Diamond Princess has been labeled as a corona disaster zone in the heart of a global pandemic (Nast, 2020). During this period many tourists onboard were active in social media to express their views and communicate with the outside world. This provides us with a unique opportunity to observe tourists’ social media entries as a reflection of their experience and sociocognitive processes.

3.2. Data collection

The research design is informed by the emerging trend of netnography in tourism studies (Mkono & Markwell, 2014; Tavakoli & Mura, 2018; Wu & Pearce, 2014) and hospitality and service research
A recent paper used Twitter data and examined public sentiment on cruise tourism during the COVID-19 pandemic (Lu & Zheng, 2021). Data collection for this project started in mid-February 2020 as the Diamond Princess case was unfolding in Yokohama and tourists were confined to their cabins onboard the quarantined ship. Because onboard tourists’ names were not public, data availability was the main obstacle for this research. To address this issue, a snowball sampling strategy was adopted (Biernacki & Waldorf, 1981) and 10 research assistants were engaged to manually collect data from publicly available sources, including Twitter and Facebook. The central idea of snowball sampling, or chain referral sampling, is that research data can be collected from contributors who are nominated through interpersonal links, connecting people that share or know of others who possess some characteristics that are of research interest (Park & Stangl, 2020). This method is particularly suitable for this paper where the respondents are hard to approach or identify (Browne, 2005).

Accordingly, data collection started with focusing on tourists with high media exposure, such as David Abel featured in many news articles (Nast, 2020). Research assistants read Person A’s post, searching for potential respondents who commented, for example Person B. Then research assistants read again Person B’s post as well, in order to verify whether he/she was onboard the ship during the quarantine period. Such cross-referencing was used in identifying social media entries of tourists. This procedure was repeated to Person C etc. until no new respondents emerged up to the end of the data collection on April 2nd, 2020. As a result, posts of confirmed respondents written in English and Japanese between Feb 1, 2020 to Feb 19, 2020 were collected. Japanese social media entries were included because almost half of onboard tourists were Japanese citizens and the cruise ship was stationed at a Japanese port. English social media entries were chosen because onboard tourists were of multiple national origins and English as an international language was widely used by tourists to communicate with the outside world during the quarantine.

Each data entry contained the following information: onboard tourist’s (screen) name, time of social media entry, contents of the entry, and language used (English or Japanese). Texts were used in the analysis because they can be processed in a more standardized manner by leveraging computational textual analytical tools. After downloading 3177 English entries and 2071 Japanese entries, entries with less than 20 words were excluded to ensure the meaningfulness of textual analysis (note that analyses with all entries show similar results). The final sample consisted of 1140 social media entries in English and 1119 entries in Japanese.

3.3. Data analysis

Consistent with some recent studies leveraging social media to analyze tourists’ attitude (X. Hu et al., 2021; Luo & Zhai, 2017) and emotions (Chen et al., 2020; Lu & Zheng, 2021; Piccinelli et al., 2021), this study uses computational textual analytical tools – topic modeling and sentiment analysis to understand what kind of messages and how customers onboard conveyed during their direct experience of the crisis.

3.3.1. Topic modeling to identify tourists’ attention

Topic modeling is a technique of text mining to discover latent semantic structure in large collections of texts. It is an unsupervised method based on probabilistic models and therefore independent of languages or external sources. It is a method for grouping words into clusters, also known as topics. A topic is a probability distribution over terms, which consists of words that co-occur most frequently together in documents. It is assumed that there are a fixed number of groups of terms in documents, and each document in a corpus exhibits topics to varying degree (Blei & Lafferty, 2006). A key strength of topic modeling is the ability to capture how meanings emerge out of relations among words, taking into consideration of contexts where words appear. Thus, it is ideal for investigating how multiple voices or styles of expressions existed among tourists trapped onboard. Previous research in tourism management has used the topic modeling technique to examine activity preferences in travel itineraries (Vu et al., 2019), customers’ online reviews (Guo et al., 2017; Hu et al., 2019), employees’ online reviews (Park et al., 2020; Stamatampros et al., 2020), and public responses of services providers as crisis communications (Su et al., 2019).

For the analysis, the R package “quanteda” was used to generate topics for the English and Japanese subsamples. After computational iterations (checking exclusivity and semantic coherence scores and model fits) and group discussions (verification by reading original texts to identify topics), 15 topics for each of the subsamples were identified (see Fig. 1 and Fig. 2). After carefully reviewing the list of terms in each topic and returning to representative documents for a given topic, 15 topics for the English and Japanese social media entries were labeled accordingly. Then, similar topics were aggregated into topic groups to make the analysis more substantively meaningful and comparable. Tables 1 and 2 show the 15-topic solution for English and Japanese social media entries, listing two sets of the 7 highest-ranked terms for each topic according to the probability of appearance (Highest probability) and the frequency and exclusivity (FREX). While the highest probability is intuitive, balancing frequency and exclusivity of terms in a topic of interest can effectively characterize topical content and make a given topic more interpretable than sheer frequency (Airola & Bischof, 2016). The weight of each topic within the corpus is also listed.

3.3.2. Sentiment analysis to capture tourists’ emotion

Information processing and communication under crisis situations not only tend to be more intuition-based, but also more emotional (Bundy et al., 2017). To capture how customers made sense of their crisis experience, a dictionary-based approach of sentiment analysis was adopted to search for sentiment-carrying words and phrases. These words and phrases were assigned with a valence according to the dictionary. Because the sample consists of both English and Japanese texts, the NRC Word-Emotion Association Lexicon, which provides a comprehensive list of both English and Japanese words captured to ensure comparability (Mohammad & Turney, 2010) was mobilized in the analysis. Each word is associated with two sentiments (positive and negative) and eight basic emotions (anger, fear, anticipation, trust, surprise, sadness, joy, and disgust).

In the sample, only 32 of 1140 English entries did not include a sentiment/emotion word, while 86 of 1119 Japanese entries did not have a sentiment/emotion word. To demonstrate how social media entries displayed emotions over time, the percentage of each sentiment or emotion in a given social media entry was calculated. Then all percentages of the same sentiment or emotion on a given day were aggregated and finally divided the percentages by the number of social media entries on a day. The aim is to understand how tourists under extreme situations make sense of their experience affectively and to which extent English and Japanese tourists perceive the same crisis similarly or

(Heinonen & Medberg, 2018; Whalen, 2018). Netnography is a naturalistic and unobtrusive technique and aims at study virtual communities and consumer behavior present on the Internet. It is based on the premise of “the shared patterns of behavior and their associated symbolic meanings expressed primarily through computer-mediated communications” (Kozinets, 1998, p. 366). With the increasing amount and intensity of online communication and the rise of social media, tourism research has been using this method to observe and analyze textual discourses, study tourist experiences, identify their expectations and desires (see Xu & Wu, 2018 for a review). Many researchers adopt the role of lurker, engage in data collection from blogs, websites, social media and tackle tourism-related issues and topics from different theoretical angles. One advantage of using netnography to study crisis events is to capture real-time experience of tourists who are cognitively and emotionally constrained during the crisis. Previous research has used netnography to investigate the use of social media to release emotions and gather information in crises (Lachlan et al., 2014, 2016).
4. Findings

This section illustrates how the content and the emotions of passengers on social media unfolded during the quarantine on the Diamond Princess. Findings show that discourses in English and Japanese languages share similar content and emotional patterns but differ in modes and emphases when enacting the crisis scene. Regarding the temporal evolution of tourists’ voices over time, Fig. 3 shows that the numbers of English and Japanese social media follow similar patterns, with a significant increase after February 4th and the peak around February 12th (about 100 social media entries) before decreasing until the disembarkment of all tourists on February 19th.

4.1. The intuitive content

4.1.1. Topics in English social media entries

Among the 15 topics in English social media entries, four of them are concerned with government actions and reactions to the quarantine, yet from different angles. Because the Diamond Princess carries tourists from all over the world, several topics touch upon different governments’ actions in bringing their own nationals off the cruise ship. Whereas Topic 11 (11.42%) specifically describes the action of the Australian government in evacuating citizens from the cruise ship, Topic 4 (7.94%) centers on people’s hope of being evacuated by their respective governments. As the Diamond Princess was halted in Japan, Topic 1 (4.61%) describes the reactions of the Japanese government to the lockdown in a general manner and Topic 5 (7.70%) provides more vivid accounts of activities by the Japanese authority on the dockside.

Three topics directly reflect the management of the health crisis onboard. Two of them are related to COVID tests to detect the scale of infection. Topic 9 (11.63%) covers some general terms regarding COVID tests for onboard tourists and crew members. Topic 13 (3.73%) connects the COVID-test with Hong Kong where some tourists may have been infected with the virus. A snippet view about crisis management is provided by Topic 3 (6.60%) – The captain’s announcements. Some entries with the highest proportion of content belonging to this topic reveals that these announcements cover various perspectives of onboard life, including the bandwidth of the Internet connection, mask distribution, getting fresh air on the deck, and medical supplies from the Japanese government.

During the critical period in focus, the multifunctionality of Diamond Princess as a floating theme park for consumption, entertainment, and relaxation is extremely limited. Being physically limited and most of the time in their cabins, tourists’ discourses of their onboard activities center around food, and daily routines. The food theme as an essential part of service is covered in two topics – Topic 2 (8.90%) on breakfast and Topic 14 (6.91%) about ordering meals. Cruise ships are seen as deterritorialized mobile destinations. Because of the constraints posed by the virus, daily routines represented in the English entries are dominated by getting fresh air on the ship’s deck, such as Topic 7 (4.98%) and Topic 12 (4.92%).

The Diamond Princess is an internationally known case during the early days of the spread of the COVID-19 and has attracted extensive attention and media reports. Two types of interactions with the outside world were identified: media exposure, and outside support. Regarding media exposure, Topic 8 (4.31%) describes tourists being interviewed by
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Table 1
Topics in English social media entries.

| Topic Details | Percentage | Topic Label | Topic Group |
|---------------|------------|-------------|-------------|
| Handrails, princess cruises, governor, yokohama, port, wait, expert | 4.61% | Japanese government reactions | Virus management |
| Morning, day, breakfast, crew, today, thank, juice | 8.90% | Breakfest | Food on board |
| Captain, day, fresh, taken, deck, laundry, supplies | 6.60% | Captain’s announcements | Virus management |
| Day, people, hope, news, make, plane, pretti | 7.94% | Tourists’ hope for government actions | Virus management |
| Pretti, plane, deis, people, health, better, news | 7.70% | Actions (on dockside) from Japanese side | Virus management |
| Album, consec, explain, influence, ten, music, else | 7.49% | Outside support - donations | Interaction with external stakeholders |
| Much, life, day, side, water, time, releas | 4.98% | Relaxation | Daily routines |
| Day, give, post, read, Japanese, thank, realli | 4.31% | Media interviews | Interaction with external stakeholders |
| Passeng, test, health, medic, crew, Japanes, post | 11.63% | Onboard Covid-tests | Virus management |
| Day, thank, david, make, time, peopl, salli | 6.22% | Media interviews | Interaction with external stakeholders |
| Board, case, flight, passeng, govern, confirm, australian | 11.42% | Government evacuating actions | Virus management |
| Day, air, cabin, sinc, fresh, fresh | 4.92% | Fresh air - relaxation | Daily routines |
| Due, toget, health, virus, hong, kong, day | 3.73% | Covid-tests | Virus management |
| Food, room, day, time, meal, servic, crew | 6.91% | Ordering meals | Food on board |
| Hour, photo, thank, video, internet, night, talk | 2.62% | Broadcasting | Interaction with external stakeholders |

Table 1 Continued

| Topic Details | Percentage | Topic Label | Topic Group |
|---------------|------------|-------------|-------------|
| Fresh, fever, air, usa, line, inside | 3.49% | Fresh air - relaxation | Daily routines |
| Due, hong, kong, immigr, toget, okinawa, hey | 2.45% | Covid-tests | Virus management |
| Chapter, kitchen, room, food, chef, free, dietari | 6.83% | Ordering meals | Food on board |
| Hour, photo, thank, video, internet, night, talk | 2.62% | Broadcasting | Interaction with external stakeholders |


different television channels and reporting their on-board experiences. As one entry writes, “Hi friends! We interviewed with CNBC this evening and will air today at 7–7:30ish pm CST if you want more updates on corona cruise!… Thank y'all for your endless support and prayers! PS-if anyone has questions about coronavirus feel free to message me or comment!…” (EntryE 1359, 2020). Topic 10 (6.22%) is organized around an English couple – David and Sally Abel, who were regularly broadcasting their on-board life. Topic 15 (2.62%) is related to the ways tourists use social media to broadcast their quarantine life. Regarding outside support, Topic 6 (7.49%) deals with donations to children on board and several terms are related to how to make kids’ quarantine life easier.

4.1.2. Topics in Japanese social media entries

Among the 15 topics in Japanese social media entries, three of them cover government actions. As the cruise ship was on Japanese soil, the attention of Japanese entries takes a different focus than English entries. Topic 15 (6.66%) explains how the Japanese government supports tourists on board. For example, one Japanese passenger wrote about how the Japan Self-Defense Force stationed in Yokohama takes responsibility for monitoring the situation of the Diamond Princess. Medical supplies are another important theme represented in Topic 1 (7.54%) and Topic 6 (7.27%).

Being isolated in a high-risk environment, the Diamond Princess tourists are concerned with virus-related information releases both internally and externally. Similar as in English entries, Japanese entries consist of the captain’s announcements regarding their quarantine life and measures taken to assist onboard tourists in Topic 8 (7.99%), and COVID-tests in Topic 9 (5.49%) and Topic 13 (7.01%). Some entries provide detailed descriptions of what a test procedure looks like, whereas others report the lack of systematic tests.

Consistent with the English entries, Japanese posts on the Diamond Princess shared their interests in food and limited daily routines on board. Three topics are organized around food. Topic 14 (5.04%) refer to breakfast. A Japanese tourist is satisfied with Japanese and foreign components of the breakfast, “with congee, miso soup, natto … but also foreign yogurt and KIRKLAND brand tea” (EntryJ 1693, 2020). In addition, meals are prepared off of the cruise ship during the quarantine and need to be ordered in advance, as shown in Topics 3 (9.15%) and 5 (6.71%). One passenger wrote, “Under this new process all food preparation will stay under control of Diamond Princess Corporate chefs and will continue to be fresh and made from scratch and will conform to dietary needs. A number of medical staff has joined the ship to expedite health screenings” (EntryJ 1510, 2020). Regarding daily routines, Japanese tourists, in contrast to English entries, are more engaged with keeping themselves physically and mentally busy inside their cabins. Topic 10 (8.95%) relates to how to keep cabins clean, whereas Topic 11 (7.13%) illustrates how tourists imagine their return home after the quarantine. In Topic 2 (3.82%) and Topic 4 (3.16%), Japanese tourists are discussing entertainment programs on local radio and TV shows.

Different from English entries, Japanese entries are less expressive in interacting with external stakeholders. Only Topic 7 (6.43%) pertains to media exposure, containing discussion regarding contradictory reports about the quarantine. Topic 12 (7.65%) includes terms referring to moral support received from another passenger ship passing by. One entry vividly describes the scene, “Earlier, the ship’s broadcast said that the passenger ship “Pacific Venus” sounded its whistle as it passed by, and the tourists and crew held up a banner in support of the ship, and everyone waved their hands in our direction to encourage us. The Diamond Princess also sounded its return whistle. Thank you all!” (EntryJ 672, 2020).
4.1.3. Topic groups in English and Japanese social media entries

Overall, findings suggest that the intuitive response of tourists during a crisis is similar across the English and Japanese groups, covering four sets of topics: Virus management (government actions and onboard management), Food on board, Daily routines, and Interaction with external stakeholders (media exposure and outside support). Fig. 4 shows the percentage evolution of four topic groups over time. Virus management is the most frequently mentioned topic throughout the quarantine in both languages. It accounts for the most important topic group in English discourses with a proportion consistently above 45%. Similar stability is also present in the Japanese discourses, but while this topic group clearly dominates the English entries, it is less prevalent for the Japanese entries.

However, English and Japanese social media entries also exhibit different distribution of attention when dealing with uncertainty on-board. Interaction with external stakeholders is the second important topic group in English with a proportion of 15–20% throughout the period. By contrast, Interaction with external stakeholders in Japanese discourses is the least salient topic group. While all four topic groups in the English discourses are relatively stable in their distribution over time, Food on board surpasses Daily routines in the second half of the quarantine. In Japanese entries, while Food on board is fairly stable, the proportion of...
responses for Daily routines visibly increase in the second half of the lockdown.

4.2. The affective emotion

4.2.1. Sentiments

Fig. 5 shows the evolution of the daily positive and negative sentiments in English and Japanese social media entries. In the English entries, except for the fluctuation in the first few days, there is a clear gap between positive and negative sentiments over time and a clear dominance of positive sentiments. The Japanese entries exhibit a similar gap between positive and negative sentiments, yet the gap is much narrower relative to the English entries with 2.6 times more English positive sentiments than negative sentiments compared to only 1.5 times more for the Japanese entries.

4.2.2. Emotions

Fig. 6 shows the evolution of eight basic emotions on a daily basis. Both English and Japanese entries show a high level of anticipation and trust, implying that tourists were confident that the crisis would be over soon, and they could rely on the crew members of Princes Diamond and their nations’ governments. In both emotions, the English entries (3.3% for anticipation and 3.2% for trust on average) are stronger than for the Japanese entries (2.1% for anticipation and 2% for trust on average). Despite the unexpectedness and seriousness of the virus, overall tourists show an unexpectedly high proportion of references to joyful emotions. Again, on this dimension English discourses (2.2% on average) are more visible than Japanese discourses (1.8% on average). At the same time, social media entries in both languages still show a considerable level of fear. Different from the other emotions, the levels of fear are almost identical across the two languages (1.8% for English and 1.6% for Japanese). Turning to other emotions – anger (0.6% for English and 0.7% for Japanese), disgust (0.5% for English and 0.5% for Japanese), sadness (1.1% for English and 1.1% for Japanese) and surprise (1.1% for English and 1% for Japanese), both the English and Japanese entries show very similar and consistent responses. More specifically, on the dimension of
anger, Japanese discourses are more evenly and proportionally distributed over time with less fluctuation than the English discourses. There is greater surprise demonstrated by the English discourses in the middle period of the crisis, but the responses of the two groups eventually converge as the crisis is resolved.

In summary, findings show that tourists under the extreme situation of COVID-19 perform their emotions with their feelings in situated local contexts. Given the unexpected and unpredictability of the virus, tourists subjected their feeling to the reality and managed their emotions accordingly. Similar emotional patterns were found between English and Japanese social media entries, with English discourses being more positive, anticipatory and trusting.

4.3. Enacting a crisis scene

By investigating and contrasting social media entries of English- and Japanese-speaking tourists, the dynamics of the content and emotions of their evaluations over time in quantity and quality were elucidated. The analysis reveals two salient characteristics of tourists’ enactment of the crisis scene: expressing cautious optimism, and crafting realistic lifestyle.

4.3.1. Expressing cautious optimism

Despite the extreme circumstances and structural limitations, the Diamond Princess tourists expressed a sense of optimism regarding their experience and the eventual resolution of the crisis. The structural similarity between English and Japanese social media entries suggests that both groups are mostly concerned with virus management, supplemented by activities on board and communication with outside world. Two visible stages were present in the evolution of their discourses: the initial confusion and anxiety in the first three to four days indicated by the fluctuation of topic groups and emotions, and the adjusted stability and constancy during the remainder of the quarantine. Turning to the affective dimension, positivity clearly dominated tourists’ sentiments in both groups. Fig. 6 demonstrates a three-layer composition of tourists’ emotions: a dominating optimistic orientation to the future (with joy, trust, and anticipation), a comparatively low presence of pessimistic attitude (e.g., disgust, anger), and a middle range level of ambivalent feelings (surprise, sadness, and fear). Underlying this collective mindset is the way tourists often reflect the temporary nature of the crisis, its unprecedentedness and uniqueness, and the international attention, as shown in one English social media entry:

Day 10 is almost over, it’s a pretty gray day outside. We received an iPhone to get information directly from the Japanese Ministry of Health,
access the internet and to make phone calls. No we don’t get to keep them. All in all it’s been a pretty uneventful day with no bad news! Which we are very happy about. We do have some wonderful friends on board that do very kind things for us. They call us, bring my favorite noodle soup and other things. (Not from Princess) so please don’t get upset and think we get special treatment. We know lots of wonderful crew on all the ships. Lucky us !!! We already started our happy hour to celebrate love day! Hope you all have beautiful Valentine’s day tomorrow as you know we’re well in to it. Thank you again to my family and friends for helping us make it through another day! (EntryE 1663, 2020)

4.3.2. Crafting realistic lifestyle

Upon acknowledging the lack of immediate solutions, tourists were engaged in crafting their constrained on-board lifestyle. Different from the homogeneity of expressing cautious optimism, this characteristic shows the different frame of references people use to understand and construct the reality. Whereas the distribution of topic groups, sentiments and emotions of the English discourses shows a wider dispersion, the distribution of different facets in the Japanese discourses is much more concentrated. It is also notable that two topic groups exhibit the reverse patterns: while English discourses focus more on interaction with external stakeholders, Japanese discourses emphasize daily routines more. Regarding emotions, while joy clearly overshadows fear in English discourses, the difference between these two emotions is indistinguishable in the Japanese discourses. Consistent with the content of topic groups, the lifestyles of the English- and Japanese-speaking tourists differ in their loci of attention and the intensity of emotion. Although both groups share considerable similarities in their discourses, their perceptions of social reality and normative evaluations of their crisis experience, mediated by languages, exhibit visibly distinctive patterns and reflect different underlying categories of value and worth. Two illustrative entries show the contrast:

Greetings from Diamond princess. We just came back in to Yokohama Bay again, and it’s day 8. Today as you can see we have a different view. This is great for our starboard side tourists as we had a beautiful view of the bay for the last 7 days. I think Captain Arma is so considerate, he turned the boat around so the starboard side will have a view of the Bay. I am very happy for those people. Meanwhile, we are enjoying our new view. We see lots of reporters by the dock, ambulances and action. Still healthy and happy. Thank you everybody for keeping us in your prayers! (EntryE 1261, 2020)

There won’t be room cleaning by the room attendant, so I guess that means you’ll have to clean half the sheets, towels and clothes, or wash them with the detergent you’re given. The room is carpeted, so it would be nice to get at least duct tape (EntryJ 2032; 2020; Japanese, our translation).

5. Discussion and conclusions

Despite insights about would-be tourists’ health risk perception and tourism providers’ strategies, crisis management literature still lacks an understanding of how tourists actually experience ongoing crises and how their in situ perception evolves. The study is based on the central premise that crisis management in tourism critically hinges upon a nuanced understanding of tourists’ evaluation in situ, which serves as a mediator between experienced reality and abstracted judgment. Drawing on the extreme case of the Diamond Princess’s quarantine during the early stage of the COVID-19 crisis, this paper sets out to investigate how tourists intuitively and affectively enact the scene of a health crisis in their concurrent discourses. Findings show that onboard tourists kept communicating with the outside world and updating their quarantine lives using social media and exhibited a substantial level of resilience while being isolated in an extreme locale. Textual and sentiment analyses of social media entries in English and Japanese show that while both groups of tourists share similar concerns and emotional reactions in principle, they differ in approaches of dealing with crises and the distribution of emotional expressions.

5.1. Contributions to tourism crisis management

By exploring concurrent discourses of tourists during an ongoing health crisis and surfacing two characteristics of their evaluations, this paper complements previous studies on tourists’ experiences in health crises and contributes to the current knowledge of health-related crisis management in three ways. First, this paper contributes to the health-related crisis management literature by advancing a sensemaking perspective in investigating tourists’ risk and crisis perception. More specifically, by presenting a unique empirical case based on naturally occurring data, this paper unravels an enriched understanding of sociocognitive processes and surfaces tourists’ meaning-making patterns during a crisis – how to interpret, accommodate, and enact the new reality (Weick, 1988, 1995). Most of extant studies on health crises “take a positivist approach in conceptualizing crisis” (Berbekova et al., 2021, p. 8), either investigating would-be tourists’ future travel plans (Chien et al., 2017; Pappas & Glyptou, 2021; Zheng et al., 2021b) or focusing on service providers’ adaptive strategies (Avraham, 2015; Liu et al., 2016; Novelli et al., 2018; Pan et al., 2021) through a rational and functional lens. This paper redirects the attention from focusing on the consequences of crisis to the process of how tourists “generate” crises through their actions and their sensemaking of these actions. The sensemaking perspective complements and extends established theoretical constructs in health risk perception based on consumer psychology by underlining the role of the demand side – tourists’ involvement in co-creating, controlling and preventing confusing, ambiguous and disorienting crises situations (Maitlis & Sonenshein, 2010). Such an approach provides a more accurate and reliable picture of activities and circumstances of crises, significantly reducing recall biases and avoiding distortions of experience evaluation (Burke, 1969).

By leveraging rich descriptions, assessments, and responses by tourists themselves, this paper provides an integrated account of risk perception emphasizing the interconnectedness between physical, health, social, psychological, functional, and performance dimensions (Holland et al., 2021). Rather than dividing individuals encountering crisis situations between cognition-oriented and emotion-oriented (Qi et al., 2021), this paper shows that tourists’ reflections are inherently personal and social simultaneously, and cool cognition and hot emotion collectively constitute the enactment of a health crisis scene (Maitlis, 2005). In this sense, tourists’ health risk perception does not always result from deliberate cognitive processes based on a calculative logic, but also intuitive expressions based on recounting mundane experience (Kahneman, 2011). Through analyses of tourists’ social media discourses, the present study shows that user-initiated crisis communication can provide a fruitful avenue to investigate health risk perception (Park et al., 2019; Ryschka et al., 2016; Schroeder et al., 2013; Schroeder & Pennington-Gray, 2015). It can provide a holistic angle capturing tourists’ real-time cognitive and emotional dynamics, complementing conventional approaches of controlled experiments or simulated scenarios in surveys.

Second, this study contributes also to tourism resilience literature by foregrounding the individual/tourist level of resilience. Current research is mostly concerned with resilience of communities, destinations, organizations, and industries and how they return to the reference state after a disturbance through building knowledge repertoire, developing learning and adaptation capabilities (Hall et al., 2017). This paper shows that tourists can effectively comprehend the local reality as difficult-to-control environment (Jonas et al., 2011) and perform their actions and emotions in adapting to and rationalizing uncertainty. Apparently, tourists under extreme circumstances may demonstrate a considerable level of positive thinking and self-encouragement, contributing to tourism operation (Mizrachi & Fuchs, 2016). They are not naive and passive consumers subject to crisis conditions and
organizational strategies, but can generate crisis-resistant structure and order (Hajibaba et al., 2015). Thus, theoretically tourist resilience can play an active role in collaboration, integration and coordination of all resources, activities and services (Fountain & Craddock-Henry, 2020; Luthe & Wyss, 2014). Tourists should be considered an integral part of a linked social-ecological system, as individual level decision making can impact niche, regime and landscape level when recovering from crises (Amore et al., 2018; Prayag, 2018, 2020).

This paper contributes to some recent studies on psychological principles of resilience by uncovering two coping mechanisms – expressing cautious optimism and crafting realistic lifestyle. It unpacks how tourists practice control, coherence and connectedness (Reich, 2006; Zheng et al., 2021b). While tourists exhibit anxiety, fear and sadness, they also express hope, trust and even joy. Rather than attributing negative experience to external environment (Jackson, 2019), they are capable and even creative in dealing with adversity socially and psychologically (Kock et al., 2020; Li et al., 2021; Miao et al., 2021; I.-J.; Park et al., 2021; Wang & Ackerman, 2019; Zenker et al., 2021). Findings from this study are consistent with results from a sentiment analysis on a large collection of posts on twitter – the suffering from widespread quarantine, isolation, and limits on travel due to COVID-19 can make people even more eager to travel and explore niche cruises (Lu & Zheng, 2021; Pan et al., 2021). Both conceptually and empirically, mechanisms and processes of tourist level resilience await more exploration and theorization.

Third, this paper contributes to a better understanding of the cultural underpinnings of consumer behavior by advancing how stories and languages mediate tourists’ live experience of crises. Extant research on tourism crisis management has started paying more attention to narratives, reviews, and framings of tourists (Hu et al., 2019; Luo & Zhai, 2017). This paper extends this bourgeoning literature by performing a two-dimensional analysis of tourists’ discourses during a crisis. By mapping out actors, themes of their accounts, and emotion over time, this paper opens new lines of inquiry for structured and generalizable interpretation of cultural elements in tourism crisis management. It proposes that a linguistic view can enhance our understanding of the complexity and ambiguity of crisis management by attending to how problems are constructed, and emotions are morally and symbolically evoked.

Yet, on the other hand, tourists’ evaluations are immersed in linguistic systems where frames of reference and standards for evaluative judgment differ. The linguistic expression of tourists’ experiences is conditioned by culture. Previous studies have shown that the relationship between risk perception and social media use differ across cultures, nationalities and ethnicities (Schroeder & Pennington-Gray, 2015) and the understanding of safety and anxiety varies across countries (Reisiger & Mavondo, 2006). Findings of this paper, consistent with studies on Japanese tourists (Kim & Lee, 2000; Nakayama & Wan, 2018; Reisinger & Turner, 1999), demonstrate how national cultures affect collectivism orientation and social interdependence in crisis situations. This is an intriguing indicator that tourists’ sentiment expressions, attention to the environmental stimuli, and control over events are to a greater extent shaped by their sociocognitive systems (Nisbett et al., 2001). This linguistically mediated geography of thought can be conceptually expanded and empirically demonstrated with the existence of publicly available big data on tourism behavior in different settings.

5.2. Practical implications

The global cruise industry has suffered enormously from the stigmatization triggered by the Dimond Princess Crisis in 2020, with unprecedented financial losses and brand-image damage. In contrast to the bleak reality, our research shows that most tourists onboard the “ghost town” ship expressed cautious optimism, focusing on virus management with positive emotions and appreciation of the cruise service and management during the quarantine. Unfortunately, the current challenging state of the cruise industry supports the idea that, at least to some extent, the stigmatization of the Dimond Princess had enabled the public’s fear of COVID-19 to be passed onto the whole industry during the post-crisis stage. Although the underlying mechanism of stigmatization would benefit from further investigation, this paper’s central finding – tourists’ resilience can sensitize tourism practitioners in perceiving customer reactions and assist in guiding the crisis management response. Findings suggest that major actors in the cruise industry, including Cruise Lines International Association and leading companies, can adopt an active public communication strategy to reshape brand-image and restore customers’ confidence. For example, practitioners can carefully make strategic use of onboard tourists’ actual experience and testimonies to publicize the safety and reliability of cruise ships and reduce fear (Quintal et al., 2021). They can further reinforce experienced tourists’ trust in cruise companies and officers, set up more visible health protocols and preventative measures, and communicate more transparently health risks to attract potential cruisers as well encourage cruisers to return (Holland, 2020). Practitioners should also further monitor and collect past tourists’ experiences, feedback and shift in evaluative criteria more systematically, especially through social media channels (Hu et al., 2021; Piccinelli et al., 2021), to reconstruct travel experience and creatively make use of distant and proximal memories to build positive market images (Farmskj, 2021).

This research also indicates that virus management is the dominating topic, attracting most of the attention of tourists in both studied groups during the lockdown period. Therefore, timely and accurately disclosure of crisis management information alongside communication with tourists directly involved during a crisis is highly recommended, which could be beneficial in pacifying concerns and building trust and emotional bonds while eliminating misunderstandings and misinterpretations (Zheng et al., 2021a). Furthermore, cruise managers can improve, organize and provide diversified, high quality food options to distract tourist’s attention from the unpleasant situation. This is not only because findings show that food is one of the major topics of concern, but also in the consideration that food supply might be a more controllable and operable way for cruise line to mitigate the negative impact on tourists during a crisis. While organizing collective entertainment activities can be more challenging, we encourage practitioners to think more creatively about how to facilitate communication and interactions among on board tourists virtually. Finally, when making these decisions catering to customers’ needs, practitioners should be aware of cross-cultural differences in safety perceptions.

5.3. Limitations and future research

As an initial attempt to address tourists’ sociocognitive dynamics in an extreme tourism destination during the global COVID-19 pandemic, this paper is restricted by the data availability. Although it adopted the snowball sampling by manually searching and verifying tourists’ social media entries to the best of the research team’s ability, findings should be cautioned against overgeneralization. The manual data collection didn’t allow for more extensive analysis to tease out sociocognitive processes among different tourist groups, between crew members and tourists, and across different cultures of origins. This paper only partially addressed this issue by examining social media posts according to the language they used. One of the promising research opportunities lies in bridging the gap of how and why tourists’ perception differs among various cultural groups (Liu-Lastres et al., 2019). Future studies on tourists’ risk perceptions can benefit from systematically collecting and making sense of digital traces and user-generated contents during crises, substantiate and provide critical qualitative and quantitative evidence for developing epidemiological susceptibility risk indexes (Mertzanis & Papastathopoulos, 2021).

At the conceptual level, future studies can take a more explicit sensemaking perspective and demonstrate how different stakeholder groups make sense similarly or differently, and how service providers
and tourists can engage in sensegiving and sensemaking interactions during and after health crises. Comparisons across different cruise ships at different points of time during the global pandemic provide ample opportunities for a deeper understanding of how the cruise industry can better engage in crisis planning and preparation, for example with Ruby Princess. Inductive studies based on interviews, ethnography and participative observations will shed more light on the content and modes of sensemaking in addressing health crises.

Related to the rather positive thinking styles of tourists emerged in this study, positive emotion is often displayed on social media, while negative emotion through other channels, such as integrated tourism websites or official enterprise websites (Yan et al., 2016). Future research can also complement this study by interviewing tourists, crew members, and cruise line managers, and using internal documents and reports to construct a more complete view of tourist psyche. Another avenue to improve the findings would be to investigate how the media can influence tourists’ perceptions of crises. The attentional focus of tourists on issues, problems, and events related to crises are shaped by news coverage and social media contents they are exposed to. Future studies may provide more insights into the social construction of tourists’ frames of references by taking into account business and tourism-related media’s narratives.

As a final note, while the still-raging COVID-19 pandemic poses uncertainty on the tourism sector at the global scale, it also provides an opportunity for researchers and practitioners to reflect on continuity and discontinuity in tourism dynamics, particularly regarding how the broader societal context and events can shape and be shaped by tourism sustainability and resilience. This paper provides a timely account of consumers’ voices and experience, as the recent surge of COVID-19 cases under the new variants puts cruise ships under the spotlight again. Further attention and exploration are needed to better understand the role of tourists’ emotions, psyche, and individual resilience in rebuilding consumer confidence in travelling and boosting tourism demand.

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Impact assessment
The quarantine of the Diamond Princess cruise ship in February 2020 at the Yokohama Port is a vivid example of the challenges posed by COVID-19 on the tourism industry. This paper investigates how tourists quarantined on the Diamond Princess made sense of and reported their broader societal context and events can shape and be shaped by tourism reveals that tourists, despite the extreme constraints they faced, developed an optimistic mindset regarding the crisis, and were able to organize their limited activities onboard. Findings demonstrate the resilience of tourists under extreme circumstances and show their supportive attitude toward tourist industry players. By investigating the quality and quantity of their social media entries, this paper contributes to a better understanding of tourists’ real-time perception of an unfolding crisis. It also suggests that tourism industry players can benefit from analyzing and internalizing tourists’ intuitive messages and emotional expressions. Tourists as an integral part of the larger linked socio-ecological system can contribute to the resilience and recovery of the tourism sector with their resources, activities, and appreciation of tourism service providers. The tourism sector in the aftermath of the current pandemic needs collaboration, integration and coordination of resources beyond the supply-demand division.

Credit author statement
Yang Chen: Conceptualization, Methodology, Formal analysis, Data Curation, Writing – Original Draft, Project administration, Supervision. Zihao Zhang: Methodology, Software, Formal analysis, Visualization. Tao Wang: Conceptualization, Methodology, Validation, Formal analysis, Writing – Original Draft, Writing – Review and Editing, Supervision.

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