Consumer Evaluations and Organisational Responses to Catastrophic Service Failures

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Dedication

This research is dedicated to my beloved brother who passed away on 7 October, 2015, my parents and siblings in Myanmar and abroad, for giving me the life and the chance to study, and teaching me how to live it.
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Abstract

Service failure, where service does not live up to consumers’ expectations, has been well studied in the service literature. This includes the examination of service failures of varying severity, from minor through to major failures. However, what is missing from the service literature is a focus on catastrophic service failures that can result in injury and/or death. To address this gap, this research examines the catastrophic service failure of an airline crash. Specifically, this research advances two conceptual frameworks pertaining to consumers’ evaluations and intentions toward an airline implicated in a crash.

The first framework examines consumers’ psychological distance from the catastrophic service failure of an airline crash. Psychological distance influences the way in which people evaluate objects and events; it is a subjective experience that something is close or far away from the self, with people thinking about distant events more abstractly and proximal events more concretely. The first theoretical framework presented in this research focuses on a specific dimension of psychological distance, that is, how spatially close or far a consumer is to the site of a crash. Specifically, this framework advances the notion that consumers perceive an airline as being more risky to fly with when psychological spatial distance is close (versus far), which in turn decreases consumers’ intentions to fly with the airline implicated in the crash. However, this proposed mediation pathway will only hold for those consumers who have a low (versus high) fear of flying. Fear of flying refers to anxiety triggered by the experience or prospect of air travel. The rationale for examining this moderation effect is that whatever mitigating influence psychological spatial distance has on consumers’ flying intentions following an airline crash will be attenuated by consumers’ fear of flying. This framework was supported via an experimental study using scenarios.
The second framework examined in this research focuses on the relative effectiveness of two distinct organisational responses following a catastrophic service failure: the organisation downplaying responsibility for the failure and its victims, which is termed ‘avoidance’; and the organisation taking responsibility for the emotional wellbeing of the victims of the failure, which is termed ‘approach’. Consistent with standard industry practice, the avoidance versus approach communication was delivered by the chief executive officer (CEO) of the airline. The researcher argues that when a CEO adopts an approach (versus avoidance) orientation, it will activate consumers’ perception of CEO concern for the victims of the crash. CEO concern is in turn argued to minimise the negative effect of the catastrophic service failure with respect to consumers’ attitudes and intentions toward the offending airline. This framework was again confirmed via an experimental study.

The frameworks advanced in this research offer several theoretical and practical contributions. Theoretically, this research examines catastrophic service failures, a topic that has rarely been the focus of past service failure and recovery literature. The service failure literature is also extended by adding a new theoretical construct (namely psychological spatial distance) to help explain consumers’ intentions following a catastrophic service failure. Practically, greater psychological spatial distance is shown to reduce consumers’ perceived risk, which lessens the negative influence on their future intentions to fly with the airline for those with a low fear of flying. Therefore, airlines are recommended to employ strategies to either increase the psychological distance of an airline crash or reduce fear of flying rates among the general population.

In the second framework, organisational responses following catastrophic service failures were the focus. Although service recovery (i.e., the process of returning a dissatisfied customer
into a satisfied one) is arguably not possible in the case of a catastrophic service failure, having the CEO of the organisation involved in the failure use an approach response when dealing with such events is recommended. This was due to the fact that an approach response was shown to ultimately increase consumers’ perceptions of CEO concern, which in turn improved consumers’ attitude and intentions toward the airline implicated in the crash.
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Chapter One: Introduction

1.1 Background to the Research
In the past few decades, technological developments in the aviation industry – such as the introduction of jet airplanes for commercial purposes in the 1950s and the introduction of wide-body jumbo jets in the 1970s – have seen the size of the industry increase dramatically (Lawrence & Thornton, 2017). Today, the aviation industry consists of more than 2,000 airlines operating over 23,000 aircraft worldwide and flying to over 3,700 airports (Airport world, 2015). Approximately four billion air passengers are expected to fly this year and the International Air Transport Association (Iata.org, 2017) estimates this figure to increase to 7.8 billion by 2036. Between 2012 to 2016, growth in passenger numbers increased by approximately 5.3 per cent annually, which was due to growing demand from the global economy (Iata.org, 2016, 2017). Competition within the aviation industry has also increased over this period, with customers now frequently able to choose from a range of national airlines, domestic airlines, and regional carriers, particularly on popular routes (Lazzarini, 2007). With this growing competition has come a corresponding pressure for airlines to provide consistently satisfying service experiences to consumers in order to survive (Lazzarini, 2007).

When choosing an airline to fly with, consumers consider various factors, including price, service quality, and convenience of scheduling (Kaynak, Kucukemiroglu, & Kara, 1994; Pakdil & Aydin, 2007). The perceived quality of an airline’s service is a particularly important factor that influences consumers’ choice behaviour (Bejou, Edvardsson, & Rakowski, 1996; Bejou & Palmer, 1998). However, while providing reliable, consistent, and error-free service is an important goal, it is a difficult one to achieve for services generally, and in an airline context specifically (Patterson, Cowley, & Prasongsukarn, 2006). This is due to the intangible, inseparable, and
variable nature of services (Park, Robertson, & Wu, 2005). Services are difficult for consumers to evaluate because they cannot be touched, tasted, smelt, or even seen (Darke, Brady, Benedictus, & Wilson, 2016). This property of intangibility introduces an element of consumer perceived risk for services (Mitchell & Greatorex, 1993). Moreover, the service provider and the consumer co-produce the service, meaning that people are inherent to the service product (Edvardsson, Tronvoll, & Gruber, 2011). The success of service encounters is, therefore, based on various interpersonal factors, including frontline employees and the behaviour of other customers (Leow, 2015). Given these properties of services, it is difficult to maintain a uniform standard of service quality (Nikbin, Ismail, Mariamuthu, & Jalalkamali, 2010).

Within this context, a challenging issue for all service industries, including the airline industry, is service failure (Leow, 2015). Service failures are defined as service performances that fall below customers’ expectations (Hess Jr, 2008). As it is difficult to deliver 100 per cent error-free service, service failures are unavoidable (Nikbin et al., 2010). Within an airline context, I. Kim and Cho (2013) identified that the most common causes of airline service failures are flight delays, uncomfortable seats, poor quality of employee service, poor quality of catering, flight cancellations, and baggage delivery issues. These service failures can be characterised as minor incidents in that although they are inconvenient to customers, they do not result in injury or loss of life (Kim and Cho, 2013). Keiningham et al. (2014) went on to distinguish such minor incidents from what they termed major incidents, which refer to catastrophic events that result in injury and/or death. This research focuses on catastrophic service failures in the airline context.

Catastrophic service failure in the airline context is defined as a complete, sudden, and often unexpected breakdown in a machine or system that causes an airline crash and results in the injury and/or death of passengers (Keiningham, Morgeson III, Aksoy, & Williams, 2014). The
causes of catastrophic service failures in the airline context are complex, and may include human-error, technical glitches, sabotage, and poor weather conditions (C. C. Chen, Chen, & Lin, 2009; McFadden & Towell, 1999). Some researchers claim that approximately 80 percent of airline accidents are related to human error, be it intentional or unintentional, such as intentional non-compliance error, communication error, or procedural error (C. C. Chen et al., 2009; Latorella & Prabhu, 2000; McFadden & Towell, 1999; Stephens & Ukpere, 2014; Wenner & Drury, 2000). For example, 42 per cent of airline accidents arise when the pilot misreads the equipment or misjudges the weather (C. C. Chen et al., 2009), while an additional 35 per cent of crashes occur because technical staff have not performed adequate testing and maintenance (C. C. Chen et al., 2009). Acts of sabotage account for a further 10 per cent of all plane crashes (Bennett, 2016). The most well-known act of sabotage occurred on September 11, 2001, when 19 militants associated with the Islamic extremist group al-Qaeda hijacked four airplanes and carried out suicide attacks against targets in the United States.

Although some work has been undertaken to quantify the causes of catastrophic service failures in the airline industry, we currently have a relatively poor understanding of the negative consumer outcomes of these catastrophic service failures (Siomkos, 2000). More generally, catastrophic service failures have also rarely been examined in the broader service literature. This might be attributed to the fact that the probability of the occurrence of catastrophic service failures is relatively low compared to more minor service failures, especially in the airline context (Keiningham et al., 2014). Research in the area of service failures has, therefore, been predominantly focused on more minor service failures (Keiningham et al., 2014).

The small body of work that has examined unexpected catastrophic (Carter & Simkins, 2004; Siomkos, 2000) and severe service failures (Bejou & Palmer, 1998; Leow, 2015; Mattila,
2004; Nikbin et al., 2010; Palmer & Bejou, 2016; Patterson et al., 2006; Tsarenko & Tojib, 2012; Tucker, 2004; Weun, Beatty, & Jones, 2004) has typically been conducted in hospital settings (e.g., operational failures by hospital nurses that have severely affected patients) and hospitality settings (Y.-L. Lee & Sparks, 2007; Lewis & McCann, 2004; McQuilken & Bednall, 2008; Wang, Wu, Lin, & Wang, 2011). However, with several notable exceptions (Keiningham et al., 2014), consumer responses to catastrophic service failures in the airline industry have not been examined.

Of particular relevance to the current study, Keiningham et al. (2014) examined the role of service failures such as minor and major service failures with regard to consumer satisfaction. They found that minor incidents are more significantly associated with customer satisfaction. While catastrophic service failures of airline crashes are very small in number, despite their relative low probability of occurrence comparative to minor and major incidents, they often have an oversized impact on the public psyche (Keiningham et al., 2014). For instance, after the terrorist attacks of September 11, 2001, airlines experienced a huge decline in air passengers, requiring airlines to discount greatly in order to persuade passengers to fly again (Hetter, 2012). This is unlike the catastrophic accidents in other industries, such as hospitals. This is an important oversight, as although the functionality of airlines is now highly advanced, traveling by air still involves some inherent risk, including the possibility of injury or even death.

Despite the limited research on catastrophic services failures, both in the general service literature and in the airline industry more specifically, it is vital to examine them. Catastrophic service failures can, after all, have a considerable negative impact on the value of firms (Davidson, Chandy, & Cross, 1987). Davidson et al. (1987), for instance, argued that there are three ways that airlines may suffer following catastrophic service failures. First, the catastrophic service failure may cause physical damage to the aircraft itself. Second, the airline may be liable for any loss or
damage arising from the catastrophic service failure, such as for the physical injury or death of passengers and non-passengers, as well as for property damage. Third, the airline may lose the ridership and goodwill of customers and market share due to perceived airline safety problems (Davidson et al., 1987). It is the third impact that this research is interested in; that is, the influence of catastrophic airline service failures on consumer evaluations and future behavioural intentions.

Catastrophic airline crashes are associated with substantial financial losses (Ho, Qiu, & Tang, 2013). The losses include decreased market value of the equity of the crash airline due to the loss of the aircraft and other costs incurred to handle the aftermath of crashes. There is also reduced air travel demand, possible future higher insurance costs, reputation and brand name damage, and customer goodwill loss (Ho et al., 2013; Kaplanski & Levy, 2010). Additionally, air crashes with a more severe fatality – more people killed in an accident – have a larger negative impact on the stock prices of the crash airline over the post-crash period (Ho et al., 2013). Kaplanski and Levy (2010) examined the effect of aviation disasters on stock prices, finding evidence of a significant negative event effect with a market average loss of more than $60 billion per aviation disaster.

The purpose of this research was two-fold. First, the researcher aimed to examine the impact of a catastrophic service failure (in this case, an airline crash) on consumer evaluations of – and future behavioural intentions to fly with – the airline that experienced that service failure. Second, the researcher focused on how airlines can best respond to a catastrophic service failure.

In order to understand consumers’ responses following catastrophic service failures in the airline industry (i.e., the first aim of this research), the researcher focused on consumers’ psychological distance with respect to an airline crash. Construal level theory describes how psychological distance influences the way in which people evaluate objects and events (Trope, Liberman, & Wakslak, 2007). According to Trope and Liberman (2010), psychological distance
is the degree to which an object is perceived to be tangible or immediately present in terms of the here-and-now. Psychological distance is a subjective experience that something is close or far away from the self (Trope & Liberman, 2010; Trope et al., 2007).

Prior research guided by psychological distance theory indicates that people think about distant events more abstractly and proximal events more concretely (M. D. Henderson, Fujita, Trope, & Liberman, 2006; Trope & Liberman, 2010; Trope et al., 2007; White, Johnson, & Kwan, 2014). When individuals think about an event that occurs near to where they are, their mental (psychological) representations of the event are concrete, but when they think about an event that occurred far away, their mental representations of that event are abstract (Williams & Bargh, 2008). The psychological distance that exists between the self and any experience or object can vary along four key dimensions: temporal distance (time), spatial distance (physical space), social distance (social range, such as the distance that exists between two different groups), and probability distance (hypotheticality, such as imagining that an event is likely or unlikely to transpire) (White et al., 2014).

In this research, the focus is on a single dimension of psychological distance, namely spatial distance. The reason for choosing spatial distance as the focus was that the spatial distance of a catastrophic service failure may play an important role in terms of consumers’ response to a catastrophic service failure (Darke et al., 2016). As a general rule, consumers tend to perceive more risk when their spatial distance is closer to a negative event (Trope & Liberman, 2010; Williams & Bargh, 2008). Conceptually, if an airline crash is perceived to be near to consumers (i.e., psychological spatial distance is low), it will likely increase consumers’ risk perceptions and decrease their behavioural intentions, such as intentions to fly with the airline in question (Trope and Liberman, 2010; Darke et al., 2016). Therefore, the prediction was made that consumers’
perceptions of risk will mediate the relationship between psychological spatial distance of an airline crash and consumers’ flying intentions.

The moderating effect of fear of flying (also known as aerophobia) on the relationship between the psychological spatial distance of an airline crash and consumer responses to that crash was also examined. Fear of flying (FoF) is defined as “a specific phobia characterised by a marked persistent excessive fear that is precipitated by the experience or immediate prospect of air travel” (Boyd, Wetterneck, & Hart, 2013, p. 246). The rationale for examining this relationship is that whatever mitigating effect psychological distance may have on consumers’ post-crash responses may be reduced by having a FoF. This is by no means an idle concern. It is estimated that between 10 per cent to 40 per cent of the general population suffer some form of FoF (Bor, 2007; Kraaij, Garnefski, & Van Gerwen, 2003; VanGerwen, Spinhoven, Diekstra, & VanDyck, 1997), and the levels of FoF may periodically spike in the wake of airline-related terrorist attacks, airline hijackings, and media coverage of airline crashes, all of which have been found to contribute to a FoF (Boyd et al., 2013; Van Gerwen, Diekstra, Arondeus, & Wolfger, 2004). Indeed, and as was seen in the wake of the September 11, 2001 attacks, one-off events can result in a tremendous drop in the number of individuals flying (Van Gerwen et al., 2004). Demand for the treatment of FoF is also on the rise (Van Gerwen et al., 2004). Most airlines provide passengers with a variety of services to allay flight-related anxiety and stress (Van Gerwen et al., 2004). For example, Qantas operate Fearless Flyers, a program designed to help people understand and deal with their FoF by analysing their fears and teaching them relaxation and stress management techniques (FearlessFlyersInc, 2018). The potential for FoF to disrupt the potentially ameliorative effect of psychological spatial distance on post-crash consumer responses consequently needs to be examined given the prevalence of fearful flyers in the general community.
In the second part of this research, the researcher examined consumers’ responses to opposing organisational response orientations following a catastrophic service failure. The organisational responses of avoidance versus approach were examined with regard to the catastrophic service failure of an airline crash. The avoidance response orientation can be described as a way of an organisation distancing itself from the victims of a crash both emotionally and psychologically (Folger & Pugh, 2002; J. C. Henderson, 2003). This type of orientation was used by the Chairman of Singapore Airlines following the crash of Singapore Airlines Flight SQ006 on 31 October 2000, who, under questioning about the (at that time, still unknown) cause of the crash, stated that “my personal feeling is that it was an accident” (J. C. Henderson, 2003, p. 282). This orientation, which integrates components of both denial and hedging, is characteristic of an avoidance strategy (J. C. Henderson, 2003).

An approach orientation, on the other hand, aims to reduce the psychological and emotional distance between the airline and the victims of the crash (Folger & Pugh, 2002). This orientation serves to strengthen the belief that the organisation deserves sympathy and aims to change consumers’ perceptions of the organisation (Coombs, 2007). An example of an approach orientation would be when an organisation expresses concern for victims and tries to help them cope with the catastrophic service failure (Coombs & Holladay, 1996, 2005; Ray, 1999).

Consistent with industry practice following a catastrophic service failure in the airline industry (e.g., (Coombs, 2007; Coombs & Holladay, 2001; Coombs & Holladay, 2005; Ray, 1999), the focus of the second conceptual framework was on the delivery of an avoidance versus approach message by the chief executive officer (CEO) of an airline that has just experienced a crash. The researcher argues that when a CEO adopts an approach (versus avoidance) orientation following a catastrophic service failure, it will activate consumers’ perception of CEO concern for the victims
of the crash (Coombs, 2007). In this research, CEO concern is defined as the amount of concern the organisation shows victims and the amount of perceived responsibility accepted for the catastrophic service failure (Coombs & Holladay, 2005). The expression of concern for the victims of the crash is argued to help to minimise the negative impact of the catastrophic service failure with regard to consumers’ attitudes and intentions toward the offending airlines (Coombs & Holladay, 2005).

The service provider’s response to service failures can potentially either reinforce a strong customer bond or change an apparently minor distraction into a major incident (Hoffman, Kelley, & Rotalsky, 1995). Given that enhancing a company’s consumer preservation rate by 20 per cent has the same influence on earnings as reducing costs by 10 per cent (Hoffman et al., 1995), it is vital that managers carefully consider responses to catastrophic service failures, understand consumers’ evaluations of and intentions toward them, and have an established plan to manage catastrophic service failures (Hoffman et al., 1995). This is currently missing from the service literature as empirical research on catastrophic service failures is scarce.

1.2 Conceptual Frameworks

Two conceptual frameworks are advanced and tested in this research. The first conceptual framework shown in Figure 1.1 depicts moderated mediation (Hayes, 2013, p. 13). This model shows perceived risk fully mediating the relationship between psychological (spatial) distance and consumers’ intention to fly, which is contingent on (moderated by) (low) fear of flying (FoF). A review of the literature pertaining to this conceptual framework can be found in Chapter 2 (see Section 2.5).
The researcher developed this conceptual framework based on the extant literature on service failure and psychological distance. Service failures interrupt the relationship between consumers and service providers and change the relational status-quo (Tsarenko & Tojib, 2012). Consumers who experience service failures therefore strive to ‘get over’ these transgressions, and in doing so might engage in protective behaviours, such as decreasing their intention to use the service provider in the future or by actually switching service providers (Tsarenko & Tojib, 2012). One of the aims of consumer psychology is to understand the way in which consumers evaluate service failures (Lii, Chien, Pant, & Lee, 2013). The catastrophic service failure of an airline crash examined in this research negatively influences consumers’ evaluations of the airline and their reactions towards it.
The second conceptual framework examines how consumers respond to an airline that has adopted either an approach or avoidance orientation in the wake of an airline crash. Specifically, it is proposed that CEO perceived concern mediates the relationship between the organisational response orientation and consumers’ attitude and behavioural intentions. A pictorial overview of this conceptual framework is presented in Figure 1.2, while a review of the literature pertinent to this framework can be found in Chapter 2 (see Section 2.10). The second conceptual framework was developed based on the recovery responses described in the crisis literature. A crisis situation may influence the organisation in their response strategy selection (Coombs & Holladay, 2002), with catastrophic failures requiring a vastly different management approach to minor service transgressions (Coombs & Holladay, 2016). Organisational communication shapes consumers’ perceptions of catastrophic service failures and the organisation involved in the failure (Coombs, 1995; Russ, 1991). In this research, an avoidance versus approach orientation was conceptualised as the response orientation of an organisation faced with the catastrophic service failure of an airline crash.
Figure 1.2: Avoidance versus approach organisational response orientation: A serial mediation model

Figure 1.2 (conceptual model two) depicts serial mediation. A serial multiple mediator model has more than one indirect effect from $X$ to $Y$ (Hayes, 2013, 2015). The model estimated in Figure 1.2 shows organisational response (approach vs. avoid) influencing perceived concern of CEO (M1), which in turn impacts consumers’ attitude toward the organisation (M2), which ultimately influences consumers’ intention to fly with the organisation.

1.3 Research Questions
In testing the two conceptual frameworks outlined in Section 1.3, this research aims to address the following primary research questions aligned with the two conceptual frameworks advanced:

- Conceptual framework 1: How does the psychological spatial distance of an airline crash influence consumers’ intention to fly with that airline?
- Conceptual framework 2: How does an airline’s approach versus avoidance response orientation following an airline crash influence consumers’ evaluation of – and intentions to fly with – that airline?

These primary research questions may be further broken down into a series of secondary research questions. For the first conceptual framework:

- Does consumers’ FoF moderate the relationship between the psychological spatial distance of an airline crash and consumers’ intentions to fly with the airline?
- Does consumers’ perceived risk mediate the relationship between the psychological spatial distance of an airline crash and consumers’ intentions to fly with the offending airline?
With respect to the second conceptual framework:

- Does CEO concern mediate the relationship between the organisational response orientation (approach versus avoidance) following an airline crash and consumers’ attitudes and intentions toward the offending airline?

### 1.4 Research Method

An experimental research design was adopted to establish the cause-and-effect relationships as depicted in the two conceptual frameworks presented in Section 1.2 (Cash, Stanković, & Štorga, 2016; Churchill, 2002; T. D. Cook, Campbell, & Shadish, 2002; Field, 2013). Data for the study were gathered through an online-based recruitment platform, i.e., Amazon’s Mechanical Turk (MTurk). MTurk is an online crowdsourcing service where web-based participants complete tasks such as surveys in exchange for money (Mason & Suri, 2012). MTurk has drawn attention from experimental psychologists interested in collecting data about human subjects more efficiently (Crump, McDonnell, & Gureckis, 2013), and it is considered to be a suitable way of collecting accurate data in an inexpensive and timely manner (Holden, Dennie, & Hicks, 2013; Mason & Suri, 2012; Paolacci & Chandler, 2014; K. A. Thomas & Clifford, 2017).

The Qualtrics web platform was used to build the online questionnaires for the experimental studies (Holden et al., 2013). The Qualtrics tool provides a level of flexibility in which several types of questionnaires can be built and edited and could be administered to participants easily and conveniently (Holden et al., 2013). A pre-test was also conducted to ascertain whether the manipulations for each study were successful before launching the main study surveys. Data were analysed through PROCESS regression analysis (Hayes, 2009, 2012, 2015; Hayes & Preacher, 2014), including testing for hypothesised mediation, moderation, and moderated mediation effects (see sections 2.3.6 and 2.4.7 in Chapter 2).
1.5 Potential Contribution of the Research
The key theoretical and practical contributions of this research are outlined as follows.

1.5.1 Contribution to Theory
First, there is a lack of literature that examines catastrophic service failures in general, and airline crashes as a specific form of catastrophic service failure. This research addresses this critical research gap by examining not only how consumers perceive airline crashes but also how airlines can attempt to “recover” from this form of catastrophic service failure. Second, while the influence of psychological distance on consumers’ service evaluations is lacking (see, for exceptions, (Carter & Simkins, 2004; J. C. Henderson, 2003; Keiningham et al., 2014; Siomkos, 2000), the construct of psychological distance provides a potentially useful means for understanding how consumers respond to catastrophic service failures, particularly those that are situated at some distance from consumers, as many international airline crashes are. This research is, therefore novel in not only experimentally testing whether the psychological spatial distance of an airline crash influences consumers’ future intentions to fly with the airline but also in determining whether this relationship is moderated by FoF. Third, this study examines the potential process by which the psychological spatial distance of an airline crash influences consumers’ flying intentions, namely consumers’ perceived risk. Fourth, by examining the organisational response orientations of approach versus avoidance following a catastrophic service failure and consumers’ subsequent responses, this research contributes to the literature by examining how best to respond to catastrophic failures. Developing a strategic communication response that can minimise the potential brand damage that an airline crash is likely to inflict on the broader airline is critical.

1.5.2 Contribution to Practice
The findings of this research are expected to be beneficial to the airline industry because the research addresses some hands-on concerns around catastrophic service failures and their influence
on consumer evaluations and behaviour. In regard to the first framework advanced (see Figure 1), it is important for managers to understand the influence of the psychological spatial distance of an airline crash on consumers’ risk perceptions and, ultimately, their behavioural intentions. This could help to direct communications efforts in terms of potentially reinforcing how spatially distant an aircraft crash is, for example. Different communication approaches may be required depending on how near or far the airline’s primary target audience are to an airline crash. A further practical contribution stemming from this research is the focus on FoF. Past studies estimate that between 10 to 40 per cent of the population may be affected by FoF (Van Gerwen et al., 2004; Vanden Bogaerde & De Raedt, 2013; VanGerwen et al., 1997), which is likely to increase at the time of a catastrophic airline crash. Therefore, the inclusion of consumers’ FoF in the first conceptual framework is worthy of study.

The second conceptual framework examined in this research focuses on an organisation’s approach versus avoidance response orientation following a catastrophic service failure. It is advanced that the adoption of an approach orientation that demonstrates concern for the welfare of crash victims will positively influence consumers’ intentions to fly with the airline in the future. This potentially provides managers with a clear and actionable orientation that they can adopt to effectively respond following a catastrophic service failure, such as an airline crash, to mitigate consumers’ negative evaluations and intentions regarding the airline. Finally, it is advanced that perceived CEO concern mediates the relationship between the adoption of an approach orientation and consumers’ attitude toward the airline. An approach-oriented response might signal the values of a CEO specifically and their organisation more generally, which again is practically relevant.

1.6 Structure of the research
This research is organised into five chapters. Chapter 1 provides the introduction, background to the research, the purpose of the research, an overview of the research method, and provides an
outline of the overall research. Chapter 2 reviews the literature on service failures, with a focus on catastrophic service failures, psychological distance, perceived risk, FOF, organisational response orientations (approach versus avoidance), and consumers’ attitudes and intentions. Based on this review, the hypotheses to be tested in this research are generated. Chapter 3 discusses the experimental research method employed and the results of the experimental studies for the first conceptual framework advanced, which focuses on examining consumers’ future flying intentions following an airline crash that is psychologically close versus far. Chapter 4 discusses the experimental research method employed and the results of the experimental studies associated with the second conceptual framework, which examines the organisational response orientations (approach versus avoidance) applied following a catastrophic service failure and consumers’ evaluations and intentions. Chapter 5 discusses the overall results of this research, the limitations of the studies conducted, suggestions for future research, and the theoretical and managerial contributions of the research.

1.7 Key Definitions
There is rarely consensus about the definitions of concepts in the service literature. Table 1.1 thus provides an overview of the definitions of the key concepts used in this research.

Table 1.1: Definitions of Key Concepts

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Catastrophic service failure</td>
<td>In the context of an airline crash, this refers to a complete, sudden, and often unexpected breakdown in a machine or system that causes an airline crash and results in death and/or injury (Keiningham et al., 2014). In this research, the catastrophic service failure studied is that of a passenger jet that has crashed while attempting to land, and there are no survivors.</td>
</tr>
<tr>
<td>Service failures</td>
<td>Service performances that fall below consumers’ expectations (Hess Jr., 2008).</td>
</tr>
<tr>
<td>Psychological distance (PD)</td>
<td>Trope and Liberman (2010, p. 440) define psychological distance as “a subjective experience that something is close or far away from the self, here, and now.”</td>
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<tr>
<td>Psychological spatial distance</td>
<td>Spatial distance refers to the physical distance at which given events are occurring from each other (Henderson et al., 2006). Spatial distance here is considered as the physical distance between the self and the catastrophic service failure of an airline crash.</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>Mitchell (1999, p. 168) defines perceived risk as “a subjectively-determined expectation of loss; the greater the probability of this, the greater the risk thought to exist for an individual.”</td>
</tr>
<tr>
<td>Intention to fly</td>
<td>The degree to which a consumer would like to fly with a given airline in the future (Chu &amp; Lu, 2007).</td>
</tr>
<tr>
<td>Fear of Flying (FoF)</td>
<td>Fear of flying (FoF) (also known as aerophobia or aviophobia) is defined as “a specific phobia characterised by a marked persistent excessive fear that is precipitated by the experience or immediate prospect of air travel” (Boyd, Wetterneck, &amp; Hart, 2013, p. 246).</td>
</tr>
<tr>
<td>Avoidance orientation</td>
<td>Where an organisation distances itself from the victims of a catastrophic service failure physically, psychologically, and emotionally (Folger &amp; Pugh, 2002).</td>
</tr>
<tr>
<td>Approach</td>
<td>Where an organisation shows concern, empathy, and acknowledges the injustice and victims’ suffering following a catastrophic service failure (Folger &amp; Pugh, 2002).</td>
</tr>
<tr>
<td>Perceived CEO concern</td>
<td>The amount of concern the CEO shows victims and the amount of perceived responsibility accepted for the catastrophic service failure (Coombs &amp; Holladay, 2005).</td>
</tr>
<tr>
<td>Attitude</td>
<td>A response to an antecedent stimulus or a psychological tendency to evaluate things, people, issues, and objects (Breckler, 1984, p. 1191).</td>
</tr>
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2 Chapter Two: Literature Review and Hypotheses Development

2.1 Introduction
In the previous chapter, the background to the research problem was presented, as was the justification for the research, the purpose of the research, the contribution of the research, an overview of the research methodology applied, and definitions of the terms used most frequently in this research. This chapter reviews the literature pertaining to catastrophic service failures, which is the focus of this research, and how consumers respond to such failures. The structure of the literature review is outlined as follows. First, the researcher will examine different types of service failure within the airline industry context before defining catastrophic service failures and examining how they impact both organisations and consumers. Second, the researcher will discuss how psychological distance influences the way in which people evaluate objects and events (Trope et al., 2007), which in this research will be evaluated in the context of a catastrophic airline crash. Psychological distance is the distance that exists between the self and any experience or object. It can vary along four key dimensions, but the focus of this research is on psychological spatial distance only (Trope & Liberman, 2010; White et al., 2014). Third, the researcher will examine organisational response orientations following a catastrophic service failure, including approach versus avoidance oriented responses (Balcetis, 2015; Coombs & Holladay, 2008; Folger & Pugh, 2002; Seibt, Neumann, Nussinson, & Strack, 2008).

2.2 Service Failures
Service failures have been widely studied in the service literature (Hess Jr, 2008; Hoffman et al., 1995; Keiningham et al., 2014; Leow, 2015; Weun et al., 2004). Service failures are defined as service performances that fall below consumers’ expectations (Hess Jr, 2008; Holloway & Beatty,
Service failures can differ in various ways, including with respect to their severity and recurrence (Hess Jr, 2008; Kelley & Davis, 1994), and can lead to consumer dissatisfaction and negative consumer behavioural outcomes, such as switching and negative word of mouth (Nikbin et al., 2010).

Service failures represent a major cost to organisations, such as lost consumers and consumer distrust (Holloway & Beatty, 2003). Although offering “zero-defect” service is the desired objective of all service organisations, consumers frequently encounter service delivery problems (Weun et al., 2004). These problems are experienced across all service industries primarily due to the unique features of services relative to goods, i.e., intangibility, inseparability, heterogeneity, and perishability (Weun et al., 2004). Moreover, the success of service encounters is based on various factors, including frontline employees and the behaviour of other consumers (Leow, 2015). Due to the variability of services largely stemming from their people component, it is difficult to deliver 100 per cent error-free service all of the time, so that service failures or breakdowns in the service are unavoidable (Nikbin et al., 2010), especially for high contact services that are people-based, such as airline services (Migacz, Zou, & Petrick, 2018). Therefore, managers and researchers are keenly interested in examining the sources and consequences of service failures (Weun et al., 2004).

2.2.1 Types of Service Failures
Service failures in the airline context can be categorised as non-catastrophic service failures and catastrophic service failures. Non-catastrophic service failures include minor and more major failures (e.g., travel delays, lost baggage), while catastrophic service failures are those that result in injury and/or death (Keiningham et al., 2014; Smits, 2018). Some examples of common
service failures (i.e., minor and major) that are the focus of the service literature to date and that occur in the airline industry are provided in the following section.

2.2.2 Non-Catastrophic Service Failures
Non-catastrophic (major and minor) service failures can include the delay or cancellation of flights, the loss or misdirection of luggage, service worker-related problems (e.g., rudeness), and technical glitches (Keiningham et al., 2014). Each of these minor and major service failures will be reviewed briefly as follows.

*Flight delay or cancellation*: Flight delays or cancellations impact the goodwill of an airline (Rocha e Oliveira, Ferrer, & Parasuraman, 2012). A relatively minor service failure for a consumer might be where the consumer wants to go on a vacation for three weeks and has to delay the vacation by one day due to a flight cancellation (Smits, 2018). On the other hand, a major service failure might be perceived by a consumer who has an important business meeting where the consumer has to cancel the meeting due to a flight delay or the flight being overbooked (Smits, 2018). Dependent on their purpose of travel and unique situations, these two consumers could potentially perceive the same type of failure as more minor versus major (Smits, 2018). Overall, flight delays can have a negative influence on passenger perceptions of the punctuality of an airline and might adversely influence consumer satisfaction and retention as a result (Rocha e Oliveira et al., 2012). One reasonable consumer causal inference for flight delays is that they are due to an airline’s faulty operational processes (Rocha e Oliveira et al., 2012).

*Loss of luggage or delay in receiving luggage*: Consumer complaints are raised by passengers travelling with airlines when their luggage does not reach the correct destination because it has been wrongly tagged, for example. When important passenger luggage gets lost this
can be considered as a major service failure, while a more minor service failure for a consumer might be where they have to wait for their delayed luggage to arrive (Keiningham et al., 2014).

*Service worker-related problems:* There is great competition among airlines to deliver excellent customer service to passengers (Leow, 2015). However, complaints are frequently raised by consumers about the unprofessional behaviour of airline staff (Leow, 2015), staff not following the policy of the airline (B. Lee & Cranage, 2018), or staff being too rigid with respect to organisational policy (B. Lee & Cranage, 2018; Leow, 2015; Villi & Koc, 2018). A major service failure might be perceived by consumers where they face airline staff rudeness, while a minor service failure can result where a passenger receives the wrong meal due to an airline staff error (Leow, 2015).

*Technical glitches:* Sometimes there are relatively minor technical issues that can arise during a flight, which can cause consumer dissatisfaction (Migacz et al., 2018). For example, when the air-conditioning is not functioning correctly, leaking water is dripping inside the aircraft, or complimentary entertainment equipment is not working correctly. Some more major technical issues that can result in a major service failure would be for example an airline needing to make an emergency landing (Leow, 2015).

### 2.2.3 Catastrophic Service Failures

As distinct from the relatively non-catastrophic failures described in Section 2.3.1 that are the focus of the service literature to date, contextualised here in the airline context, catastrophic service failures are incidents that result in consumer injury and/or death (Keiningham et al., 2014). The causes of catastrophic service failures in the airline context are varied but can be classified into two broad categories: *human error* (e.g., technical-related issues, sabotage, breaches of safety
measures) and *weather conditions* (McFadden & Towell, 1999). These causes are outlined as follows.

**Human error:** Human error has reportedly contributed to the greatest proportion of airline accidents (C. C. Chen et al., 2009; J. C. Chen & Yu, 2018; McFadden & Towell, 1999). Some accidents are related to pilot-error, including intentional and unintentional errors (Dziugiel & Goraj, 2018; Haber, 1987; Laukkala et al., 2018). Intentional pilot error could include instances of suicide or sabotage, while unintentional errors might be caused by pilot fatigue, for example (Dziugiel & Goraj, 2018; Laukkala et al., 2018; S. Lee & Kim, 2018).

Technical-related issues usually occur when maintenance staff have not undertaken proper testing or servicing of an aircraft (C. C. Chen et al., 2009), i.e., due to human error. McFadden and Towell (1999) reported that about 15 per cent of airline accidents are due to maintenance errors. Some examples of errors caused by aircraft maintenance staff include the fitting of wrong parts, incorrect installation of components, electrical wiring discrepancies, loose objects left in the aircraft, and the inadequate lubrication of mechanical parts (C. C. Chen et al., 2009).

Sabotage reportedly contributes to approximately 10 per cent of airline crashes (Bennett, 2016). Typically, this includes terrorist-like attacks, where one or more individuals deliberately set out to cause damage to – or destruction of – an airline (Bennett, 2016). One such example would be the use of airlines to perpetrate attacks throughout the US on 11 September, 2001 (Carter & Simkins, 2004).

Some other airline accidents may have been caused due to operational errors, such as computer software crashes and incorrect display information, which may lead to pilots’ misreading equipment or being presented with the incorrect information (C. C. Chen et al., 2009; Haber, 1987).
Some airline crashes have also been caused following air traffic control deficiencies, such as when an air traffic controller has caused a flight to crash into a mountain (C. C. Chen et al., 2009; Dziugiel & Goraj, 2018; Latorella & Prabhu, 2000; Munakata, 1989). Further, when a plane is overloaded, fuel dumping can lead to an explosion, and a crash ensues, which is also categorised as a crash being caused by human error (C. C. Chen et al., 2009; J. C. Chen & Yu, 2018; Cox, Kepert, & Clark, 1989; Dziugiel & Goraj, 2018; McFadden & Towell, 1999). Other related human errors include breaches of safety measures. For example, a range of safety and security checks must be completed before any flight takes off, and skipping such procedures can be the cause of a catastrophic airline crash (J. C. Chen & Yu, 2018; Dziugiel & Goraj, 2018; Latorella & Prabhu, 2000).

Since the Airline Deregulation Act of 1978, the US airline market has been highly competitive, which has seen an increasing emphasis on the profitability of airlines (McFadden & Towell, 1999). There has been some concern, however, that this emphasis on profitability has led to a decrease in safety expenditures by airlines (McFadden & Towell, 1999), potentially increasing the risk of catastrophic service failures.

Weather conditions: The second major category of causes of catastrophic service failures is weather conditions. Certain weather conditions, such as lightning, can affect the safe operation of an aircraft and, in rare cases, be the cause of an airline crash (C. C. Chen et al., 2009; S. Lee & Kim, 2018; McFadden & Towell, 1999). McFadden and Towell (1999) reported that about five per cent of airline crashes are weather-related.
2.2.4 The Impact of and Responses to Catastrophic Service Failures in the Airline Context

Airlines rely heavily on the perception that air travel in general, and their planes in particular, are safe for passengers to travel on (Ray, 1999). Catastrophic service failures consequently have a dramatic negative influence on this perception. For example, following a plane crash, an airline may find itself battling allegations of irresponsibility, blame, or inadequacy (Ray, 1999). A crash also creates concerns about the general safety of the airline involved, thus threatening the image and reputation of that airline (Ray, 1999).

Research studies from the general service literature suggest that the greater the perceived severity of the service failure, the greater the reduction in consumer satisfaction and consequently revenue, and the larger the number of consumers that will be lost (Keiningham et al., 2014; Weun et al., 2004). For example, Weun et al. (2004) found that severe service failures reduce consumer satisfaction, trust, commitment, and future purchase intentions. Similarly, Keaveney (1995) found that a single severe service failure or a catastrophic service failure is one of the primary factors causing consumers to switch service providers. There are, however, several factors specific to the airline industry that need to be considered when examining the impact of catastrophic service failures within this industry. The following discussion consequently provides a brief outline of some of the ramifications of an airline crash, both for the airline itself as well as for its various stakeholders, particularly its customers.

Physical damage: First and foremost, airline crashes necessarily entail some form of physical damage to the aircraft itself and to the people and/or cargo travelling on the aircraft (Billings, 2018; Siomkos, 2000). Airline crashes can also result in bodily injury to – or the death
of – people on the ground, as well as damage to property on the ground (Benoit, 2018; Davidson et al., 1987).

**Liability risk:** Physical damage to aircraft, people, and property can also cause major financial losses to airlines (Billings, 2018; Case et al., 2018; Davidson et al., 1987; B. K. Lee, 2005; Von Thaden, Wiegmann, & Shappell, 2006). One form of financial loss stems from the fact that airlines are fiscally responsible for compensating passengers (or their next of kin) for any injury that they sustain that is the fault of the airline (Case et al., 2018; Davidson et al., 1987). For example, Australian families of the victims of Malaysian Airlines Flight MH17 that was hit by a rocket missile over the Ukraine in July 2014 sought compensation of $10 million per passenger. This is one of the largest aviation catastrophe compensation claims recorded (Barlass, 2016).

**Reputational loss for the airline:** The second form of financial loss from an airline crash stems from the reputational damage that arises as a result. Catastrophic airline failures generally receive a high level of media attention relative to their incidence as they tap into some of the public’s worst fears, thus impacting consumers’ future choice behaviour (Bor, 2007; Fleischer, Tchetchik, & Toledo, 2012; Keiningham et al., 2014). Research also indicates that consumers usually blame a given airline for an accident, regardless of the cause of the crash (B. K. Lee, 2005). Airlines involved in a catastrophic service failure will, therefore, typically face a reduction in consumer positive attitudes and intentions toward the airline, which is not an insurable risk (Bosch, Eckard, & Singal, 1998; Davidson et al., 1987). Therefore, the impact of this kind of loss on shareholder wealth may be considerable (Davidson et al., 1987). Consumers concerned with an airline’s safety may also switch to rival carriers (Davidson et al., 1987). Airlines that have experienced an airline crash will consequently typically experience a decline in their market
position as future potential consumers seek to avoid flying with the affected airline (Siomkos, 2000).

Reputational loss for the broader airline industry: A third form of financial loss, and one that can transcend a given airline, is the effect an airline crash on the broader airline industry. That is, an airline crash may increase consumer concerns with other elements of the commercial air system, implying a “negative spillover” that would decrease demand for all airlines (Bosch et al., 1998; Davidson et al., 1987). For example, the September 11 terrorist attack majorly affected the whole of the US airline industry (Gittell, Cameron, Lim, & Rivas, 2006). This highlights how a series of related crashes can negatively affect the broader airline industry.

As this brief review suggests, catastrophic service failures can have a major negative impact on both airlines and consumers. Surprisingly, however, the impact of catastrophic service failures in the airline sector can sometimes appear to be less severe vis-à-vis minor service failures, at least when the outcome measure is consumer satisfaction (Keiningham et al., 2014). That is, minor airline service failures that do not result in death or physical harm (Smits, 2018), such as being denied boarding due to overbooking, may cause greater drops in consumer satisfaction and market share than catastrophic service failures (Keiningham et al., 2014; Smits, 2018). As Keiningham et al. (2014) go on to note, however this is likely a reflection of the fact that most consumers who are influenced by major incidents will tend to switch to competing airlines, minimising the apparent influence of catastrophic service failures on consumer outcomes, such as satisfaction.

There are various possible organisational responses to catastrophic service failures, such as apology, compensation, expression of concern, sympathy, and denial, for example (Hess Jr, 2008; Hess Jr, Ganesan, & Klein, 2003; Keiningham et al., 2014; I. Kim & Cho, 2013; Lapré,
Moreover, different types of service failures require firms to respond in different ways (Dawar & Pillutla, 2000; Keiningham et al., 2014). With regard to consumer responses to catastrophic failures, consumers’ level of satisfaction, trust, loyalty and behavioral intentions towards the firm implicated in the failure are unsurprisingly greatly reduced. For example, Sajtos, Brodie, and Whittome (2010) and Keiningham et al. (2014) find that the severity of a service failure negatively impacts consumer satisfaction. Service failures have also been found to elicit different responses in different consumers (Keiningham et al., 2014). For example, consumers will respond to an hour flight delay as if it were a catastrophe if they miss an important business meeting, while others will likely view running out of a desired food item on a flight as an exasperation, but not as a severe or catastrophic failure (Keiningham et al., 2014). Regardless of consumers’ perceptions of the severity of a failure, it is difficult to imagine any consumer who would perceive any non-catastrophic service failure as being more severe than taking a flight that results in human injury and/or death (Keiningham et al., 2014).

Given the adverse impacts of catastrophic service failures outlined in this review, this research focused exclusively on catastrophic service failures within the airline sector. Specifically, this research positions an airline crash as a catastrophic service failure and seeks to examine two general processes that may influence how people respond to such failures: the psychological spatial distance existing between a consumer and the catastrophic service failure (Section 2.3) and organisational response orientations to the catastrophic service failure (Section 2.4). The next section reviews the literature pertaining to psychological distance.
2.3 Psychological Distance
This section advances a series of hypotheses associated with the first conceptual framework tested in this research. Specifically, it examines the influence of psychological spatial distance on consumers’ flying intentions following a catastrophic service failure. According to Trope and Liberman (2010, p. 440), “psychological distance is a subjective experience that something is close or far away from the self, here and now.” CLT describes how psychological distance influences the way in which people evaluate objects and events (Trope et al., 2007).

2.3.1 Construal Level Theory
CLT was introduced in a series of articles by Trope, Liberman, and their colleagues (Amit, Algom, & Trope, 2009; Bar-Anan, Liberman, & Trope, 2006; M. D. Henderson et al., 2006; Liberman, Sagristano, & Trope, 2002; Liberman & Trope, 2008; Trope & Liberman, 2010; Trope et al., 2007) and has been examined extensively in the consumer behaviour literature (Williams, Stein, & Galguera, 2014).

One of the central features of CLT is that psychological distance can vary on four distinct dimensions: spatial (physical) distance (e.g., a mile is more distant than a foot); social distance (e.g., a stranger is more distant than a friend); temporal distance (e.g., a year is more distant than a day); and hypothetical distance (e.g., an imagined event is more distant than a real event) (Amit et al., 2009; Darke et al., 2016; M. D. Henderson et al., 2006; McGraw, Warren, Williams, & Leonard, 2012; Trope & Liberman, 2010; Trope et al., 2007; White et al., 2014). Each of these dimensions will be briefly reviewed in turn.

*Temporal distance* refers to distance in time (Trope et al., 2007). Something that is temporally near is something that is near in time, whereas something that is temporally remote is
far in time (Trope et al., 2007). For example, there is greater temporal distance in recalling an airline crash that happened last year versus remembering an accident that occurred last week.

**Social distance** refers to the degree of space that exists between two or more social groups or individuals (Trope et al., 2007). Theory on social distance distinguishes between not only the self and others but also between close others (i.e., in-groups, similar others) and distant others (i.e., out-groups, different others) (Trope et al., 2007; Xue et al., 2011). If a social group feels safe revealing personal information to another group, that group would be conceptualised as being socially ‘close’ (White et al., 2014). Research has indicated that out-groups, who are more distal, are described in relatively more abstract terms than in-groups, who are more proximal and are construed in more concrete terms (Xue et al., 2011). Applied to the context of catastrophic service failures in the airline industry, social distance would be low if an airline crash involved fellow Australians (and was examined from the perspective of Australians), whereas for those same observers, social distance would be high if the crash involved French nationals.

**Hypothetical distance** also referred to as probability distance (Halamish & Liberman, 2017; Trope & Liberman, 2010), refers to the possibility of an event occurring. The more likely an event is to occur, the nearer it is in hypothetical distance to the self (White et al., 2014). When considering airline crashes, if the likelihood of being exposed to an air crash is high, it will be seen as being close in hypothetical distance (White et al., 2014).

**Spatial distance** refers to the physical distance at which given events are occurring from each other (M. D. Henderson et al., 2006). For example, something that occurs 10,000 miles away from an observer would be seen as more spatially distant than an event that occurs 10 miles away (M. D. Henderson et al., 2006). In the context of an airline crash, spatial distance could refer to the
physical proximity of an observer to the crash itself such that as physical proximity increases, psychological spatial distance will also increase.

This research adds to the literature by enhancing our understanding of catastrophic service failures and consumers’ responses to them by considering the role of the psychological spatial distance of the catastrophic service failure of an airline crash. Specifically, the researcher argues that consumers’ perceptions of an airline crash being relatively close or relatively far will influence their evaluations and behaviour with regard to the airline. For example, if an airline crash occurred 10 miles from where an observer lives, it will be perceived as being relatively near to that observer, whereas if it occurred 10,000 miles from where the observed lives, it will be perceived as being relatively distant.

The first research question addressed in this research, aligned with conceptual model one, is as follows: can the amount of psychological spatial distance perceived by consumers between oneself and the catastrophic service failure of an airline crash influence consumers’ future intentions to fly with the airline? Research in other contexts suggests that psychological distance can indeed exert an important influence on how consumers evaluate and respond to different phenomenon. Prior research on psychological distance and the evaluation of viruses, for instance, found that viruses described as originating closer to respondents’ current location were judged as more dangerous than viruses described as originating at farther distances (White et al., 2014). In that same study, respondents were also found to be willing to pay more for a vaccine for viruses described as originating at closer distances (White et al., 2014). The reason for this set of effects was traced to perceived risk. That is, as the perceived psychological distance to an illness decreased, there was a corresponding increase in the perceived risk of the illness (White et al., 2014). A similar dynamic may exist in the case of a catastrophic service failure. Specifically, the
A researcher argues that consumer perceived risk following a catastrophic service failure will be reduced (increased) when the airline crash is perceived to be psychologically far (close) in distance from the consumer. In the next section, further attention will be directed towards explaining: (i) the construct of consumer perceived risk; and (ii) how consumer perceived risk is influenced by psychological distance.

### 2.3.2 Consumer Perceived Risk

Consumer perceived risk is typically examined within the consumer behaviour literature as a psychological construct (Stone & Grønhaug, 1993), although definitions vary subtly. Mitchell (1999, p. 168), for example defined perceived risk as a “subjectively determined expectation of loss; the greater the probability of this, the greater the risk thought to exist for an individual”. A similar stance was taken by J. W. Taylor (1974), who referred to risk as equivalent to the concept of uncertainty, while Stone and Grønhaug (1993) argued that perceived risk focuses on the likelihood of prospective negative outcomes. A more granular approach to conceptualising risk was taken by Horton (1976, p. 695), who distinguished between financial, performance-related, and psychological losses in his definition of perceived risk. More recently, researchers have added to this list of types of consumer perceived risk. For example, a range of consumer perceived risks have been identified and examined in the consumer behaviour literature, including: financial risk, which relates to the potential to lose or waste money if a service goes wrong (Boksberger, Bieger, & Laesser, 2007; Quintal, Lee, & Soutar, 2010; Reisinger & Mavondo, 2005); functional or performance-related risk, which centres around services that do not perform, deliver benefits, and/or meet consumers’ needs and requirements (Boksberger et al., 2007; Sweeney, Soutar, & Johnson, 1999; Vlek & Stallen, 1981); physical risk, which pertains to the likelihood that a service will inflict injury or illness (Conchar, Zinkhan, Peters, & Olavarrieta, 2004; Floyd, Gibson, Pennington-Gray, & Thapa, 2004; Quintal et al., 2010; Reisinger & Mavondo, 2005); social risk,
which captures the extent to which a service could result in an individual losing personal or social status, appearing unfashionable, and/or lowering their status (Johnson, Sivadas, & Garbarino, 2008; Mandel, 2003; Mitchell, 1999; Reisinger & Mavondo, 2005); psychological risk, which is the probability that a service will damage an individual’s self-image or reflect poorly on their personality (Johnson et al., 2008; Reisinger & Mavondo, 2006); satisfaction, which captures whether the service will deliver satisfaction (Johnson, Garbarino, & Sivadas, 2006; Johnson et al., 2008); and time, which relates to whether the service will perform on time, take too much time, or waste an individual’s time (Floyd et al., 2004; Reisinger & Mavondo, 2005).

Although these many different types of consumer perceived risk have been identified in the literature (Cunningham, Young, & Lee, 2002; Stone & Grønhaug, 1993), the researcher examines overall consumer perceived risk in this research. The rationale for this choice is that a catastrophic service failure in the form of an airline crash is likely to implicate multiple facets of risk, including physical risk, functional risk, psychological risk, and financial risk, so an overall measure of consumer perceived risk is most appropriate to employ here. For example, airline crashes often involve some form of physical risk, such as injury or death (Boksberger et al., 2007; Smits, 2018). They also infer functional risk and satisfaction risk in that the core value of the service was not delivered adequately (Boksberger et al., 2007; Peter, Olson, & Grunert, 1999) as well as psychological risk, as reflected by the stress and anxiety that such incidents can cause consumers (Boksberger et al., 2007; Reisinger & Mavondo, 2006; Zimmermann, Sarstedt, & Ringle, 2011). Financial risks, either directly emerging from the crash itself (e.g., damage to property) or as immediate outcomes of the crash (e.g., injury), can also eventuate (Keiningham et al., 2014; Smits, 2018). For these reasons, a holistic, as opposed to a dimension-specific, approach to conceptualising and assessing perceived risk was adopted in this research.
Notwithstanding the different approaches that have been advanced to conceptualise perceived risk, there are several other important aspects of risk that should be noted, including the relationship between objective and subjective consumer risk, and the difference between risk and uncertainty.

*Objective and subjective risk:* An important definitional distinction, and one that has not heretofore been made in this research, is the difference between subjective (perceived) and objective risk. According to Bauer (1960), individuals are typically concerned with subjective (perceived) risk as opposed to real-world (objective) risk. This is particularly true in the consumption of services (Aven, 2012; Reisinger & Mavondo, 2006). For example, given that services are high in experience properties (i.e., can be evaluated only after the service experience) or credence properties (e.g., difficult to fully evaluate even after purchase), making a precise evaluation of risk is almost impossible (Dawar, 2016). Even if the consumer could determine perfectly the risk involved, it is not objective risk that motivates their behaviour, but rather their subjective opinion of it (Aven, 2012; Mitchell, 1999). For this reason, this research will examine consumers’ subjective perceptions of risk as opposed to more objective measures of risk. Prior experience with a service is relevant in determining perceived risk, namely prior experience with a service will generally reduce consumers’ perceived risk (Dawar, 2016).

*Risk and uncertainty:* Another key definitional distinction is the difference between risk and uncertainty. Any action of consumers will generate consequences that cannot be anticipated with absolute certainty, and some consequences may be unpleasant (Quintal et al., 2010). The difference between risk and uncertainty is that where risk captures some subjective expectation of loss (Aven, 2012), uncertainty refers to situations where insufficient knowledge exists to generate an evaluation of risk (Mitchell, 1999). This distinction, while subtle, is nevertheless important, as
researchers have often previously used the two terms synonymously (Mitchell, 1999). In this research, the focus will be restricted to consumer perceptions of risk.

2.3.3 Psychological Distance and Consumer Perceived Risk
Efforts to reduce consumers’ perceived risk ultimately culminate in one or both of the following means: reducing the degree of certainty that a loss will occur or reducing the amount at stake (Mitchell & Greatorex, 1993). One potential means of reducing the degree of certainty that a loss will occur is by manipulating psychological distance. The basis for this putative effect lies in the fact that psychological distance exerts an influence on construal level. Construal level theory (CLT) refers to the fact that people use a higher/lower level of construal to represent an object as psychological distance from the object increases/decreases (Trope & Liberman, 2010). The relationship between CLT and psychological distance is that people think about distant events more abstractly and proximal events more concretely (Amit et al., 2009; M. D. Henderson et al., 2006; Liberman et al., 2002; Liberman & Trope, 2008; Trope & Liberman, 2010; Trope et al., 2007; White et al., 2014). More specifically, consumers tend to construe a target more concretely if it: is physically closer (i.e., spatial distance); is occurring in the near future (i.e., temporal distance); is related closely to the self (i.e., social distance); or is actual rather than probabilistic (i.e., hypothetical distance) (Ding & Keh, 2017; Yan, 2012). Over the last two decades, a vast amount of empirical evidence has provided support for this proposition (M. D. Henderson et al., 2006; Liberman et al., 2002; Liberman & Trope, 2008; Trope & Liberman, 2010; Trope et al., 2007). Moreover, CLT has been used to study how psychological distance, by shifting construal level, affects a variety of downstream judgments and preferences (Ding & Keh, 2017; Yan, 2012), including consumer perceptions of risk.
Applied to the context of this research, the CLT literature would suggest that an airline crash that is spatially proximal (i.e., low in psychological spatial distance) would elicit greater perceptions of risk than an identical airline crash that is spatially distant (i.e., high in psychological spatial distance). This finding, if supported empirically, could have important implications for the airline industry, particularly with respect to determining which consumer markets should be particularly targeted in activities aimed at addressing post-crash risk perceptions. Flying is a relatively unique behaviour, however not least because of the general level of fear that accompanies flying for a sizeable proportion of the population (Boksberger et al., 2007; Bor, 2007). This, in turn, may moderate the influence of psychological spatial distance of a catastrophic failure on consumer risk perceptions. The following section will consequently define fear of flying (FoF) and advance the potential moderating influence of this construct on the relationship between psychological distance and perceptions of risk.

2.3.4 Moderating Effect of Fear of Flying
A FoF, also known as aerophobia or aviophobia, is defined as “a specific phobia characterised by a marked persistent excessive fear that is precipitated by the experience or immediate prospect of air travel” (Boyd et al., 2013, p. 246). FoF can arise from a range of factors, including an individual’s personality, past experiences, and upbringing (Oakes & Bor, 2010b). For example, pre-existing psychological conditions such as stress and anxiety can contribute to FoF. Social aspects, such as having close relatives or friends that are fearful of flying or having experienced a difficult flight in the past (e.g., due to turbulence) may also contribute to one’s FoF (Bor, 2007; Kraaij et al., 2003; McNaughton & Corr, 2004; Mühlberger, Alpers, & Pauli, 2005; Oakes & Bor, 2010a; Van Gerwen et al., 2004).
It is estimated that between 10 and 40 per cent of the general population in industrialised countries has a FoF (Bor, 2007; Van Gerwen et al., 2004). Therefore, FoF is a phenomenon high on the list of fears impacting individuals today and with which individuals have to cope (Boyd et al., 2013; Kraaij et al., 2003; Van Gerwen et al., 2004; Vanden Bogaerde & De Raedt, 2013). At the same time, however, there is evidence to suggest that the number of individuals suffering from a FoF is responsive to contemporaneous events and may even be increasing (Bor, 2007; Van Gerwen et al., 2004). The terrorist attacks occurring on September 11, 2001, for instance, resulted in a tremendous drop in the number of individuals flying either for pleasure or business (Floyd et al., 2004; Mühlberger et al., 2005; Van Gerwen et al., 2004), suggesting that FoF may have spiked following these attacks. Similar effects have also been noted in the wake of global health threats that are transmitted via airline routes, such as the SARS outbreak, where the number of passengers flying also dipped (Nousi, Haringsma, van Gerwen, & Spinhoven, 2008; Van Gerwen et al., 2004). As such, contemporary security and health fears may contribute to people’s FoF.

Research on the effects of FoF has generally focused on how it impacts on various facets of one’s life. For example, FoF may affect relationships between couples or families when making plans for holidays as it hampers freedom of movement and interactive activities (Bor, 2007; Popp, 2013). The researcher argues in this research that FoF may also bias consumer risk perceptions around flying. Specifically, FoF may reduce the effect that psychological spatial distance of an airline crash has on consumer risk perceptions. The rationale for this argument lies in the psychological underpinnings of FoF, which, by definition, represents a fear response to thoughts around flying (Bor, 2007; Popp, 2013). Fear can result in a “flight or fight” response, with individuals either confronting the fear-inducing stimuli (i.e., fight) or removing themselves from that stimuli (i.e., flight) (Rothbaum et al., 2006). Arguably, FoF is indicative of a flight response
insofar as those with a FoF actively seek to avoid flying (Mühlberger et al., 2005; Rothbaum et al., 2006). For this reason, individuals who express some form of FoF are likely to be insensitive to the effects of psychological distance on perceptions of risk in that any airline crash, irrespective of how psychologically distant it is, is likely to elicit perceptions of risk. For this reason, FoF is proposed to moderate the relationship between psychological spatial distance and perceptions of risk.

2.3.5 Psychological Spatial Distance, Perceived Risk and Intention to Fly
Perceived risk has been shown to have strong negative effects on purchase intentions, such as intention to fly (D. J. Kim, Ferrin, & Rao, 2008). Perceived risk is not the only factor that consumers are sensitive to in the context of intention to purchase (D. J. Kim et al., 2008). Consumers’ disposition to organisational reputation, safety, and security concerns also have strong effects on consumers’ confidence, which influence intentions to fly with an airline (D. J. Kim et al., 2008; Reisinger & Mavondo, 2005). In this research, the researcher refers to perceived risk as a consumer’s belief about the potential negative results that could occur by choosing to fly with a particular airline (D. J. Kim et al., 2008). The general literature on perceived risk is replete with studies demonstrating a negative relationship between perceptions of risk and the adoption of behaviours associated with that risk (see, for example, (DeWitt & Brady, 2016; Grewal, Iyer, Gotlieb, & Levy, 2007; Maxham III, 2001; Rocha e Oliveira et al., 2012; Trope et al., 2007).

A similar pattern of findings is expected to be observed within the airline context. That is, a catastrophic service failure will lead to consumers’ increased risk perceptions and reduced intentions to fly with the airline in the future (DeWitt & Brady, 2016), i.e., perceived risk will fully mediate the relationship between the spatial distance of an airline crash and consumers’ intentions to fly with that airline in the future.
Intention to fly with an airline can be defined as the degree to which an individual is inclined to fly with a given airline in the future (Bonifield & Cole, 2006). According to Cunningham et al. (2002), the greater a consumer’s perceptions of risk with regard to air travel with a particular carrier, the greater the reduction in their intention to fly with that airline in the future (Bor, 2007). Reisinger and Mavondo (2006) added that perceived risk creates emotions that generate consumer anxiety and fear of the outcomes of the purchase decision, which adversely influences intention to fly with a given airline. In this research, perceived risk is, therefore advanced as a mediator of the relationship between the psychological spatial distance of an airline crash and intention to fly with that airline in the future.

2.3.6 Hypotheses Related to Conceptual Framework One
Based on the literature reviewed thus far in this chapter, the following hypotheses are advanced:

\[ H_1: \text{When the psychological spatial distance to an airline crash is far (near), consumers’ intention to fly with that airline will increase (decrease).} \]

\[ H_2: \text{The effect of psychological spatial distance on intention to fly is moderated by fear of flying. Specifically, those with a low (high) fear of flying will have higher (lower) intentions to fly when psychological spatial distance of the crash is far.} \]

\[ H_3: \text{Perceived risk will mediate the relationship between the psychological spatial distance of an airline crash and consumers’ intention to fly with that airline, but only when FoF is low.} \]

A diagrammatic representation of these study hypotheses is presented in Figure 2.1.
In this section, the hypotheses associated with the second conceptual framework tested in this research are advanced. Specifically, this section examines the effectiveness of two separate organisational response orientations that could be implemented following a catastrophic service failure in the airline industry: an approach- versus an avoidance-oriented response.

2.4.1 Organisational Oriented Responses
Organisational response strategies in a crisis refer to “blatant persuasive tactics” aimed at minimising damage and protecting/improving the organisation’s reputation post-crisis (Coombs & Holladay, 2016; Xu & Wu, 2017). While some crisis managers would query the need to be honest and open about crises (Seeger, 2006), it has been recommended that organisations elucidate the crisis and share any information associated with it openly to consumers, which can give the organisation greater control of the situation (Seeger, 2006). Consumers might otherwise access and focus on information from alternative sources, such as the substantial negative media coverage.
of the crisis, including via social media (Xu & Wu, 2017), which in turn may lead consumers to embrace more negative attitudes toward the organisation (S. Kim, 2013; Seeger, 2006). Indeed, past research has revealed that organisational response strategies influence a variety of important outcomes, such as the organisation’s reputation, public anger, consumer negative attitudes, and negative word-of-mouth (Coombs & Holladay, 2009).

In the wake of a catastrophic service failure, the principal goal of an organisational response strategy should be to reduce and contain harm (Seeger, 2006). For example, those organisations associated with a catastrophic service failure may seek to minimise damage to their reputation, avoid accountability, and even shift blame (Seeger, 2006). The question facing an organisation is which specific response strategy they should implement following a catastrophic service failure, particularly with a view to minimising negative consumer perceptions. This consideration is pertinent in the wake of an airline crash, in that the airline that experienced the crash typically faces severe reputational threats (Coombs, 2007). Indeed, while an airline may recover from a minor service failure, such as lost baggage or rude flight crew, how can they seek to recover from a catastrophic service failure that involves death and destruction?

From the outset, it should be recognised that airline crashes, particularly those that have taken a large toll on individual life, arguably cannot be ‘recovered’ (Siomkos, 2000). The only way to respond to such catastrophic service failures is to act with a view to minimising their damage (Claeys & Cauberghe, 2012; Coombs, 2004, 2007; Seeger, 2006). Early studies of crisis response strategies (Coombs, 1998, 2004, 2007; Coombs & Holladay, 1996, 2008, 2009, 2016; Coombs & Holladay., 2002; Ray, 1999) stress the influence of situational aspects, such as the type and severity of the crisis, on the effectiveness of any crisis response strategy in restoring the organisational reputation (Claeys & Cauberghe, 2012). Coombs (2007) developed the situational
crisis communication (SCC) theory that emphasises that an appropriate crisis response strategy takes the level of organisational crisis responsibility into account when attempting to restore the damage caused by the crisis (Claeys & Cauberghe, 2014; Coombs, 2007). First, the type of crisis will influence attributions about who was responsible for the crisis and help to determine how stakeholders will perceive the organisation’s role in precipitating that crisis. Second, the crisis-related history of an organisation relates to whether the organisation has been implicated in a similar crisis before. Third, prior relationship reputation captures how well the organisation has treated its stakeholders in the past. Analysing these three key factors can help the organisation predict the level of reputational threat it is facing and, by extension, assist it in generating an appropriate crisis response strategy (Coombs, 2007). This research advances two specific organisational response orientations that an airline could pursue following a catastrophic service failure: an approach orientation versus an avoidance orientation.

2.4.2 Avoidance Oriented Response
An avoidance orientation refers to any action that is aimed at distancing the organisation from the victims of a catastrophic service failure (Benoit & Brinson, 1994; Folger & Pugh, 2002; Ray, 1999). One oft-encountered avoidance strategy is to deny responsibility for a crisis (Coombs, 2007). In the context of this research, an avoidance response could involve denying that an airline crash was the fault of the airline. For instance, following the crash of Singapore Airlines Flight SQ006 on 31 October, 2000, the Chairman of Singapore Airlines used an avoidance strategy as the organisation distanced itself from questioning of being accountable for the crisis. This was evidenced by the fact that the Chairman stated that “my personal feeling is that it was an accident” that was responsible for the crash, even though no air crash investigation had occurred at that time (J. C. Henderson, 2003, p. 287).
There are a multitude of strategies that organisations seeking to avoid responsibility can adopt, although these can ultimately be subsumed into two broad categories: denying responsibility and hedging responsibility (Coombs & Holladay, 2016; J. C. Henderson, 2003; Ray, 1999). General theories of crisis response strategies suggest that crisis events move through a series of stages/levels, with action occasionally probable to avert a final crisis (J. C. Henderson, 2003). According to Ray (1999), four tactics can be applied for denying responsibility: direct denial, expanded denial, redirection of blame, and aggression. Direct denial is a simple response of denying any responsibility for the service failure. Expanded denial goes further than direct denial by following up with an explanation as to why the organisation is not responsible for the service failure. Redirection refers to when the organisation blames another source or other external factors for the failure. Finally, the response of aggression occurs in situations where an accuser incorrectly places blame, and an organisation may choose more aggressive tactics, such as confronting or attacking its accuser.

Hedging responsibility occurs when the accused does not deny committing an offense, but nevertheless engages in a series of actions aimed at minimising, or ‘dodging’, their responsibility (Ray, 1999). In the context of the cause of an airline crash, for instance, hedging of responsibility would occur if the crash was attributed to a lack of information about the factors that gave rise to the cause of the crash (Benoit & Brinson, 1994). According to (Ray, 1999), four tactics can be used to dodge responsibility: excuses, scapegoating, pleading ignorance, and refuting evidence. An organisation may offer excuses to defend and justify some of their actions, while scapegoating lets the organisation place primary responsibility on another entity, such as a person or group or organisation, which is similar to switching blame strategies. An organisation may plead ignorance
by stating that there was a lack of major information about the situation, or they may attempt to refute or argue conflicting evidence to reduce their responsibility.

Irrespective of the specific avoidance strategy selected, all of these strategies, according to Folger and Pugh (2002) and Ray (1999), can be described as organisational distancing strategies in that they are aimed at minimising responsibility for the catastrophic service failure that transpired. Put differently, these avoidance strategies serve to physically, psychologically, and emotionally distance the organisation from the victims of a catastrophic service failure (Folger & Pugh, 2002). In this way, avoidance strategies are conceptually analogous to psychological distance, with one key difference: they examine the ‘organisational distance’ that exists between an organisation and a catastrophic service failure, whereas psychological distance captures the perceived proximity between the catastrophic service failure and oneself.

2.4.3 Approach Oriented Strategy

Approach strategies refer to actions implemented by an organisation that indicate a preparedness to empathically identify with the victims of a catastrophic service failure, including wanting to reduce their suffering or helping them to cope with the failure (Folger & Pugh, 2002). According to (Ray, 1999), there are three ways in which an organisation may implement an approach strategy. First, they can apologise, express regret for the service failure, and request forgiveness. Second, the organisation can compensate victims with money and/or other services in an effort to lessen their negative feelings toward the organisation. Third, the organisation can demonstrate their concern and regret by correcting the problem where possible. Necessary changes are also made to prevent the failure from occurring again in the future. Ultimately, these approach tactics are aimed at portraying the organisation as wishing to make amends in an effort to win forgiveness for the failure (Coombs & Holladay, 2001).
Just as avoidance strategies can be seen as an attempt to distance an organisation from the victims of the catastrophic service failure, an approach strategy can be conceptualised as a way of bringing an organisation closer to the catastrophic service failure by showing concern, empathy, and acknowledgement of the injustice caused and for victims’ suffering (Folger & Pugh, 2002). Thus, an approach strategy reduces the ‘organisational distance’ between the organisation and those affected by the catastrophic service failure. The researcher argues that these opposite orientations will influence consumers’ attitude towards the airline.

2.4.4 Evaluating Avoidance and Approach Strategies
Public relations (PR) experts often advocate approach strategies as their preferred means for responding to catastrophic service failures (Coombs, 2006; Coombs & Holladay, 2001, 2004; Coombs & Holladay, 2008, 2009; Shin, Casidy, & Mattila, 2018; Xu & Wu, 2017). Their rationale for this position is that expressing sympathy shows concern for victims, while providing compensation offsets victim suffering. These approach strategies are more effective and less expensive compared to alternative strategies, such as apology, for example. That is because apology can also mean accepting greater responsibility for the failure, even when responsibility is unidentified or unknown (Coombs & Holladay, 2008; Liu, Austin, & Jin, 2011). Sympathy demonstrates concern for the unjust suffering of victims and regret over the failure, while compensation offers victims something to offset the loss that they have experienced (Coombs, 2006; Coombs & Holladay, 2008, 2009; Shin et al., 2018; Xu & Wu, 2017).

Nevertheless, avoidance strategies are still often used by organisations post-crisis, particularly in contexts when an organisation can show that it is not at fault for the catastrophic service failure, or to help combat rumors that the organisation was responsible for the failure (Coombs, 2006). Moreover, avoidance strategies may also be used to minimise legal liability for
a particular crisis (Coombs, 2000; Coombs & Holladay, 2016). In such situations, PR specialists favour the use of avoidance strategies that directly deny the failure, redirect blame for the failure to others, or that hedge responsibility for the failure (Ray, 1999).

In this research, the researcher focuses on examining consumers’ reaction to approach versus avoidance oriented strategies (Folger & Pugh, 2002; Ray, 1999). The approach orientation shows concern, compassion, considerateness, and interpersonal sensitivity toward the victims of the catastrophic service failure and the desire to ameliorate the unjust suffering caused (Folger & Pugh, 2002). The avoidance orientation, in contrast, shows less concern for victims’ needs, but also serves to distance the organisation from the catastrophic service failure (Folger & Pugh, 2002). The chief executive officer (CEO) of the organisation is implicated in this choice of orientation (J. C. Henderson, 2003; McDonald, Sparks, & Glendon, 2010), and the researcher argues that choosing an approach (versus avoidance) orientation communicates the concern of the organisation’s CEO as perceived by consumers.

2.4.5 Perceived CEO Concern
The CEO of an organisation is often considered by the public to be the ‘face’ of an organisation (Amernic & Craig, 2007; Conte, 2018; J. C. Henderson, 2003; McDonald et al., 2010; Seeger, Ulmer, Novak, & Sellnow, 2005), and it is the CEO that has ultimate responsibility for developing an organisational response to a catastrophic service failure (Amernic & Craig, 2007; McDonald et al., 2010). This responsibility is manifested both internally and externally. From an internal perspective, organisational responses to a catastrophic service failure are often crafted by top-level decision makers, including the CEO (Amernic & Craig, 2007; Child, 1972; Conte, 2018; Coombs & Holladay, 2016; Dutton & Jackson, 1987; Jeong, 2009). From an external perspective, it is often the CEO who addresses the media following a catastrophic service failure, and who delivers the
organisational response strategy that has been developed by internal decision-makers (Diga & Kelleher, 2009). After all, a catastrophic service failure requires follow-up actions to persuade consumers to remain faithful to the organisation, and the CEO is the most credible source of communication about that catastrophic service failure (Amernic & Craig, 2007; Siomkos, 2000). The specific organisational response enacted by the CEO can, therefore, influence consumers’ perceptions of CEO concern.

Perceived CEO concern refers to the amount of concern and level of responsibility acceptance for the crisis shown to consumers in strategic message framing in crisis communication responses (Claeys & Cauberghe, 2014; Shin et al., 2018; Xu & Wu, 2017). A CEO’s expression of concern may shift a crisis incident from being an organisational catastrophe to an opportunity for enhancements of commercial credibility and reputation in the long-run (Siomkos, 2000). These potentially positive outcomes can emerge because of the ‘signal’ that CEOs can send about the values and directions of the organisations that they lead (Amernic & Craig, 2007; Conte, 2018; Jensen & Zajac, 2004). Indeed, perceptions of a CEO can shape and inform how the broader public perceives the organisation for which they are responsible (Amernic & Craig, 2007; Conte, 2018; J. C. Henderson, 2003; Jensen & Zajac, 2004).

While organisational response strategies ultimately aim to repair the reputational and brand damage arising from a catastrophic service failure, such responses can differ with respect to the amount of concern the CEO (and by extension, the organisation) is seen to show towards victims (Coombs & Holladay, 2005). This perceived level of concern that a CEO shows towards victims is important because consumers expect an expression of concern following a catastrophic service failure (Coombs, 2007; Fuchs-Burnett, 2002). Minimising the damage associated with a catastrophic service failure can, therefore, be achieved by a CEO (and by extension, the
organisation) expressing their concern for the catastrophic service failure (Coombs, 2006, 2007; Coombs & Holladay, 2005). Most importantly, CEO communications need to address the concerns of victims both physically and psychologically (Coombs, 2007).

With this set of principles and consumer expectations in mind, an approach strategy, which shows empathy and compassion for the victims of a catastrophic service failure (Claeys & Cauberghe, 2012; Xu & Wu, 2017), is likely to give rise to greater levels of perceived CEO concern. The expression of CEO concern, and the resultant sympathy that is shown for victims, should in turn help to minimise the negative organisational impact of a catastrophic failure and lessen consumers’ negative emotions towards the organisation (Coombs & Holladay, 2005). After all, an approach strategy serves to strengthen the belief that the organisation deserves sympathy and may subsequently change consumers’ attitude toward the organisation (Coombs, 2007). Conversely, an avoidance strategy, which ultimately serves to distance the organisation from the catastrophic service failure (Coombs, 2007; Folger & Pugh, 2002; Ray, 1999), is likely to reduce consumers’ perceived CEO concern.

As a CEO is widely perceived as the ‘face’ of their organisation (Kaplan, Klebanov, & Sorensen, 2012), the concern that they show towards the victims of a catastrophic service failure is likely to inform broader consumer evaluations of the organisation. That is, perceived CEO concern should influence consumers’ attitude towards the organisation. In this way, perceived CEO concern is proposed to mediate the relationship between the organisational response strategy (avoidance versus approach) and attitude towards the organisation.

2.4.6 Consumers’ Attitude towards the Service Organisation
Attitude is defined as a response to an antecedent stimulus or a psychological tendency to evaluate things, people, issues, and objects (Albarracin & Shavitt, 2018; Augusto de Matos, Vargas Rossi,
Teixeira Veiga, & Afonso Vieira, 2009; Breckler, 1984; Chahal & Devi, 2015; Costa-Font, Gil, & Traill, 2008; Petty, 2018). Attitude is built on three components: an affective component, a cognitive component, and a behavioural component (Breckler, 1984). The affective component refers to an emotional response towards an object or topic (Breckler, 1984). In the context of this research, a consumer statement such as, ‘I feel insulted by the airline’s response to the crash’ would represent an affective response as the word ‘insulted’ indicates a feeling or emotion that describes that consumer’s attitude toward the organisation. The cognitive component of attitude captures an individual’s belief about – or knowledge of – an object or subject (Breckler, 1984). For example, a consumer statement such as, ‘I believe that the airline does not care for its passengers’ represents a cognitive belief about the values of the organisation and how it is likely to treat its consumers. Finally, the behavioural component includes actions or behavioural intentions concerning a certain topic or object (Breckler, 1984). For example, ‘I will avoid flying with the given airline when I have to fly in the future’ represents a potential behavioural response that a consumer may ultimately form following an avoidance strategy.

Together, these elements form the ABC model of attitudes (Breckler, 1984). A fundamental supposition underlying the attitude model indicates that the three components differ on an evaluative scale, i.e., the affective component (A) can vary from positive feeling (i.e., feeling good, feeling happy) to negative feeling (i.e., feeling bad, feeling unhappy). The behavioural component (B) can range from positive actions (e.g., keeping, supporting, protecting) to adverse reactions (e.g., avoiding, discarding). Finally, the cognitive component (C) also differs from positive thoughts and beliefs to negative thoughts and beliefs, which individuals form in relation to some object (Breckler, 1984).
Fishbein and Ajzen (2005; 2011) advanced a similar tri-component model of attitude in their theory of reasoned action approach. Unlike Breckler (1984), however, Fishbein and Ajzen (2011) advanced an alternative conceptual model for examining the inter-relationships between these three components of attitude. Specifically, Fishbein and Ajzen (2011) argued that the cognitive and affective components of attitude could be examined simultaneously as part of a global measure of attitude. Moreover, Fishbein and Ajzen (2011) proposed that this global measure of attitude acted as an important antecedent of behavioural intentions. This alternative conceptualisation, which has received wide support in the academic literature (Ajzen, 2011; Albarracin & Shavitt, 2018; Crisafulli & Singh, 2017; Fishbein & Ajzen, 2005; Glasman & Albarracin, 2006; Kraus, 1995; Lorenz, Johnson, & Barakat, 2017; Petty, 2018; Prayag, Chen, & Del Chiappa, 2018; Sawicki & Wegener, 2018; Sheeran & Rivis, 2017), was adopted in this research.

Specifically, given that both affective and cognitive attitudes are likely to be influenced by organisational response strategies to catastrophic service failures, focus was restricted to examining the effect of organisational response strategies on a global measure of attitude. Moreover, and drawing explicitly on the Fishbein and Ajzen (2011) model, attitude was conceptualised as an immediate antecedent of intention to fly with the airline. This conceptual linkage is also consistent with previous research, which has found that consumers’ behavioural intentions are influenced by their attitude towards the airline, which in turn are based on their perceptions of how an organisation responds to the airline crash (Chahal & Devi, 2015).

2.4.7 Hypotheses Related to Conceptual Framework Two
The second research question examines how consumers respond to an airline that has adopted either an approach or avoidance orientation in the wake of an airline crash. Drawing these lines of
evidence together, the researcher argues that the approach versus avoidance oriented strategy adopted by an organisation (and expressed by its CEO) will, via serial mediation, determine perceived CEO concern, consumers’ attitude towards the airline, and their intention to fly with the airline in the future. This set of relationships are expressed via the following hypotheses (diagramatically depicted in Figure 2):

\( H_4: \text{Adopting an approach (versus avoidance) oriented strategy to respond to an airline crash will increase consumers’ positive attitude towards the organisation.} \)

\( H_5: \text{Perceived CEO concern mediates the relationship between adopting an approach (versus avoidance) oriented strategy and consumers’ attitude towards the organisation.} \)

\( H_6: \text{CEO concern and attitude towards the organisation will serially mediate the relationship between an approach (versus avoidance) oriented strategy and consumers’ intention to fly with the airline.} \)
Figure 2: Conceptual framework two: Avoidance versus approach organisational response orientation and consumers’ intention to fly: A serial mediation model

2.5 Summary
This chapter discussed the body of literature on service failures, psychological distance, fear of flying, consumer perceived risk, the organisational response orientations of approach versus avoidance, perceived CEO concern, and attitude toward and intention to fly with a particular airline. The literature review mainly focused on the possible factors that are associated with consumers’ perceptions and behavioural intentions in the context of a catastrophic service failure of an airline crash. In this regard, intention to fly was discussed and its interconnected variables taken from the literature to generate the two conceptual frameworks advanced in this research. The following chapter discusses the research method and results of the proposed study which examined the relationship between psychological spatial distance and consumers’ intention to fly.
3 Chapter Three: Method and Results: Psychological Spatial Distance and Consumers’ Intention to Fly

3.1 Introduction
The purpose of this chapter is to examine whether psychological spatial distance influences consumers’ intentions to fly with a given airline following the catastrophic service failure of an airline crash. The literature review presented in Chapter 2 (see Section 2.3) addressed, among other things, service failures, with a focus on catastrophic service failures, construal level theory and psychological distance. This chapter describes each element of the study that was developed to answer the primary research questions and test the hypotheses advanced with regard to the first conceptual framework justified in Chapter Two (see Section 2.3.6). This chapter first discusses methodological considerations and justifications, followed by the research design, measures of reliability and validity, scenario development, scenario pre-testing, and the participant recruitment process, along with procedures. The chapter concludes with a presentation of the results and a discussion based on these results.

3.2 Methodological Considerations and Justifications
3.2.1 Research Design
This study was designed as a two-level (psychological spatial distance: near versus far) between subjects experimental design. Between subjects designs comparing two treatments are used extensively in service failure research involving scenarios (Boshoff, 1997; Clopton, Stoddard, & Clay, 2001; Collie, Bradley, & Sparks, 2002; Goodwin & Ross, 1992; Mattila & Ro, 2008; McCollough, Berry, & Yadav, 2000; Sparks & Fredline, 2007; Wirtz & Mattila, 2004). In a between subjects experimental design, different groups of participants receive different levels of the independent variable, with each participant serving in only one condition (Charness, Gneezy,
Independent samples may be used in each condition and participants are selected without regard to who is in the other condition (Charness et al., 2012).

In this research, hypothetical service scenarios were used to examine whether psychological distance influences how consumers respond to airline crashes. Scenarios are founded on the role-playing approach and have been used often in consumer and service research with respect to service failure (e.g., Barling & Phillips, 1993; Bitner, 1990; Collie et al., 2002; Dabholkar, 1996; Goodwin & Ross, 1992; Surprenant & Solomon, 1987; Wirtz & Mattila, 2004). The scenario method is highly appropriate when examining consumers’ subjective reactions to phenomena (Lind & Tyler, 1988).

Experimental research designs proffer several advantages over other research designs. First, and perhaps most notably, experimental research designs come closest to providing evidence of causality (Cash et al., 2016). Experimental designs provide evidence regarding the relationships between antecedents and outcomes, while controlling for the effects of extraneous variables (Aguinis & Bradley, 2014). Second, experimentally-generated scenarios enhance internal validity by offering substantial control over how participants perceive the independent variables, and by minimising random noise (e.g., due to differences in personal circumstances) in the dependent variables with a universal setting for all participants (Churchill, 1995; T. C. Cook & Campbell, 1979; Shadish, Cook, & Campbell, 2002). It is for these reasons that experimental research designs represent some of the most widely applied methodologies for measuring and analysing consumers’ preferences, evaluations and intentions (Shadish et al., 2002).

Although experimental research designs provide clear benefits, the limitations associated with this choice of study design need to nevertheless be acknowledged. First, the development of experimental scenarios is often accomplished at the expense of external validity (Highhouse,
2009). Indeed, most criticisms of experimental designs are around them using contrived scenarios that do not effectively simulate “real-world” events (Highhouse, 2009). Second, controlling irrelevant variables at times also means creating conditions that are somewhat artificial. Participants are required to project themselves fully into imaginary situations; if they experience difficulty doing so, their responses may not be indicative of their real response (Wirtz & Mattila, 2004). In addition, reading a scenario may not generate the range of emotions that an actual encounter would produce (Widmier & Jackson, 2002). Therefore, using scenarios requires the researcher to pay more attention to the degree to which the treatment manipulation is representative, reliable and valid (Highhouse, 2009). Notwithstanding these limitations, an experimental research design was ultimately adopted in this research because of its ability to provide insights into causal relationships and control the influence of extraneous variables.

According to Cash et al. (2016), there are three fundamental types of experimental designs. The first type is a randomised experiment. In randomised experiments, participants are randomly assigned to an experimental or control group, which enables researchers to control the potential influence of extraneous variables on the outcome variables of interest. By exposing one group to a specific experimental treatment (i.e., the experimental group) and withholding this treatment from the other group (i.e., the control group), any differences between the two groups can be attributed to the effect of the experimental treatment (Cash et al., 2016). The second type of experiment is a quasi-experiment or natural experiment. Quasi-experimental designs are similar to randomised designs as they involve comparisons between groups. However, unlike randomised designs, quasi-experimental designs are generally conducted in naturally occurring settings, which usually prohibits the random allocation of participants to experimental and control groups. The third type of experiment is a pre-experiment or pseudo-experiment. It follows experimental design
conventions, but no control conditions are used. Subsequently, this type of experiment indicates correlation only (as opposed to cause and effect).

In this research, a randomised experimental approach was used to examine the effect of psychological spatial distance of the catastrophic service failure of an airline crash on consumers’ intentions. The benefit of using this method is that it provides the strongest evidence of cause and effect relationships (Cash et al., 2016). Moreover, this approach is relatively easy to employ, sampling error can be calculated, and it requires little knowledge of the population in advance (Blankenship, 2010; Rea & Parker, 2014).

A cross-sectional design using an online questionnaire was employed. Cross-sectional studies measure a population at only one point in time. The use of a cross-sectional design is consistent with much of the prior research in the area of service failures (Albrecht, Walsh, & Beatty, 2017; Edell, 2017; Koc, Ulukoy, Kilic, Yumusak, & Bahar, 2017; Liao, 2007; Nikbin, Marimuthu, & Hyun, 2016; Sengupta et al., 2018; Sparks & Fredline, 2007; Valentine, McKell, & Ford, 2018). A formal structured questionnaire was utilised and all participants were presented with exactly the same questions and with a standardised set of fixed-alternative responses to each question. This method remains popular as fixed-alternative responses reduce the variability in the results that may occur from differing participant perceptions (Churchill, 1999).

3.2.2 Measures of Reliability and Validity

3.2.2.1 Reliability
Reliability is “the degree to which measures are free from error and, therefore yield consistent results” (Zikmund, 2000, p. 375). Cronbach’s alpha (α) is a commonly applied measure of reliability. The α varies from 0 to 1, with higher values indicating greater internal reliability. While Griethuijsen et al. (2015) and Shemwell, Chase, and Schwartz (2015) argued that the generally
accepted alpha level is 0.7, in more recent times, calls have been made to increase the strictness of this test (Taber, 2017). Therefore, a minimum value of 0.75 for $\alpha$ is set in this research. The use of Cronbach’s alpha assumes scale uni-dimensionality (Cronbach, 1951). Uni-dimensionality exists where a single construct or trait is found to underlie a set of measures (Anderson & Gerbing, 1991; Hattie, 1985). Low alpha values suggest that the measure consists of too few items, or that the combination of items do not adequately capture a construct.

3.2.2.2 Validity
To be robust, measurement instruments need to be not only reliable but also valid. Tests for validity are used to determine how well the observed items capture the theoretical constructs being measured (Streiner, Norman, & Cairney, 2015). In this research, validity was assessed in terms of content (or face) validity and convergent validity. Content validity investigates the extent to which the measurement scale captures the theoretical basis of the construct (Cash et al., 2016; Churchill, 1999; Malhotra, Hall, Shaw, & Oppenheim, 2006) and needs to be established prior to any theoretical testing (Hair, Black, Babin, Anderson, & Tatham, 2006). In this research, content validity was established, in part, by adopting well-established measurement instruments that had been used in previous empirical studies (T. Brown, Morrison, & Stagnitti, 2010; Streiner et al., 2015). Convergent validity refers to the degree to which two measures of constructs that theoretically should be related, are in fact related (T. Brown et al., 2010). Convergent validity was measured in this research via the correlation coefficient, Pearson’s $r$. This coefficient is a measure of the linear correlation between two variables $X$ and $Y$. It has a value between $+1$ and $-1$, where 1 represents a perfect positive linear correlation, 0 shows no linear correlation, and $-1$ is a perfect negative linear correlation (R. Taylor, 1990). Inter-item correlations of 0.8 are considered ‘good’, while correlations of 0.9 and above are deemed ‘excellent’ (George & Mallery, 2003; Gliem & Gliem, 2003).
In addition, principal component analysis (PCA), a popular multivariate technique, was used to determine if the items included in each of the measurement instruments employed belonged to a single factor (Happ & Greven, 2018). It can be often the case in factor analysis that there are several variables that the researcher is trying to find inter-correlations between and a pattern as to how these variables work together, and PCA can help the researcher do this mathematically (Sarkar, Saha, & Agrawal, 2014). The purpose of PCA is to reduce the redundancy in the measurement of a construct, and to refine the measurement instrument to be more efficient in measuring the construct of interest (Abdi & Williams, 2010; Candès, Li, Ma, & Wright, 2011; Sarkar et al., 2014). PCA can be used to compress a large dimensional dataset into a smaller dimensional dataset, especially when the researcher is trying to develop and evaluate scales that measure a particular construct (Candès et al., 2011; Happ & Greven, 2018; Sarkar et al., 2014).

3.2.3 Scenario Development
Examining the effect of psychological distance on how consumers evaluate airline crashes requires the development of scenarios that successfully manipulate how psychologically distant the airline crash appears to be from the perspective of the consumer reading the scenario. Studies examining the spatial distance component of psychological distance provided some insight into how this could be accomplished. Fujita, Henderson, Eng, Trope, and Liberman (2006), for instance, manipulated psychological spatial distance by asking participants to consider helping a friend move apartment to a location “outside of New York City, about 3 miles from here” or “outside of Los Angeles, about 3,000 miles from here”. Similarly, White et al. (White et al., 2014) manipulated the psychological spatial distance of a disease outbreak by presenting participants with a map of the USA depicting the location of a recent disease outbreak. For participants in the near condition, the disease was exposed as having been detected at the University of Arizona (in which all participants
were taking a course) as well as in five nearby cities, while for those in the far condition, the disease was depicted as having been detected in other US states.

As the findings from this set of studies suggest, varying the geographic location of a stimulus is sufficient to vary the psychological spatial distance between the stimulus and an observer. With this principle in mind, a brief scenario describing an airline crash was developed for use in this research. In the spatial distance “near” scenario, the airline crash was described as having occurred 10 miles away, as follows:

“A passenger jet operated by Wide Sky Airlines has crashed while attempting to land. The crash occurred 10 miles from where you live.”

Conversely, in the spatial distance “far” scenario, the airline crash was described as having occurred 10,000 miles away, as follows:

“A passenger jet operated by Wide Sky Airlines has crashed while attempting to land. The crash occurred 10,000 miles from where you live.”

In both scenarios, a hypothetical airline company (Wide Sky Airlines) was featured so that participants could not draw upon existing brand knowledge or preferences when evaluating the scenario and the role of the airline in that scenario. Using a hypothetical airline avoids complications arising from participants having different perceptions of specific brands or differing levels of brand familiarity (Kumar, Lee, & Kim, 2009).

3.3 Scenario Pre-test
Although the method used to manipulate psychological spatial distance in the scenarios has been employed extensively in prior studies (Amit et al., 2009; Darke et al., 2016; Fujita, Eyal, Chaiken, Trope, & Liberman, 2008; Fujita et al., 2006; M. D. Henderson et al., 2006; McGraw et al., 2012;
Trope & Liberman, 2010; Trope et al., 2007; White et al., 2014; Yan, 2012), a pre-test was nevertheless conducted to ascertain whether the manipulation of psychological spatial distance had indeed been successful in the context of this research.

3.3.1 Participants
The two scenarios were pre-tested using US participants recruited via Amazon Mechanical Turk (MTurk), an online crowdsourcing platform where workers perform tasks that require human intelligence, such as completing a questionnaire (Antoun, Zhang, Conrad, & Schober, 2016; Mason & Suri, 2012). Previous research has found that MTurk provides a useful means for recruiting demographically diverse participants (Buhrmester, Kwang, and Gosling, 2011) who are more representative of the general population than the college student-based samples that typify much of the prior research conducted in the social sciences (Berinsky, Huber, & Lenz, 2012; Crump et al., 2013). MTurk also enables researchers access to a large, stable, and diverse subject pool at low cost, allowing researchers to more quickly iterate between developing theory and executing experiments (Mason & Suri, 2012). In fact, researchers from a variety of fields, such as economics (Arechar, Kraft-Todd, & Rand, 2017), sociology (Gaddis, 2017; Whitley & Dietz, 2017), politics (Renshon, Dafoe, & Huth, 2017), and psychology (Clifford & Thomas, 2017; Peer, Brandimarte, Samat, & Acquisti, 2017; Wessling, Huber, & Netzer, 2017) use MTurk to conduct experiment-based studies (Mason & Suri, 2012). Moreover, previous experimental studies examining psychological spatial distance have also been conducted using MTurk (McGraw et al., 2012; M. Thomas & Tsai, 2012; White et al., 2014). Finally, researchers have been able to replicate via MTurk the results of seminal experiments (Mason & Suri, 2012), suggesting that this platform also provides an expeditious means for capturing valid data. For these reasons, MTurk provided the means for recruiting participants in this and all other studies conducted as part of this research.
The decision to restrict the focus of participant recruitment to US residents was based on self-selection to become a part of the MTurk population (Cheung, Burns, Sinclair, & Sliter, 2017). That is, MTurk workers are mostly US residents who have diverse backgrounds and are more representative of the US population than student samples (Cheung et al., 2017). Moreover, MTurk helps researchers to overcome generalisability issues by gaining quick, easy, and convenient access to a heterogeneous US population (i.e., with greater demographic diversity than college students) (Cheung et al., 2017). The age of participants was 18 years or over. The age qualification was based on the difficulty of obtaining ethics approval for a study involving participants under the age of 18 years.

For the pre-test, the final sample comprised 41 participants (male = 23, female = 18) ranging in age from 22 to 65 years ($M = 1.45$, $SD = 0.50$). A breakdown of the participant demographic profile is reported in Table 3.1. Different tasks require different amounts of time to perform on MTurk, which can vary from a few minutes to a couple of hours, so compensation for such tasks can range from a few cents to a few dollars (Shank, 2016). In this study, each pre-test participant received US$1.00 for their participation.

Table 3.1. The demographic profile of the pre-test participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>$N$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>23</td>
<td>55.0</td>
</tr>
<tr>
<td>Female</td>
<td>18</td>
<td>45.0</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 24</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>25 to 34</td>
<td>16</td>
<td>39.0</td>
</tr>
<tr>
<td>35 to 44</td>
<td>13</td>
<td>31.0</td>
</tr>
<tr>
<td>45 to 54</td>
<td>6</td>
<td>16.0</td>
</tr>
<tr>
<td>55 to 64</td>
<td>3</td>
<td>8.0</td>
</tr>
<tr>
<td>65+ years</td>
<td>1</td>
<td>1.0</td>
</tr>
</tbody>
</table>
3.3.2 Procedure
Participants were first presented with an explanatory statement that outlined the purpose of the pre-test study. Participants were advised that completion of the questionnaire indicated their consent to partake in the study. After reading the explanatory statement, participants were randomly presented with either the spatially near (psychological spatial distance = near; \( n = 20 \)) or spatially distant (psychological spatial distance = far; \( n = 21 \)) the scenario described in Section 3.2.3. Both scenarios were presented to participants in such a way as to prevent participants from navigating away from the scenarios until 10 seconds had elapsed. This strategy was implemented to make sure that participants had paid sufficient attention to the information presented in the scenario before proceeding with completing the pre-test survey (Downs, Holbrook, Sheng, & Cranor, 2010).

Once the 10 seconds had elapsed, and after they had finished reading the scenario, participants proceeded to the next screen and completed a four-item measure of psychological spatial distance that had been modified from Darke et al. (2016). These items, which were scored on a seven-point Likert scale, were designed to capture the psychological spatial distance that participants perceived to exist between themselves and the airline crash described in the scenario. For example, participants were asked to evaluate the statement, ‘When you consider Wide Sky Airlines, how tangible is the crash in your mind?’ on a scale ranging from 1 (very intangible) to 7 (very tangible). Tangibility refers to consumers’ ability to sense something (e.g., see, touch, hear, taste, and/or smell it) (Darke et al., 2016). All questionnaire items relevant to this construct in their original and adapted form are outlined in Table 3.2. When PCA was conducted, the four items loaded onto a single component, as presented in Table 3.3. The resultant scale had adequate internal consistency (\( \alpha = .85 \)) (Cronbach, 1951; Peterson, 1994; Ponterotto & Ruckdeschel, 2007). The survey concluded when participants reported their age and gender.
Table 3.2 Items measuring psychological spatial distance

<table>
<thead>
<tr>
<th>Original Item*</th>
<th>Adapted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>When you consider [retailer] and its features, how tangible are the attributes of the company in your mind?</td>
<td>When you consider Wide Sky Airlines, how tangible is the crash in your mind?</td>
</tr>
<tr>
<td>When you think about [retailer] and its characteristics, how physically close are you to the company?</td>
<td>When you think about Wide Sky Airlines, how difficult or easy is it to imagine in your mind?</td>
</tr>
<tr>
<td>When you think about the physical features of [retailer], how abstract are they in your mind?</td>
<td>When you think about Wide Sky Airlines, how abstract or real does the crash seem in your mind?</td>
</tr>
<tr>
<td>When you think about the physical features of [retailer], how real do they seem in your mind?</td>
<td>When you think about Wide Sky Airlines, how distant or close does the crash seem in your mind?</td>
</tr>
</tbody>
</table>

*Source: Darke et al. (2016)

Table 3.3 Principal components analysis (PCA) for psychological spatial distance

<table>
<thead>
<tr>
<th>Items</th>
<th>Component loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>When you consider Wide Sky Airlines, how tangible is the crash in your mind?</td>
<td>0.87</td>
</tr>
<tr>
<td>When you think about Wide Sky Airlines, how difficult or easy is it to imagine in your mind?</td>
<td>0.84</td>
</tr>
<tr>
<td>When you think about Wide Sky Airlines, how abstract or real does the crash seem in your mind?</td>
<td>0.83</td>
</tr>
<tr>
<td>When you think about Wide Sky Airlines, how distant or close does the crash seem in your mind?</td>
<td>0.80</td>
</tr>
</tbody>
</table>

Number of cases: 41; Eigenvalue: 2.80; Percentage of common variance: 70.08.

3.3.3 Results and Discussion
An independent samples $t$-test was conducted to determine whether the study scenarios were successful in manipulating psychological spatial distance. The results of this analysis revealed that the spatial distance (near) scenario ($M = 5.68$, $SD = 1.00$) was perceived as being more psychologically near than the spatial distance (far) scenario ($M = 4.20$, $SD = 1.76$; $t (39) = 3.28, p = .02$). These results suggest that participants perceived the manipulation as intended. Thus, and consistent with previous studies (e.g., Henderson, et al., 2006; White et al., 2014; Trope &
Liberman 2010), changing how far an event is spatially situated from an observer is sufficient to manipulate psychological spatial distance.

3.4 Primary Studies

3.4.1 Study 1

The purpose of Study 1 was to determine whether fear of flying (FoF) moderates the relationship between the psychological spatial distance of an airline crash and consumers’ intentions to fly with the airline that experienced the crash.

3.4.2 Participants

Recruitment for Study 1 once again took place via MTurk, with recruitment restricted to those residing in the United States. MTurk participants were compensated US$1.00 for partaking in the experimental study. Of the 100 participants who completed the survey, eight participants were subsequently excluded from the analysis because they took 120 seconds or more to read the single sentence scenario, which is indicative of being distracted while completing the questionnaire. The remaining sample of 92 participants comprised 53 males and 39 females aged 22 to 70 years ($M = 0.50, SD = 0.05$). A summary of the participant profile can be found in Table 3.4.

Table 3.4. The demographic profile of the Study 1 participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>$N$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>53</td>
<td>57.6</td>
</tr>
<tr>
<td>Female</td>
<td>39</td>
<td>42.4</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 24</td>
<td>3</td>
<td>3.0</td>
</tr>
<tr>
<td>25 to 34</td>
<td>26</td>
<td>28.0</td>
</tr>
<tr>
<td>35 to 44</td>
<td>34</td>
<td>31.0</td>
</tr>
<tr>
<td>45 to 54</td>
<td>15</td>
<td>16.0</td>
</tr>
<tr>
<td>55 to 64</td>
<td>10</td>
<td>11.0</td>
</tr>
<tr>
<td>65+ years</td>
<td>4</td>
<td>5.0</td>
</tr>
</tbody>
</table>
3.4.3 Procedure
After reading the same explanatory statement used in the pre-test (see Section 3.3.2), participants were randomly presented with either the spatially near (psychological distance = near; n = 46) or spatially distant (psychological distance = far; n = 46) scenario. As in the pre-test, participants were unable to proceed with completing the questionnaire until 10 seconds had elapsed. After reading the scenario, participants were instructed to complete two items to assess their intention to fly with Wide Sky Airlines. Intention to fly with the airline was measured by adapting two items taken from prior work (Tsai & Huang, 2007; Van der Heijden, Verhagen, & Creemers, 2001).

The items measuring intention to fly were adapted from a purchase intentions instrument, as outlined Table 3.5. As Cronbach’s alpha is inappropriate and meaningless for two-item instruments (Eisinga, Te Grotenhuis, & Pelzer, 2013; O’Brien, Buikstra, & Hegney, 2008; Sainfort & Booske, 2000; Verhoef, 2003), Pearson’s correlation coefficient was employed as a measure of reliability (Eisinga et al., 2013). The Pearson’s value of $r = 0.90$ indicated reliability of the intentions measure, and the two items were found to load onto a single component (see Table 3.6). The items, which were scored on a seven-point Likert scale ranging from 1 (strongly disagree) through to 7 (strongly agree), were then averaged, such that greater scores indicated a stronger intention to fly with Wide Sky Airlines.

Table 3.5 Items measuring intention to fly

<table>
<thead>
<tr>
<th>Original Item</th>
<th>Sources</th>
<th>Adapted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will definitely buy products from this site in the near future.</td>
<td>Hausman and Siekpe (2009)</td>
<td>I would be happy to fly with Wide Sky Airlines.</td>
</tr>
<tr>
<td>I consider this online store as my first choice for online shopping.</td>
<td>Van der Heijden et al. (2001)</td>
<td>I would consider flying with Wide Sky Airlines.</td>
</tr>
</tbody>
</table>
Table 3.6 Principal components analysis (PCA) for intention to fly

<table>
<thead>
<tr>
<th>Number of cases: 41; Eigenvalue: 1.83; Percentage of common variance: 91.52.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of items</td>
</tr>
<tr>
<td>I would be happy to fly with Wide Sky Airlines.</td>
</tr>
<tr>
<td>I would consider flying with Wide Sky Airlines.</td>
</tr>
</tbody>
</table>

FoF was measured by adapting two items taken from FoF instruments developed by Oakes and Bor (2010b) and Botella, Osma, Garcia-Palacios, Quero, and Baños (2004). A third item was developed specifically for this study (see Table 3.7). Once again, items were scored on a seven-point Likert scale (anchored at 1 = ‘disagree strongly’ and 7 = ‘agree strongly’). The three items loaded onto a single component (see Table 3.8). These items were then averaged to form a single scale, with higher scores denoting a greater FoF. Cronbach’s alpha coefficient for the FoF scale was $\alpha = .94$, indicating good internal consistency.

Table 3.7 Items measuring FoF

<table>
<thead>
<tr>
<th>Original Item</th>
<th>Source</th>
<th>Adapted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear of flying</td>
<td>Oakes and Bor (2010b)</td>
<td>I fear flying on planes.</td>
</tr>
<tr>
<td>I always avoid it</td>
<td>Botella et al. (2004)</td>
<td>I avoid flying on planes.</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Study-specific</td>
<td>When I fly, I fear that the plane will crash.</td>
</tr>
</tbody>
</table>

Table 3.8 Principal components analysis (PCA) for FoF

<table>
<thead>
<tr>
<th>Number of cases: 41; Eigenvalue: 2.70; Percentage of common variance: 90.02.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of items</td>
</tr>
<tr>
<td>I fear flying on planes.</td>
</tr>
<tr>
<td>When I fly, I fear that the plane will crash.</td>
</tr>
<tr>
<td>I avoid flying on planes.</td>
</tr>
</tbody>
</table>

Next, participants completed a study-specific item to assess their frequency of flying. This item was worded as follows: ‘How many flights have you flown in the past 12 months?’ Participants completed this item by reporting the specific number of times that they had flown over the past
year in a free-text field, efficiently providing a continuous scale for this item. The study concluded after participants completed items assessing their age and gender.

3.4.4 Results and Discussion
The moderating effect of FoF on the relationship between psychological spatial distance and consumers’ intentions to fly with the airline implicated in the crash was examined using the PROCESS macro for SPSS (Hayes, 2012). This tool offers several advantages over regular regression tools. First, PROCESS is a versatile computation tool that can test for moderation, mediation, and moderated mediation effects (Hayes, 2012). Second, and of particular relevance to this study, PROCESS allows for the incorporation of a continuous (i.e., non-dichotomous) moderator in the analytical framework. In contrast, conducting an ANCOVA would require a dichotomous moderator. There are two main problems associated with dichotomising (often referred to as median splitting) a continuous independent variable. Firstly, the statistical power used to test the hypotheses is likely to be reduced (Irwin & McClelland, 2001). The second is the potentially more troubling problem that inappropriate dichotomisation of continuous data could create spurious significant results if the independent variables happen to be correlated (Maxwell & Delaney, 1993). PROCESS provides an alternative means for analysing continuous moderators by conducting spotlight analysis (Fitzsimons, 2008).

PROCESS Model 1, which provides a means for examining the moderating effect of a continuous variable (i.e., FoF) on the relationship between an independent variable (i.e., psychological spatial distance) and a dependent variable (i.e., intentions to fly), was used to test $H_2$, which is “When the psychological spatial distance to an airline crash is far, consumers’ intention to fly with that airline will increase, but only when FoF is low”. PROCESS Model 1 also allows for the inclusion of covariates. Covariates provide an opportunity to control for the
influence of variables that cannot be incorporated into the research design, which may have an influence on the dependent variable (Hayes, 2012; Yzerbyt, Muller, & Judd, 2004). By removing the impact of these additional variables, the power or sensitivity of the test may be enhanced, increasing the likelihood that differences between groups will be detected (Pallant, 2005). The frequency of flying was, therefore, added to the PROCESS Model 1 analysis as a means of controlling for the potential that frequent flyers may respond differently to the news of catastrophic airline crashes.

PROCESS Model 1 was used to determine whether FoF moderated the relationship between psychological spatial distance and consumers’ intention to fly, with the frequency of flying acting as a covariate. As outlined in Table 3.9, neither spatial distance nor FoF had a significant direct effect on consumers’ flying intentions, so H1 was not supported. Similarly, the frequency with which participants flew did not affect flying intentions. Finally, and inconsistent with H2, the spatial distance × fear of flying interaction was not significant. It should be noted, however that the spatial distance × fear of flying interaction approached significance (p = .09; 95% CI [-0.06, 0.72]).

Table 3.9. The moderating effect of FoF on the relationship between psychological spatial distance and intention to fly

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>T</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatial distance</td>
<td>-1.26</td>
<td>0.77</td>
<td>-1.63</td>
<td>-2.80</td>
<td>0.28</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>-0.10</td>
<td>0.14</td>
<td>-0.75</td>
<td>-0.38</td>
<td>0.17</td>
</tr>
<tr>
<td>Spatial distance × fear of flying</td>
<td>0.33</td>
<td>0.20</td>
<td>1.69</td>
<td>-0.06</td>
<td>0.72</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.03</td>
<td>0.07</td>
<td>0.49</td>
<td>-0.10</td>
<td>0.16</td>
</tr>
</tbody>
</table>

For this reason, spotlight analysis (Fennis, Andreassen, & Lervik-Olsen, 2015; Krishna, 2016) was conducted to probe the direction of this close-to-significant interaction effect. The
results of this analysis indicated that when FoF was low (-1 SD), spatial distance had a negative if non-significant influence on consumers’ flying intentions (effect = -0.82, SE = 0.57, p = .15, 95% CI [-1.94, 0.31]). However, when FoF was high (+1 SD), the effect of spatial distance was positive, if still non-significant (effect = 0.55, SE = 0.57, p = .34, 95% CI [-0.59, 1.68]). Thus, although the results did not meet the threshold for determining statistical significance (i.e., p < .05), the pattern of results remained consistent with H2. While the relationship between psychological spatial distance and intention to fly, moderated by FoF remained non-significant, it is important to replicate these findings and test H3 for the mediating role of perceived risk in a subsequent study, along with employing a larger sample size to help to verify the results.

One explanation for the non-significant spatial distance × fear of flying interaction is that there was insufficient statistical power to identify a significant effect. Power is defined as the ability to detect “real” differences (Kraemer and Thiemann, 1987), and measures of power range from 0 to 1 (Hair et al. 2006). This is supported by the fact that there is a greater likelihood of producing a significant statistical result if the number of participants allocated to each condition is increased (Lieber, 1990). A second study with a larger sample size may, therefore be required to more fruitfully test whether FoF moderates the relationship between the psychological spatial distance of an airline crash and intention to fly with the airline that experienced the crash.

3.4.5 Study 2
The purpose of Study 2 was twofold. First, Study 2 was designed to re-examine the potential moderating effect that FoF has on the relationship between the psychological spatial distance of an airline crash and consumers’ intentions to fly with the airline that experienced the crash. Second, Study 2 was also designed to determine whether consumer perceived risk was ultimately responsible for this effect, i.e., H3. As perceived risk creates negative emotions and generates
consumer anxiety and fear (Reisinger & Mavondo, 2006), it's mediating effect on the relationship between the psychological spatial distance of an airline crash and consumers’ intentions to fly with the airline that experienced the crash was examined.

3.4.6 Participants
Recruitment for Study 2 once more took place via MTurk, with recruitment again restricted to those residing in the United States. Of the 417 participants who completed the survey, 65 participants were subsequently excluded from the analysis as they took 120 seconds or more to read the single sentence that formed the basis of the scenario, which is indicative of distraction while completing the questionnaire. This is consistent with the approach taken in Study 1. The remaining sample of 352 participants comprised 185 males and 164 females who were aged 22 to 70 years ($M = 1.47, SD = 0.50$). MTurk participants were compensated US$1.00 for completing the survey. A summary of the participant profile can be found in Table 3.10.

Table 3.10. Demographic profile of Study 2 participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>$N$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>187</td>
<td>53.0</td>
</tr>
<tr>
<td>Female</td>
<td>165</td>
<td>47.0</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 24</td>
<td>14</td>
<td>4.0</td>
</tr>
<tr>
<td>25 to 34</td>
<td>155</td>
<td>44.0</td>
</tr>
<tr>
<td>35 to 44</td>
<td>99</td>
<td>28.0</td>
</tr>
<tr>
<td>45 to 54</td>
<td>55</td>
<td>16.0</td>
</tr>
<tr>
<td>55 to 64</td>
<td>22</td>
<td>6.0</td>
</tr>
<tr>
<td>65+ years</td>
<td>7</td>
<td>2.0</td>
</tr>
</tbody>
</table>
3.4.7 Procedure
A similar procedure to that employed in Study 1 was used in Study 2. Specifically, after being presented with the study’s explanatory statement, participants were randomly presented with the spatially near (psychological distance = near; \( n = 176 \)) or spatially distant (psychological distance = far; \( n = 176 \)) scenario. Ten seconds after being presented with this scenario, and once they had finished reading it, participants could navigate to the next page of the questionnaire. Participants were once again presented with the items used to measure intention to fly \((r = 0.90)\), which were the same as those used in Study 1.

Perceived risk was measured adapting five items from (Laroche, Yang, McDougall, & Bergeron, 2005) (see Table 3.11). Once again, items were scored on a seven-point Likert scale (anchored at 1 = ‘disagree strongly’ and 7 = ‘agree strongly’). The five items loaded onto a single component (see Table 3.12), and Cronbach’s alpha for the items \((\alpha = .98)\) was well above the recommended cut-off. The five items were consequently averaged to form a single scale, with higher scores denoting a greater level of perceived risk.

Next, participants completed the same FoF items used in Study 1 \((\alpha = .98)\) before reporting their frequency of flying using the same item wording employed in Study 1. The study concluded after participants completed items assessing their age and gender.

Table 3.11 Items measuring perceived risk

<table>
<thead>
<tr>
<th>Original Item</th>
<th>Source</th>
<th>Adapted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have the feeling that purchasing this item will really cause me lots of trouble.</td>
<td>Laroche et al. (2005)</td>
<td>I have a feeling that flying with Wide Sky Airlines would cause me trouble.</td>
</tr>
<tr>
<td>There is a good chance I will make a mistake if I purchase this item.</td>
<td>Laroche et al. (2005)</td>
<td>There is a good chance that I would be in trouble if I flew with Wide Sky Airlines.</td>
</tr>
<tr>
<td>I will incur some risk if I buy this item in the next twelve months.</td>
<td>Laroche et al. (2005)</td>
<td>I will incur high risk if I fly with Wide Sky Airlines.</td>
</tr>
</tbody>
</table>
Table 3.12 Principal components analysis (PCA) for perceived risk

<table>
<thead>
<tr>
<th>Number of items</th>
<th>Component loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a feeling that flying with Wide Sky Airlines would cause me trouble.</td>
<td>0.92</td>
</tr>
<tr>
<td>There is a good chance that I would be in trouble if I flew with Wide Sky</td>
<td>0.95</td>
</tr>
<tr>
<td>Airlines.</td>
<td></td>
</tr>
<tr>
<td>I will incur high risk if I fly with Wide Sky Airlines.</td>
<td>0.96</td>
</tr>
<tr>
<td>The decision to fly with Wide Sky Airlines would involve a lot of risks.</td>
<td>0.97</td>
</tr>
<tr>
<td>Overall, flying with Wide Sky Airlines would be very risky.</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Number of cases: 352; Eigenvalue: 4.56; Percentage of common variance: 91.12.

3.4.8 Results and Discussion

PROCESS Model 8 was used to test the proposed mechanism (i.e., perceived risk) on the interacting effect of psychological spatial distance and FoF on consumers’ intention to fly. This type of analysis is termed moderated mediation or a conditional indirect effect analysis. The PROCESS Model 8 moderated mediation analysis tests the following effects:

- Does the independent variable (i.e., psychological spatial distance) predict the dependent variable (i.e., intention to fly)? (H1)

- Is the influence of the independent variable (i.e., psychological spatial distance) on the mediator (i.e., perceived risk) conditional on the moderator (i.e., FoF)? (H2)

- Does the mediator (i.e., perceived risk) predict the dependent variable (i.e., intention to fly)? (H3)

Model 8 was run to determine whether the indirect effect of perceived risk on the relationship between psychological spatial distance and flying intention was conditional on FoF. In the
analysis, the spatially near (psychological spatial distance = near) scenario was coded as 0, while the spatially far (psychological spatial distance = far) scenario was coded as 1. The number of times the participant had flown in the past 12 months was again used as a covariate to control for the potential influence that differential flying experience may have had on consumers’ intention to fly.

This analysis generated two sets of results: one examining the variables that predicted the mediator (i.e., perceived risk) and one examining the variables that predicted the dependent variable (i.e., flying intentions). For the first set of results, spatial distance and the spatial distance × fear of flying interaction had significant effects on perceived risk (see Table 3.13). The FoF and frequency of flying direct effects were not, however, significant. For the second set of results, perceived risk significantly predicted flying intentions, but no other significant predictors were identified (see Table 3.13).

Table 3.13. The indirect effect of perceived risk on the relationship between psychological spatial distance and flying intention, conditional on fear of flying

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>T</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>DV (mediator): Perceived risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial distance</td>
<td>-0.78</td>
<td>0.32</td>
<td>-2.45*</td>
<td>-1.41</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>0.11</td>
<td>0.07</td>
<td>1.60</td>
<td>-0.02</td>
</tr>
<tr>
<td>Spatial distance × fear of flying</td>
<td>0.18</td>
<td>0.09</td>
<td>2.06*</td>
<td>0.01</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.02</td>
<td>0.04</td>
<td>0.42</td>
<td>-0.06</td>
</tr>
<tr>
<td>DV: Flying intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived risk</td>
<td>0.75</td>
<td>0.04</td>
<td>17.63***</td>
<td>0.67</td>
</tr>
<tr>
<td>Spatial distance</td>
<td>-0.06</td>
<td>0.25</td>
<td>-0.22</td>
<td>-0.56</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>0.01</td>
<td>0.07</td>
<td>-0.08</td>
<td>-0.09</td>
</tr>
<tr>
<td>Spatial distance × fear of flying</td>
<td>0.01</td>
<td>0.07</td>
<td>-0.08</td>
<td>-0.14</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>-0.04</td>
<td>0.03</td>
<td>-1.31</td>
<td>-0.09</td>
</tr>
</tbody>
</table>

*p < .05; ***p < .001

Following (Hayes, 2015), the index of moderated mediation was then examined to determine whether the indirect effect of perceived risk was conditional on FoF. The index of
moderated mediation was significant (index = 0.14, 95% CI [0.01, 0.27]), suggesting that FoF indeed moderated the mediating effect of perceived risk on the relationship between psychological spatial distance and flying intentions.

Spotlight analyses were then conducted to assist in the interpretation of this effect. When FoF was low (-1SD), the mediating effect of perceived risk was both negative and significant (effect = -0.42, 95% CI [-0.80, -0.05]). Conversely, when FoF was high (+1SD), perceived risk had no mediating effect on the relationship between spatial distance and flying intention (effect = 0.09, 95% CI [-0.20, 0.36]). These findings suggest that consumers’ risk perceptions mediate the relationship between the psychological spatial distance of an airline crash and intentions to fly with that airline, but only when FoF is low, thus supporting H3.

3.5 Summary
This chapter specified the details of a pre-test and two main studies used to examine consumers’ evaluations of a catastrophic service failure of an airline crash and their intention to fly with the airline implicated in the crash. The four key findings of these first two studies are summarised as follows. The first finding of Study 1 was that psychological (spatial) distance did not have a direct relationship with consumers’ intention to fly, which is inconsistent with H1. The second finding was that the moderation effect of FoF on the relationship between psychological (spatial) distance and intention to fly was close to significance, although nonetheless, H2 was not supported. The third finding from Study 2, which replicated the moderating effect of FoF and further included the mediator of perceived risk, was that the spatial distance × FoF interaction had a significant effect on perceived risk. The FoF and frequency of flying direct effects were not, however, significant. The fourth finding was that perceived risk influenced consumers’ flying intentions, but no other significant predictors were identified. Overall, it can be concluded that psychological spatial
distance influences consumers’ flying intentions, but only in the case of a moderated mediation framework; that is, FoF moderates the mediating effect of perceived risk on the relationship between consumers’ psychological spatial distance and consumers’ intention to fly with the airline (H₂ and H₃). The next chapter examined the organisational response orientations of approach versus avoidance following the catastrophic failure of an airline crash, and the effect on consumers’ evaluations and intentions pertaining to the airline involved in the crash.
Chapter Four: Method and Results: Organisational Response Orientations and Consumers’ Flying Intentions

4.1 Introduction
Chapter Three examined consumers’ intentions to fly with an airline implicated in the catastrophic service failure of an airline crash. The purpose of this chapter is to examine the influence of organisational response orientations (organisational approach versus avoidance) following a catastrophic service failure on consumers’ evaluations and behavioural intentions. This chapter describes the design of the studies aimed to answer the primary research questions pertaining to the second conceptual framework introduced in Chapter One and justified in Chapter Two, and to test the proposed hypotheses (see Section 2.4.7). This chapter outlines the scenario development, scenario pre-test, recruitment of participants, procedures, and results and discussion associated with two experiments designed to examine the effect of organisational response orientations on consumer evaluations and intentions.

4.2 Scenario Development
Two scenarios were developed to procedurally manipulate organisational avoidance versus approach responses to an airline crash. The avoidance scenario was based on public statements made by the Chairman of Singapore Airlines following the crash of Singapore Airlines Flight SQ006 on 31 October, 2000. Specifically, in a press conference held the morning after the crash took place, “the Chairman [of Singapore Airlines] avoided questions of responsibility, although the Chairman did say … that ‘my personal feeling is that it was an accident’” (J. C. Henderson, 2003, p. 287). This response, which incorporates elements of both denial and hedging (see Section 2.4.2 in Chapter 2 for a discussion of these elements), is characteristic of an avoidance strategy (J.
C. Henderson, 2003) and consequently provided real-world inspiration for the avoidance scenario used in this research, which was worded as follows:

* A passenger jet operated by Wide Sky Airlines has crashed while attempting to land. In an emergency press conference held immediately after the crash was made public, the CEO of Wide Sky Airlines said that “while the cause of the crash is being externally investigated, it is my personal feeling that Wide Sky Airlines was not at fault.”

For the approach scenario, the researcher followed the work of Folger and Pugh (2002), who argued that approach-type strategies are predicated on expressions of sympathy and regret for any harms caused, as well as an absence of any denials of responsibility. On the basis of this reasoning, the wording for the approach scenario used in this research read as follows:

* A passenger jet operated by Wide Sky Airlines has crashed while attempting to land. In an emergency press conference held immediately after the crash was made public, the CEO of Wide Sky Airlines said that “while the cause of the crash is being externally investigated, we are providing on-the-ground support to the families of everyone involved in the crash”.

The remainder of this chapter is outlined as follows. The two scenarios presented in this section were pre-tested to ascertain whether they did indeed manipulate perceptions of organisational avoidance versus approach. Study 1 then sought to investigate whether an airline’s adoption of an avoidance versus approach oriented response influenced individuals’ attitude towards that airline and intention to fly with the airline implicated in a crash. Finally, Study 2 was designed to examine whether perceived CEO concern mediated the influence of the organisational response orientation (avoidance versus approach) on consumers’ attitude and intention to fly with the airline.
4.3 Scenario Pre-test
A pre-test was conducted to test whether the scenarios outlined in Section 4.2 were successful in manipulating participant perceptions of avoidance versus approach orientations.

4.3.1 Participants
In total, 79 US participants (47 males and 32 females) recruited via MTurk took part in the pre-test in return for US$1.00. These participants ranged in age from 22 to 65 years. A descriptive profile of participants’ age and gender can be found in Table 4.1.

Table 4.1: Demographic profile of the pre-test participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>47</td>
<td>59.0</td>
</tr>
<tr>
<td>Female</td>
<td>32</td>
<td>41.0</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 24</td>
<td>10</td>
<td>13.0</td>
</tr>
<tr>
<td>25 to 34</td>
<td>35</td>
<td>44.0</td>
</tr>
<tr>
<td>35 to 44</td>
<td>19</td>
<td>24.0</td>
</tr>
<tr>
<td>45 to 54</td>
<td>9</td>
<td>11.0</td>
</tr>
<tr>
<td>55 to 64</td>
<td>4</td>
<td>5.0</td>
</tr>
<tr>
<td>65+ years</td>
<td>2</td>
<td>3.0</td>
</tr>
</tbody>
</table>

4.3.2 Procedure
Participants were first presented with a plain language statement that outlined the purpose of the study (see Appendix 2). After reading the plain language statement, participants were randomly presented with either the avoidance scenario \( n = 38 \) or the approach scenario \( n = 41 \). After reading the scenario to which they were assigned, participants were asked to respond to three items adapted the sources byDuhachek (2005) and K. A. Brown and Ki (2013) which were designed to assess perceptions of organisational avoidance. These items in their original and adapted form are outlined in Table 4.2. All items were scored on Likert-type scales that ranged from 1 (strong
disagree) to 7 (strongly agree). The three items loaded onto a single factor (see Table 4.3) and had a Cronbach’s alpha of 0.92, which exceeded the minimum cut-off value of 0.75 (Griethuijsen et al., 2015; Peterson, 1994; Ponterotto & Ruckdeschel, 2007; Taber, 2017). Principal components analysis was then conducted for the avoidance scale to ascertain whether the items loaded onto a single dimension (see Table 4.3).

Table 4.2 Items measuring organisational avoidance orientation

<table>
<thead>
<tr>
<th>Original Item</th>
<th>Source</th>
<th>Adapted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deny that the event happened.</td>
<td>Duhachek (2005)</td>
<td>Wide Sky Airlines is denying that they were responsible for the crash.</td>
</tr>
<tr>
<td>Refuse to believe that the problem had occurred.</td>
<td>Duhachek (2005)</td>
<td>Wide Sky Airlines is refusing to take responsibility for the crash.</td>
</tr>
</tbody>
</table>

Table 4.3 Principal components analysis (PCA) for avoidance orientation

<table>
<thead>
<tr>
<th>Number of items</th>
<th>Component loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide Sky Airlines is not taking responsibility for the crash.</td>
<td>0.90</td>
</tr>
<tr>
<td>Wide Sky Airlines is refusing to take responsibility for the crash.</td>
<td>0.94</td>
</tr>
<tr>
<td>Wide Sky Airlines is denying that they were responsible for the crash.</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Number of cases: 79; Eigenvalue: 2.60; Percentage of common variance: 86.83.

Participants also completed three items that were designed to assess perceptions of approach, as shown in Table 4.4. The items reflected the approach orientation by Wide Sky Airlines following the crash, including displays of empathy. One item was taken from Yao et al.’s (2015), while the other two items were generated for this study based on a review of the crisis communication literature. The PCA indicated that the three items loaded onto a single factor, while Cronbach’s alpha was .95, indicating that this scale had good internal consistency (Griethuijsen et al., 2015; Peterson, 1994; Ponterotto & Ruckdeschel, 2007; Shemwell et al., 2015; Taber, 2017). The
avoidance and approach items were consequently averaged separately, such that higher scores denoted greater perceptions of avoidance and approach, respectively. The pre-test study concluded after participants reported their age and gender.

Table 4.4 Items measuring organisational approach orientation

<table>
<thead>
<tr>
<th>Original Item</th>
<th>Source</th>
<th>Adapted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Study-specific</td>
<td>Wide Sky Airlines is doing the right thing for the families of those involved in the crash.</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Study-specific</td>
<td>Wide Sky Airlines is giving emotional support to the families of those involved in the crash.</td>
</tr>
<tr>
<td>Friends in the community did not show much empathy for my situation* (reverse coded).</td>
<td>Yao, Zheng, and Fan (2015)</td>
<td>Wide Sky Airlines is showing empathy to the families of those involved in the crash.</td>
</tr>
</tbody>
</table>

Table 4.5 Principal components analysis (PCA) for approach orientation

<table>
<thead>
<tr>
<th>Number of items</th>
<th>Component loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide Sky Airlines is doing the right thing for the families of those involved in the crash.</td>
<td>0.92</td>
</tr>
<tr>
<td>Wide Sky Airlines is giving emotional support to the families of those involved in the crash.</td>
<td>0.96</td>
</tr>
<tr>
<td>Wide Sky Airlines is showing empathy to the families of those involved in the crash.</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Number of cases: 79; Eigenvalue: 2.70; Percentage of common variance: 90.22.

4.3.3 Results and Discussion
To ensure that the manipulation of approach versus avoidance orientations was successful, two independent measures $t$-tests were conducted to determine whether the avoidance and approach scenarios were perceived by participants as intended. The results from the first $t$-test indicated that perceptions of organisational avoidance were greater among participants who read the avoidance scenario ($M = 8.69$, $SD = 1.38$) relative to those who read the approach scenario ($M = 5.88$, $SD = 1.25$; $t(77) = 9.50$, $p < .001$). Furthermore, results for the second $t$-test indicated that those who
read the approach scenario reported greater perceptions of approach ($M = 5.60, SD = 1.14$) relative to those who read the avoidance scenario ($M = 2.51, SD = 1.34; t(77) = -11.05, p < .001$). These findings suggest that the scenarios were successful in manipulating perceptions of organisational avoidance versus approach. These scenarios were consequently used in Study 1 and Study 2.

4.4 Study 1
The primary purpose of Study 1 was to determine whether the organisational responses following an airline crash (i.e., avoidance versus approach) influenced consumers’ attitude towards the organisation that experienced the crash. Study 1 consequently tested $H_4$, which is: “Adopting an approach (versus avoidance) oriented strategy to respond to an airline crash will increase consumers’ positive attitude towards the organisation”.

4.4.1 Participants
Recruitment for Study 1 once more took place via MTurk as in the pre-test study, with recruitment restricted to those residing in the United States. Of the 101 participants who completed the study, 57 were male and 44 were female, with the age of participants ranging from 22 to 65 years ($M = 36.88, SD = 10.47$). All participants were compensated US$1.00 for completing the experiment, and a summary of the participant profile can be found in Table 4.6.

Table 4.6. Demographic profile of the Study 1 participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>$N$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>57</td>
<td>56.4</td>
</tr>
<tr>
<td>Female</td>
<td>44</td>
<td>43.6</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 24</td>
<td>8</td>
<td>8.0</td>
</tr>
<tr>
<td>25 to 34</td>
<td>44</td>
<td>43.0</td>
</tr>
<tr>
<td>35 to 44</td>
<td>32</td>
<td>32.0</td>
</tr>
<tr>
<td>45 to 54</td>
<td>9</td>
<td>9.0</td>
</tr>
<tr>
<td>55 to 64</td>
<td>6</td>
<td>6.0</td>
</tr>
</tbody>
</table>
4.4.2 Procedure
After reading the explanatory statement, participants were presented with one of the two pre-tested scenarios. Specifically, 51 participants were randomly assigned to the avoidance scenario and 50 participants were assigned to the approach scenario. After reading the scenario, participants were instructed to complete a three-item attitude towards the organisation scale, which was modified from an existing measure of attitude toward the brand used by Spears and Singh (2004). Specifically, participants were asked to evaluate three items with the stem, “My overall impression of Wide Sky Airlines is” using seven-point semantic differential format in the scales which were used in several studies (Greenwald, McGhee, & Schwartz, 1998; Spears & Singh, 2004) (see Table 4.7). Principal components analysis was then conducted to ascertain whether the items for the attitude toward the organisation scale loaded onto a single dimension, which they did (see Table 4.8). The internal consistency of this scale was also excellent (α = .98). Responses to the semantic differential scale (Friborg, Martinussen, & Rosenvinge, 2006) were consequently averaged to form a measure of attitude towards the organisation, such that greater scores denoted a more positive attitude.

Table 4.7 Items measuring attitude toward the organisation

<table>
<thead>
<tr>
<th>Original Item</th>
<th>Source</th>
<th>Adapted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please describe your overall feelings about the brand described in the ad you just read.</td>
<td>Spears and Singh (2004)</td>
<td>Please describe your overall feelings about Wide Sky Airlines described in the scenario you just read.</td>
</tr>
</tbody>
</table>
Table 4.8 Principal components analysis (PCA) for attitude towards the organisation

<table>
<thead>
<tr>
<th>Number of items</th>
<th>Component loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My overall impression of Wide Skye Airlines is: Negative/Positive</td>
<td>0.98</td>
</tr>
<tr>
<td>My overall impression of Wide Skye Airlines is: Undesirable/Desirable</td>
<td>0.98</td>
</tr>
<tr>
<td>My overall impression of Wide Skye Airlines is: Bad/Good</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Number of cases: 101; Eigenvalue: 2.87; Percentage of common variance: 95.52.

After completing the attitude scale, participants completed the same FoF scale as presented in Chapter 3 (see Section 3.3.3, Table 3.7). The items were scored on a seven-point Likert scale (anchored at 1 = ‘disagree strongly’ and 7 = ‘agree strongly’). Cronbach’s alpha coefficient for the FoF scale was α = .94, which exceeded the minimum value of α = .75 necessary to satisfy the requirements for internal consistency (Griethuijsen et al., 2015; Ponterotto & Ruckdeschel, 2007; Shemwell et al., 2015; Taber, 2017). The three items were then averaged to form a single scale, with higher scores denoting a greater FoF. Participants also completed a single-item designed to assess their frequency of flying. This item was worded as follows: ‘How many flights have you flown in the past 12 months?’ Finally, participants reported their age and gender.

4.4.3 Results
An independent-measures ANCOVA was conducted to determine whether an airline adopting an avoidance versus approach orientation following a crash influenced attitude towards the organisation. As in Chapter 3 (see Section 3.3.4, Table 3.9), the frequency of flying was once again used as a covariate to control for the influence that exposure to the airline industry may have had on this putative relationship. Additionally, FoF was also included as a covariate to control for the potential influence that this construct may have on attitude towards the airline implicated in the crash.
The results revealed that while FoF was a significant covariate \((F(1,97) = 7.34, p < .01)\), frequency of flying was not \((F(1,97) = .01, p = .93)\). Moreover, and of greater relevance to the testing of the study hypotheses, the results also indicated that consumers’ attitude towards the organisation was more positive when the organisation that experienced the airline crash had adopted an approach response \((M = 3.6, SD = 1.58)\) rather than an avoidance response \((M = 2.88, SD = 1.17; F(1,97) = 13.09, p < .001)\). These findings provide support for \(H_4\) and suggest that firms seeking to deal with a catastrophic service failure should adopt an approach response rather than an avoidance response.

A supplementary analysis was also conducted to rule out an alternative conceptual model. Specifically, PROCESS (Hayes, 2012) Model 1 with the frequency of flying acting as a covariate was tested to determine whether FoF moderated the relationship between organisational avoidance versus approach strategies and consumers’ attitude towards the organisation. The moderating influence of FoF was not hypothesised on the grounds that all participants, irrespective of their FoF, are likely to react negatively to organisations that adopt an avoidance (versus approach) strategy following a catastrophic service failure. Nevertheless, given the results reported in Chapter 3, this supplementary analysis was conducted to rule out the potential moderating influence of FoF.

As outlined in Table 4.9, results from the PROCESS Model 1 analysis revealed that organisational response (avoidance versus approach) had a significant direct effect on consumers’ attitude toward the organisation, whereas FoF did not. Similarly, the frequency with which participants flew had no effect on attitude toward the organisation. Finally, the organisational response (avoidance versus approach) \(\times\) FoF interaction was not significant, although the magnitude of this effect did approach significance \((p = .07; 95\% \text{ CI } [-0.47, 0.02])\). For this reason, spotlight analysis (Fennis et
al., 2015; Krishna, 2016) was conducted to probe the direction of this close-to-significant interaction effect. The results of this analysis indicated that when FoF was low (-1 SD), an organisational approach response had a significant positive influence on attitude toward the organisation (effect = 1.45, SE = 0.38, p < .01, 95% CI [0.70, 2.20]). In contrast, when FoF was high (+1 SD), the effect of an approach-oriented organisational response, while still positive, was non-significant (effect = 0.50, SE = 0.38, p = .19, 95% CI [-0.25, 1.24]). Thus, although the results did not meet the threshold for determining statistical significance (i.e., p < .05), the pattern of results suggests that additional studies may be warranted to further examine the potentially moderating influence of FoF on the relationship between organisational approach versus avoidance and attitude towards the organisation.

Table 4.9. The moderating effect of FoF on the relationship between organisational response and consumers’ attitude toward the organisation

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>T</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Upper</td>
</tr>
<tr>
<td>Organisational response</td>
<td>1.68</td>
<td>0.47</td>
<td>3.55***</td>
<td>0.74 2.61</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>-0.07</td>
<td>0.09</td>
<td>-0.75</td>
<td>-0.25 0.11</td>
</tr>
<tr>
<td>Organisational response × fear of flying</td>
<td>-0.22</td>
<td>0.12</td>
<td>-1.80</td>
<td>-0.47 0.02</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>-0.01</td>
<td>0.04</td>
<td>-.13</td>
<td>-0.09 0.08</td>
</tr>
</tbody>
</table>

*p < .05; ***p < .001

4.4.4 Discussion
The findings revealed that the direct relationship between the organisational response following an airline crash (i.e., avoidance versus approach) and consumers’ attitude towards the organisation that experienced the crash was significant, which was consistent with $H_4$. An independent-measures ANCOVA indicated that participants’ attitude towards the organisation was more positive when the organisation that experienced the airline crash had adopted an approach response ($M = 3.6$, $SD = 1.58$) rather than an avoidance response ($M = 2.88$, $SD = 1.17$; $F (1, 97) = 13.09$, $p$
However, the organisational response (avoidance versus approach) × fear of flying interaction was not significant, although the magnitude of this effect did approach significance. Similarly, the frequency with which participants flew had no effect on attitude towards the organisation. While the organisational response (avoidance versus approach) moderated by FoF on attitude towards the organisation remained non-significant, it is important to understand the process by which this effect is taking place. Thus, the mediating role of perceived CEO concern was tested in the next study (Study 2).

4.5 Study 2
The purpose of Study 2 was fourfold. The first aim was to replicate and extend the Study 1 findings by determining whether the organisational response (avoidance versus approach) influenced not only attitude towards the organisation but also intention to fly with the airline. The second aim was to reassess the Study 1 finding that FoF had a marginally significant moderating effect on the relationship between the organisational response (avoidance versus approach) and attitude towards the organisation. The third aim was to examine whether perceived CEO concern mediated the relationship between organisational response (avoidance versus approach) and the two dependent variables, i.e., attitude toward the airline and intention to fly with the airline. The fourth and final aim was to determine whether perceived CEO concern and attitude toward the organisation serially mediated the relationship between the organisational response (avoidance versus approach) and intention to fly with the airline.

4.5.1 Participants
Recruitment for Study 2 once more took place via MTurk, with recruitment again restricted to those residing in the United States. Of the 101 participants who completed the survey, seven participants were excluded from the analysis for taking more than two minutes to read the study scenario. This removal of participants was motivated by the fact that the scenario, which was two
sentences long, should not have taken two minutes to read and may consequently indicate that participants were distracted while completing the survey. The same data screening rule was also applied in the studies reported in Chapter 3 (see Section 3.3.2) and in Study 1 in this chapter. The remaining sample of 94 participants comprised 52 males and 42 females aged 22 to 65 years ($M = 38.10, SD = 11.24$). MTurk participants were compensated US$1.00 for completing the experiment, and a summary of the participant profile can be found in Table 4.10.

Table 4.10. Demographic profile of the Study 2 participants

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>$N$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>52</td>
<td>51.3</td>
</tr>
<tr>
<td>Female</td>
<td>42</td>
<td>48.7</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 24</td>
<td>4</td>
<td>4.0</td>
</tr>
<tr>
<td>25 to 34</td>
<td>41</td>
<td>44.0</td>
</tr>
<tr>
<td>35 to 44</td>
<td>27</td>
<td>29.0</td>
</tr>
<tr>
<td>45 to 54</td>
<td>11</td>
<td>12.0</td>
</tr>
<tr>
<td>55 to 64</td>
<td>7</td>
<td>7.0</td>
</tr>
<tr>
<td>65+ years</td>
<td>4</td>
<td>4.0</td>
</tr>
</tbody>
</table>

4.5.2 Procedure
After reading the explanatory statement, participants were randomly presented with one of the two scenarios that had been formerly pre-tested (see Section 4.2.3). Specifically, 47 participants were assigned to the avoidance scenario while 47 participants were assigned to the approach scenario. The participants were then instructed to complete the same three-item attitude towards the organisation scale adopted in Study 1. After completing the attitude towards the organisation scale, participants answered two items designed to assess their intention to fly with the organisation. The items, which were scored on a seven-point Likert scale ranging from 1 (strongly disagree) through
to 7 (strongly agree), were then averaged such that greater scores indicated a stronger intention to fly with Wide Sky Airlines ($r = 0.90$).

Next, participants completed a three-item scale designed to ascertain the level of concern shown by the CEO. These items, which were modified from an existing measure used by Rifon et al. (2004), are presented in Table 4.11. Each item was scored on a seven-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach’s alpha for the CEO concern items was $\alpha = .97$, which exceeded the minimum cut-off value of $\alpha = .75$ (Griethuijsen et al., 2015; Ponterotto & Ruckdeschel, 2007; Shemwell et al., 2015; Taber, 2017), and PCA confirmed that they loaded onto a single factor. The three items were consequently averaged to form a single scale, with higher scores denoting a greater level of perceived CEO concern.

Table 4.11 Items measuring perceived CEO concern

<table>
<thead>
<tr>
<th>Original Item</th>
<th>Source</th>
<th>Adapted Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. __________ has no concern about its consumers’ welfare.</td>
<td>Rifon et al. (2004)</td>
<td>Wide Sky Airlines has no concern about its consumers’ welfare.</td>
</tr>
<tr>
<td>Not applicable</td>
<td>Study-specific item</td>
<td>Wide Sky Airlines has no interest in protecting its consumers.</td>
</tr>
</tbody>
</table>

Table 4.12 Principal components analysis (PCA) for perceived CEO concern

<table>
<thead>
<tr>
<th>Number of items</th>
<th>Component loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide Sky Airlines does not care about its consumers.</td>
<td>0.98</td>
</tr>
<tr>
<td>Wide Sky Airlines has no concern about its consumers’ welfare.</td>
<td>0.96</td>
</tr>
<tr>
<td>Wide Sky Airlines has no interest in protecting its consumers.</td>
<td>0.98</td>
</tr>
</tbody>
</table>

Number of cases: 94; Eigenvalue: 2.83; Percentage of common variance: 94.45.
After completing these items, participants completed the same FoF scale used in the previous studies (see Chapter 3, Section 3.3.3, Table 3.7). The items were scored on a seven-point Likert scale (anchored at 1 = ‘disagree strongly’ and 7 = ‘agree strongly’). The items loaded onto a single component, and Cronbach’s alpha coefficient for the fear of flying scale was α = .90. The three items were then averaged to form a single scale, with higher scores denoting a greater FoF. Next, participants reported the number of times they had flown over the past 12 months. The study then concluded after participants reported their age and gender.

4.5.3 Results

4.5.3.1 Effect of Organisational Response on Attitude toward the Organisation

An independent measures ANCOVA with the frequency of flying and FoF included as covariates was conducted to examine whether the organisational orientation (avoidance versus approach) influenced attitude towards the organisation. The results of this analysis revealed that neither FoF ($F(1,90) = 1.74, p = 0.19$) nor the frequency of flying ($F(1,90) = 0.001, p = 0.97$) influenced attitude towards the organisation. However, organisational response (avoidance versus approach) had a significant influence on attitude towards the organisation, with participants exposed to the approach scenario reporting a more positive attitude ($M = 3.76, SD = 1.58$) than those exposed to the avoidance scenario ($M = 2.87, SD = 1.68; F(1,90) = 23.89, p < .001$). These results provide further support for H₄.

4.5.3.2 Effect of Organisational Response on Intention to Fly with the Organisation

An independent measures ANCOVA with the frequency of flying and FoF acting as covariates was also employed to examine whether the organisational response (avoidance versus approach) influenced intention to fly with the airline. The results indicated that FoF was a significant covariate ($F(1,90) = 8.42, p < .001$), whereas frequency of flying was not ($F(1,90) = 0.04, p = .84$). More importantly, with respect to testing the study hypotheses, the results also indicated that
organisational response significantly influenced intention to fly with the airline, with participants who read the approach scenario reporting greater intentions to fly with the airline \((M = 3.91, SD=1.49)\) than those who read the avoidance scenario \((M = 3.02, SD=1.64; F(1,90) = 6.99, p < .01)\). These findings are consistent with H₄, but the direct association between organisational response and intention to fly was not hypothesized.

4.5.3.3 **Moderation Effect of Fear of Flying**

PROCESS (Hayes, 2012) Model 1, which provides a test for moderation, was used to determine whether FoF moderated the relationship between the organisational response (avoidance versus approach) and attitude towards the organisation, with the frequency of flying being included as a covariate. As shown in Table 4.13, results from the analysis showed that frequency of flying as a covariate was non-significant. The first set of analysis revealed that the interaction between the organisational response (avoidance versus approach) \(\times\) fear of flying was not significant \((p = .62; 95\% \text{ CI } [-0.22, 0.36])\).

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>T</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational response</td>
<td>1.12</td>
<td>0.58</td>
<td>1.91</td>
<td>-0.04</td>
<td>2.28</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>-0.14</td>
<td>0.11</td>
<td>-1.29</td>
<td>-0.35</td>
<td>0.07</td>
</tr>
<tr>
<td>Organisational response (\times) fear of flying</td>
<td>0.07</td>
<td>0.14</td>
<td>0.49</td>
<td>-0.22</td>
<td>0.36</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>-0.00</td>
<td>0.10</td>
<td>-0.01</td>
<td>-0.18</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Spotlight analysis (Fennis, Andreassen, & Lervik-Olsen, 2015; Krishna, 2016) was nonetheless performed to test the direction of the interaction effect. Results of this analysis revealed that when FoF was low (-1 SD), an organisational approach response had a significant influence on attitude toward the organisation \((\text{effect} = 1.22, \text{SE} = 0.41, p < .01, 95\% \text{ CI } [0.40,
When FoF was high (+1 SD), the effect of an approach-oriented organisational response was also positive and significant (effect = 1.51, SE = 0.42, \( p < .01 \), 95% CI [0.68, 2.34]).

PROCESS (Hayes, 2012) Model 1 was also used to examine whether FoF moderated the relationship between the organisational response (avoidance versus approach) and intention to fly with the organisation, with the frequency of flying being included as a covariate. As outlined in Table 4.14, results from the analysis revealed that frequency of flying was not a significant covariate. The organisational response (approach versus avoidance) also had a non-significant direct effect on intention to fly with the airline. As would be expected, a greater FoF reduced intentions to fly with the airline. Next, the first set of analysis revealed that the organisational response (avoidance versus approach) \( \times \) fear of flying interaction was not significant (\( p = .80 \); 95% CI [-0.27, 0.35]).

Table 4.14. Moderating effect of fear of flying on the relationship between organisational response and intention to fly with the organisation

<table>
<thead>
<tr>
<th>Variable</th>
<th>( B )</th>
<th>( SE )</th>
<th>( T )</th>
<th>( 95% ) CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational response</td>
<td>0.69</td>
<td>0.62</td>
<td>1.11</td>
<td>-0.55, 1.93</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>-0.25</td>
<td>0.11</td>
<td>-2.24*</td>
<td>-0.48, -0.02</td>
</tr>
<tr>
<td>Organisational response ( \times ) fear of flying</td>
<td>0.38</td>
<td>0.16</td>
<td>0.24</td>
<td>-0.27, 0.35</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.20</td>
<td>0.10</td>
<td>0.21</td>
<td>-0.17, 0.21</td>
</tr>
</tbody>
</table>

\(* p < .05; ** p < .001\)

Spotlight analysis was again performed to examine the direction of this effect. The results of this analysis indicated that when FoF was low (-1 SD), an organisational approach response had a non-significant influence on intention to fly with the organisation (effect = 0.75, SE = 0.44, \( p = .09 \), 95% CI [-0.13, 1.63]. On the other hand, when fear of flying was high (+1 SD), the effect of an approach-oriented organisational response was significant (effect = 0.90, SE = 0.44, \( p < .05 \), 95% CI [0.02, 1.78]).
4.5.3.4 Mediation Effect of Perceived CEO Concern and Attitude Toward Organisation
PROCESS (Hayes, 2012) Model 4 was used to examine whether perceived CEO concern mediated the relationship between the organisational response (avoidance versus approach) and attitude toward the organisation, with the frequency of flying and FoF once again being included as covariates. This analysis comprises three components: (i) predictors of the mediator, which in this case was perceived CEO concern; (ii) predictors of the dependent variable, which in this analysis was attitude towards the organisation; and (iii) an overall analysis examining whether perceived CEO concern significantly mediated the relationship between organisational response (avoidance versus approach) and attitude towards the organisation.

For the first component of this analysis, and as displayed in Table 4.13, both frequency of flying and fear of flying were identified as non-significant predictors of perceived CEO concern. As expected, however organisational response (avoidance vs. approach) had a positive, significant effect on perceived CEO concern, with an approach response leading to greater perceived concern. This leads to the second component of the analysis to ascertain whether perceived CEO concern has a relationship with attitude towards the organisation.

For the second component of this analysis, FoF and frequency of flying were once again identified as having a non-significant effect on attitude towards the organisation. More importantly, perceived CEO concern was identified as a significant predictor of attitude towards the organisation. Interestingly, however, organisational response (avoidance vs. approach) had no influence on attitude towards the organisation in the presence of the mediator, i.e., perceived CEO concern.
In the third component of the analysis, the indirect effect of perceived CEO concern was found to be significant (indirect effect = 1.27, 95% CI [0.76, 1.91], although the direct effect of the organisational response on attitude towards the organisation remained non-significant after including perceived CEO concern. Therefore, perceived CEO concern indeed mediated the relationship between the organisational response and attitude towards the organisation. This finding is consistent with the proposed H5.

Table 4.15. Mediating effect of perceived CEO concern on the relationship between organisational response and attitude toward the organisation

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>T</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Mediator: Perceived CEO concern</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational response</td>
<td>-2.26</td>
<td>0.32</td>
<td>-7.00***</td>
<td>-2.90</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>0.12</td>
<td>0.08</td>
<td>1.44</td>
<td>-0.04</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.09</td>
<td>0.10</td>
<td>0.91</td>
<td>-0.10</td>
</tr>
<tr>
<td>DV: Attitude towards the organisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived CEO concern</td>
<td>-0.56</td>
<td>0.07</td>
<td>-7.43***</td>
<td>-0.70</td>
</tr>
<tr>
<td>Organisational response</td>
<td>0.10</td>
<td>0.29</td>
<td>0.35</td>
<td>-0.46</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>-0.03</td>
<td>0.06</td>
<td>-0.53</td>
<td>-0.15</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.05</td>
<td>0.07</td>
<td>0.66</td>
<td>-0.09</td>
</tr>
</tbody>
</table>

*p < .05; ***p < .001

To further verify these findings, this analysis can be replicated with another dependent variable, intention to fly with the airline. PROCESS (Hayes, 2012) Model 4 output was generated (see Table 4.16) for replication with another dependent variable (intention to fly with the airline) to re-examine whether perceived CEO concern mediated the relationship between organisational response (avoidance versus approach) and intention to fly with the airline, with frequency of flying and FoF once more being covariates.
For the first part of this analysis, and as displayed in Table 4.16, both frequency of flying and FoF were shown to be non-significant predictors of intention to fly with the airline. Similarly, organisational response (avoidance versus approach) had no significant direct effect on intention to fly with the organisation in the presence of the mediator, i.e., perceived CEO concern. This leads to the second part of this analysis, which tested whether organisational response had a positive relationship with perceived CEO concern, which could mediate the relationship between the organisational response and intention to fly with the airline. For the second part of the analysis, FoF and frequency of flying were once again identified as having a non-significant effect on intention to fly with the airline. However, organisational response had a significant effect on perceived CEO concern.

Table 4.16. Replication of the mediating effect of perceived CEO concern on the relationship between organisational response and intention to fly

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>T</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediator: Perceived CEO concern</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational response</td>
<td>-2.26</td>
<td>0.32</td>
<td>-7.00***</td>
<td>-2.90 to -1.62</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>0.12</td>
<td>0.08</td>
<td>1.44</td>
<td>-0.04 to 0.29</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.09</td>
<td>0.10</td>
<td>0.91</td>
<td>-0.10 to 0.29</td>
</tr>
<tr>
<td>DV: intention to fly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived CEO concern</td>
<td>-0.46</td>
<td>0.08</td>
<td>-5.13***</td>
<td>-0.63 to -0.28</td>
</tr>
<tr>
<td>Organisational response</td>
<td>0.21</td>
<td>0.34</td>
<td>0.64</td>
<td>-0.90 to 0.46</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>-0.18</td>
<td>0.07</td>
<td>-2.47</td>
<td>-0.32 to -0.04</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.06</td>
<td>0.08</td>
<td>0.71</td>
<td>-0.11 to 0.23</td>
</tr>
</tbody>
</table>

*p < .05; ***p < .001

In the third part of the analysis, when examining the overall indirect effect of perceived CEO concern as a mediator, it was found to be significant (indirect effect = 1.04, 95% CI [0.56, 1.71]), although the direct effect of the organisational response on intention to fly with the organisation remained non-significant after including perceived CEO concern (direct effect = -
0.23, 95% CI [-0.90, 0.46]. This means that the organisational response (avoidance versus approach) had an indirect effect on intention to fly with the airline through the mediator of perceived CEO concern.

Since the results indicate that perceived CEO concern acted as a mediator of the relationship between organisational response (avoidance versus approach) on both attitude toward the organisation and intention to fly with the organisation, the further serial mediating effect of perceived CEO concern was additionally examined.

**4.5.3.5 Serial Mediation Effect of Perceived CEO Concern and Attitude Toward Organisation**

A final analysis, which was conducted using PROCESS Model 6, examined whether perceived CEO concern and attitude towards the organisation serially mediated the relationship between the organisational response (avoidance versus approach) and intention to fly with the organisation. This analysis encompasses four components: (i) predictors of perceived CEO concern; (ii) predictors of attitude toward the organisation; (iii) predictors of intention to fly with the airline; and (iv) an overall analysis examining the significance of each potential mediation pathway. The results associated with this analysis can be found in Table 4.17.

The findings relating to the first two components of the serial mediation analysis (i.e., predictors of perceived CEO concern and predictors of attitude toward the organisation) mirror the findings outlined in Tables 4.15 and 4.16 in Section 4.5.3.4, and so will not be discussed further in this section. With regard to the third component of the serial mediation analysis (i.e., predictors of intention to fly with the airline), both attitude towards the organisation and FoF were found to act as significant predictors of intention to fly, whereas perceived CEO concern, organisational response, and frequency of flying did not.
Table 4.17. Model coefficients for the serial mediation on the intention to fly

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE$</th>
<th>$T$</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Mediator 1: Perceived CEO concern</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisation response</td>
<td>-2.26</td>
<td>0.33</td>
<td>-6.75***</td>
<td>-2.93</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.09</td>
<td>0.10</td>
<td>0.84</td>
<td>-0.12</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>0.12</td>
<td>0.09</td>
<td>1.30</td>
<td>-0.06</td>
</tr>
<tr>
<td>Mediator 2: Attitude towards the organisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived CEO concern</td>
<td>-0.56</td>
<td>0.09</td>
<td>-6.00***</td>
<td>-0.74</td>
</tr>
<tr>
<td>Organisational response</td>
<td>0.10</td>
<td>0.34</td>
<td>0.29</td>
<td>-0.58</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.04</td>
<td>0.09</td>
<td>0.52</td>
<td>-0.13</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>-0.03</td>
<td>0.07</td>
<td>-0.47</td>
<td>-0.17</td>
</tr>
<tr>
<td>DV: Intention to fly with the organisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived CEO concern</td>
<td>-0.06</td>
<td>0.09</td>
<td>-0.63</td>
<td>-0.24</td>
</tr>
<tr>
<td>Attitude towards the organisation</td>
<td>0.71</td>
<td>0.14</td>
<td>5.04***</td>
<td>0.43</td>
</tr>
<tr>
<td>Organisational response</td>
<td>-0.29</td>
<td>0.25</td>
<td>-1.18</td>
<td>-0.78</td>
</tr>
<tr>
<td>Frequency of flying</td>
<td>0.02</td>
<td>0.07</td>
<td>0.39</td>
<td>-0.11</td>
</tr>
<tr>
<td>Fear of flying</td>
<td>-0.16</td>
<td>0.06</td>
<td>-2.58**</td>
<td>-0.28</td>
</tr>
</tbody>
</table>

*p < .05; ***p < .001

The final component of the serial mediation analysis involves examining the significance of each potential mediation pathway. The first pathway (organisational response $\rightarrow$ perceived CEO concern $\rightarrow$ intention to fly with the organisation) was not significant (indirect effect = 0.34, 95% CI [-0.25, 0.61]). In contrast, the second pathway (organisational response $\rightarrow$ perceived CEO concern $\rightarrow$ attitude towards the organisation $\rightarrow$ intention to fly with the organisation) was significant (indirect effect = 0.91, 95% CI [0.49, 1.54]). Finally, the third potential mediation pathway (organisational response $\rightarrow$ attitude towards the organisation $\rightarrow$ intention to fly with the organisation) was not significant (indirect effect = 0.07, 95% CI [-0.36, 0.55]). Thus, of all the potential mediation pathways, only one was found to be significant: the serial mediation pathway involving perceived CEO concern and attitude towards the organisation. These findings are consistent with the proposed $H_6$, which is: “CEO concern and attitude towards the organisation
will serially mediate the relationship between an approach (versus avoidance) oriented strategy and consumers’ intention to fly with the airline”.

4.5.4 Discussion
The purpose of the current study was to examine the mediating role of perceived CEO concern and attitude towards the organisation with respect to the relationship between the organisational response (avoidance versus approach) and intention to fly with the organisation. The results from this study showed separate, single mediation roles of perceived CEO concern on attitude towards the organisation and intention to fly with the organisation (see Table 4.17). An analysis was then performed to test for serial mediation, as discussed above in Section 4.5.3.5. In this analysis, perceived CEO concern as a mediating variable on intention to fly was non-significant. However, attitude towards the organisation as a mediating variable on intention to fly was significant. More importantly, the indirect effect of both perceived CEO concern and attitude towards the organisation on the relationship between organisational response (avoidance versus approach) and intention to fly with the organisation was significant. Therefore, based on these results, it can be concluded that perceived CEO concern contributes to attitude towards the organisation, and thus to intention to fly with the organisation.

These findings suggest that the CEO (and by implication, the organisation) is perceived as being unconcerned with the well-being of its consumers when it distances itself (i.e., adopts an avoidance response) from the victims of a catastrophic service failure (Coombs, 2007; Folger & Pugh, 2002; Ray, 1999). The reverse applies to an approach response, which signals CEO concern. This supports the prior work of Coombs (2007) and Henerson (2003), who advocated that managers should respond to a catastrophic failure by addressing the concerns of the victims, both physically and psychologically. An expression of concern and sympathy toward the victims can help to
minimise the negative impact of a catastrophic failure and reinforce that the organisation cares about its customers (Coombs & Holladay, 2005). This is especially the case in the context of an airline crash, which is a distinctive type of crisis; that is, of the greatest severity, leading to loss of life and/or physical and psychological injury. Therefore, the organisation has obligations regarding the well-being of victims and their next of kin (J. C. Henderson, 2003).

This finding is also consistent with Cronin, Brady, & Hult (2000) in that consumers make evaluations about the characteristics of service failures and how organisations handle them, and this alters consumers’ perceptions and responses. The analysis also revealed that the indirect effects of perceived CEO concern and attitude towards the organisation have an influence on behavioural intentions to purchase in the future (Cronin, Brady, & Hult, 2000; Hellier, Geursen, Carr, & Rickard, 2003; Breckler, 1984). For example, in the case of an avoidance response by the airline implicated in the crash, consumers felt that they were troubled by the airline CEO’s lack of concern. Indeed, the word “concern” indicates a feeling or emotion (Breckler, 1984), which creates an attitude (i.e., negative attitude) towards the CEO concern and the airline organisation itself, thus reducing consumers’ intentions to fly with the airline in the future.

4.6 Summary
This chapter examined the organisational response strategies of approach versus avoidance following the catastrophic failure of an airline crash and the effect on consumers’ evaluations and intentions pertaining to the airline involved in the crash. The four key findings from this set of studies are summarised as follow. The first key finding from Study 1 was that consumers’ attitude towards the organisation was more positive when the organisation that experienced the airline crash had adopted an approach orientation rather than an avoidance orientation, thus supporting H4. The second key finding from Study 2 was that perceived CEO concern predicted attitude
towards the organisation, with the direction of this relationship indicating that consumers’ attitude toward the airline is more positive when CEO concern is greater. The third finding was that there was no direct relationship between the organisation response orientation and attitude towards the organisation in the presence of the mediator (perceived CEO concern). This finding is partially consistent with Hs. The final key finding was the serial mediation pathway found (i.e., organisational response orientation → perceived CEO concern → attitude towards the organisation → intention to fly with the organisation). Therefore, H6 was supported in that CEO concern and attitude towards the organisation serially mediated the relationship between an approach (versus avoidance) strategy and consumers’ intention to fly with the airline. The next and final chapter of will discuss the contributions of this research as well as limitations and directions for future research.
5  Chapter Five: Contributions, Limitations and Future Research

5.1  Introduction
The focus of this research was guided by two central research questions: How do consumers respond to a catastrophic service failure (i.e., an airline crash)? How do they react to different organisational responses to that catastrophic service failure? In addressing these overarching research questions, the researcher drew on theories of psychological distance (Trope & Liberman, 2010; White et al., 2014) and organisational recovery responses (Amernic & Craig, 2007; Coombs, 2006, 2007; Coombs & Holladay, 2016; Folger & Pugh, 2002; J. C. Henderson, 2003; Ray, 1999), along with past research examining the effect of catastrophic service failures within the airline industry (Bejou et al., 1996; Keiningham et al., 2014; Rocha e Oliveira et al., 2012; Siomkos, 2000).

In summary, as depicted in Table 5.1, two hypotheses were supported. The results from the first set of experimental studies were quite robust given that the researcher employed the CLT of psychological (spatial) distance using the context of a catastrophic service failure of an airline crash. The findings showed that the CLT of psychological (spatial) distance influences consumers’ flying intentions, but only in the case of a moderated mediation framework (Hayes, 2015); that is, when FoF moderates the relationship between consumers’ psychological (spatial) distance and consumers’ intention to fly with the airline, mediated by perceived risk. This tells us that consumer intentions to fly with the organisation were influenced by the indentifed factors, i.e., perceived risk and FoF perceptions which were driven by the close spatial distance of the catastrophic service failure of an airline crash. It seems logical for practitioners to focus on strategies which reduce consumers’ perceived risk and FoF, which have a negative impact on consumers’ intention to fly.
The study findings suggest that psychological (spatial) distance did not have a direct relationship with consumers’ intention to fly, inconsistent with \( H_1 \).

Table 4.18 A summary of the hypotheses supported

<table>
<thead>
<tr>
<th>Hypotheses</th>
</tr>
</thead>
<tbody>
<tr>
<td>( H_3 ): Perceived risk will mediate the relationship between the psychological spatial distance of an airline crash and consumers’ intention to fly with that airline, but only when FoF is low.</td>
</tr>
<tr>
<td>( H_4 ): Adopting an approach (versus avoidance) oriented strategy to respond to an airline crash will increase consumers’ positive attitude towards the organisation.</td>
</tr>
<tr>
<td>( H_5 ): CEO concern and attitude towards the organisation will serially mediate the relationship between an approach (versus avoidance) oriented strategy and consumers’ intention to fly with the airline.</td>
</tr>
</tbody>
</table>

The second set of studies relate to the organisational response orientation (approach versus avoidance) following the catastrophic failure of an airline crash and the effect on consumers’ evaluations and intentions pertaining to the airline. The findings indicated the serial mediation pathway of: organisational response orientation \( \rightarrow \) perceived CEO concern \( \rightarrow \) attitude towards the organisation \( \rightarrow \) intention to fly with the organisation (indirect effect = 0.91, 95% CI [0.49, 1.54]). Therefore, \( H_6 \) was supported, i.e., CEO concern and attitude towards the organisation will serially mediate the relationship between approach (versus avoidance) strategy and consumers’ intention to fly with the airline. The findings from study 1 showed that consumers’ attitude towards the organisation was more positive when the organisation that experienced the airline crash had adopted an approach orientation rather than an avoidance orientation, supporting \( H_4 \) (see Chapter 4, Table 4.9). Further, the results from study 2 showed the direction of this relationship indicating that consumers’ attitude toward the airline is more positive when CEO concern is greater, though, there was no direct relationship between the organisation response orientation and attitude towards the organisation in the presence of the mediator (perceived CEO concern), inconsistent with \( H_5 \). However, attitude towards the organisation as a mediating variable on intention to fly was
significant. This seems reasonable, for customers interact with the catastrophic service failure and evaluate the organizational response to the event. If customers perceived the organizational responses to the event did not demonstrate a stated concern for the welfare of the family and friends of the victims, consumers’ attitude towards the organisation will be negatively impacted, which will result in decreasing their intention to fly with the organization. Therefore, based on these results, it can be concluded that perceived CEO concern contributes to attitude towards the organisation, and thus to intention to fly with the organisation.

The remainder of this chapter is outlined as follows. In the following section, theoretical implications emerging from the findings of this research are discussed. Managerial implications emerging from the study findings, particularly implications that decision-makers such as a CEO or a crisis manager operating in the airline industry might find useful and could adopt, are then outlined. The chapter then discusses some of the limitations associated with the studies described in this research and concludes with some directions for future research.

5.2 Theoretical Implications

5.2.1 Consumer Reactions to Airline Crashes
The first conceptual framework, which examined consumer intentions following an airline crash, makes some important contributions to the extant theory in this domain. First and foremost, there is scarce literature on catastrophic service failures in general, particularly relative to the extensive body of research that exists on more minor service failures (e.g., (Bejou et al., 1996; Bejou & Palmer, 1998; Edvardsson, 1992; Franks, 2007; Goodwin & Ross, 1992; Hoffman et al., 1995; Leow, 2015; Reynolds & Harris, 2005; Rocha e Oliveira et al., 2012). Moreover, when prior studies have examined non-minor service failures, it has usually been within the context of service failure severity, which tends to examine instances of service failure that stop short of a catastrophic
service failure (e.g., (Hess Jr, 2008; Hess Jr et al., 2003; Hoffman et al., 1995; McCollough, 2009; Swanson & Hsu, 2011; Tsarenko & Tojib, 2012; Wang et al., 2011; Weun et al., 2004). While instances of severe service failures may have important implications for customers and firms alike, the outcomes, and therefore, the potential to recover from such failures, tend not to be as extreme as is seen with catastrophic service failures, which involve incidents where a customer(s) has been injured or even killed. Put differently, it cannot be automatically assumed that previous findings pertaining to minor or more major service failures will automatically translate to contexts involving a catastrophic service failure. The focus of this thesis being on catastrophic airline crashes therefore goes some way towards addressing the research gap identified by Keiningham et al. (2014).

A second contextual contribution relates to the application of psychological spatial distance with regard to consumers’ intentions following a catastrophic service failure (Berthon, Pitt, Ewing, & Carr, 2002). While psychological spatial distance has been extensively applied in understanding how individuals make decisions (Darke et al., 2016; Ledgerwood, Trope, & Chaiken, 2010; Liberman & Trope, 2008; McGraw et al., 2012; Trope & Liberman, 2010; White et al., 2014) and form behavioural intentions (Animesh, Pinsonneault, Yang, & Oh, 2011; M. Brown, Pope, & Voges, 2003; Eyal, Liberman, & Trope, 2009; Trope et al., 2007), to the researcher’s knowledge, this is the first time that psychological spatial distance has been studied in the context of a catastrophic service failure. This is an important contribution because it suggests that even in contexts involving outcomes as severe as death or injury, subtle shifts in psychological distance, such as the spatial distance that exists between an individual and an airline crash, can be sufficient to influence consumer risk perceptions around flying with the airline that experienced those outcomes. Thus, incidents that contravene a seemingly inviolable responsibility of any service
organisation, that is protecting consumers from harm, may with increasing psychological distance nevertheless be perceived as being less risky.

The drop in consumer perceived risk was, in turn, found to be associated with increased flying intentions. This finding is consistent with previous literature that has established that perceived risk is an important antecedent of consumers’ (re)purchase intentions (Cho & Lee, 2006; Hsin Chang & Wen Chen, 2008; Sweeney et al., 1999). In an airline context, for example, Cunningham et al. (2002) reported that the greater a consumer’s perceived risk associated with flying with a given airline, the greater the reduction in their intentions to fly with that airline in the future. That the psychological spatial distance of an airline crash could reduce risk perceptions and consequently had a positive influence on intentions to fly with the airline that experienced the crash is a valuable finding. There was, however, one important factor that was found to moderate the relationship between psychological spatial distance and consumers’ perceived risk and which represented a theoretical contribution in its own right: FoF.

Unique to this research, FoF was introduced as a potential moderator of the relationship between the psychological spatial distance of an airline crash and consumer perceived risk of flying with the airline. Support was found for the moderating role of FoF such that when psychological spatial distance was far and FoF was low, the mediation pathway associated with perceived risk was both significant and negative. That is, risk perceptions actually declined when this unique combination of factors was present. When FoF was high, however, the psychological nearness versus farness of an airline crash had no effect on risk perceptions. Put differently, the ability for psychological spatial distance to modify consumer risk perceptions disappeared when FoF was high. These findings highlight a FoF-induced limit to the ameliorating effect that psychological distance may otherwise have on consumer risk perceptions. Situated within the broader context of
construal level theory (Darke et al., 2016; K. Kim, Zhang, & Li, 2008; Shen & Chiou, 2010), this set of findings suggests that FoF interferes with an individual’s ability to abstractly construe an airline crash, as would normally be expected to occur when a crash is perceived as being psychologically distant. Instead, individuals with high FoF appeared to construe the airline crash scenario concretely in that their risk perceptions were invariant across the spatially near and far conditions. The flying-related anxiety that stems from FoF would therefore appear to reduce whatever cognitive effects the psychological spatial distance of an airline crash has on flying-related risk appraisals.

5.2.2 Consumer Reactions to Organisational Responses
The findings of the second conceptual framework advanced in this research contribute to the body of research on organisational service recovery responses. Most previous studies examining firm responses to service failures have examined proactive crisis communication strategies (Coombs & Holladay, 1996, 2009; Coombs & Holladay, 2002; Ray, 1999), such as issuing an apology (Claeys & Cauberghe, 2014; Coombs, 2007). Following many catastrophic service failures, however, there is a period of time during which the specific cause of the failure, and by extension, whether the firm is culpable for that failure, remains unknown. This is particularly true in the context of the airline industry, where investigations into the cause of a crash can be lengthy (Haunschild & Sullivan, 2002). Within such contexts, issuing an apology may be premature, yet issuing no statement could be deemed inappropriate by consumers who tend to expect some sort of organisational response following a catastrophic service failure (Coombs & Holladay, 2016; Ray, 1999). The current findings are therefore of particular theoretical importance in that they evaluate the relative efficacy of two specific strategic orientations (i.e., approach versus avoidance) that could be adopted during that window of time in which the true cause of the crash is unknown.
Conceptually, the approach and avoidance oriented responses tested in this research can be conceived of as being analogous to psychological distance. Rather than examining the distance that exists between oneself and an observed stimuli, however, these approach and avoidance orientations can be seen as modifying the distance between two observed stimuli. An approach strategy, for instance, represents a firm taking responsibility for the outcomes (if not for the cause) of an airline crash, thereby bringing the crash perceptually closer to the firm (Coombs & Holladay, 2008; Folger & Pugh, 2002). Conversely, an avoidance strategy seeks to distance the airline from the crash by casting doubt on the responsibility of the airline for the crash (Coombs, 1995; Coombs & Holladay, 1996).

Although approach and avoidance response orientations may be conceptually analogous to psychological distance, a different set of dynamics exist between these concepts, at least on the basis of the current findings. Specifically, and as articulated in Section 5.2.1, firms benefit when an airline crash is seen as being psychologically distant to consumers. However, a similar distancing strategy (i.e., avoidance) was not found to be optimal when considered from the perspective of how an airline should respond to a crash. Rather, consumers responded most positively when an airline was seen to adopt an approach response orientation (i.e., reducing the perceptual distance between the airline and the crash). These findings highlight the contingent nature of ‘distance’ and demonstrate the need for organisations to tailor their response strategies to an airline crash depending upon who or what the focal comparison point is (i.e., consumers or firms). Further managerial implications stemming from these findings will be outlined in Section 5.3.

Previous organisational crisis response strategies focus on specific crisis communication variables from defensive responses (i.e, attack accuser, denial, scapegoat, excuse, justification) to
accommodative responses (i.e., sympathy, compensation, apology) (Coombs, 1995, 2006, 2007; Coombs & Holladay, 2005; Ihlen, 2002; Jin, 2014; Shin et al., 2018; Xu & Wu, 2017). This research differs from these prior studies by categorising organisational responses into two broad orientations, i.e., approach versus avoidance versus using individual variables, e.g., apology. While the approach versus avoidance response categorisation has been examined in other consumer domains, such as in the context of how individuals respond to personal set-backs (Corr, 2013; Elliot, 1999; Elliot & Thrash, 2002; Rinck & Becker, 2007), this categorisation has not previously been used to examine organisational responses in a service recovery context. Moreover, while considerable research has separately examined communication responses consistent with approach and avoidance strategies, such as apology, i.e., an approach oriented strategy from (see, for example, (Coombs, 1995, 1998; Coombs & Holladay, 2001; Coombs & Holladay, 2008; Wan & Pfau, 2004) and denial, i.e., an avoidance oriented strategy from (see, for example, (Coombs, 2006, 2007; J. C. Henderson, 2003), only a few studies have directly compared these organisational response orientations or evaluated their relative effectiveness within the context of a catastrophic service failure, such as an airline crash. The findings reported in this research consequently shed light on an important, yet heretofore under-examined, set of opposing orientations that organisations could adopt following a catastrophic service failure.

Evaluation of the approach and avoidance oriented responses revealed that the approach strategy positively influenced perceptions of CEO concern. While this was the first study to associate an approach (versus avoidance) organisational response orientation with perceived CEO concern, this theoretical contention was grounded based on existing research. The current research findings, for example, are consistent with prior work (Coombs, 2007; Fuchs-Burnett, 2002) in that an expression of organisational concern following a catastrophic service failure is expected by
consumers (Coombs & Holladay, 2016; Ray, 1999). Moreover, recovery response strategies, such as the actions taken or words used in response to a catastrophic failure, are perceived to be influenced by top-level decision-makers, such as CEOs (Child, 1972; Dutton & Jackson, 1987). That an approach-oriented strategy was ultimately found to positively influence perceptions of CEO concern, while novel in this context is, therefore not inconsistent with previous findings.

Perceived CEO concern was also shown to mediate the relationship between an approach (versus avoidance) orientation and consumers’ attitude toward the organisation. This finding accords with the notion that the CEO is often seen as the figurehead or ‘face’ of an organisation (Amernic & Craig, 2007; Kaplan et al., 2012), so the actions that they perform are central to how the organisation as a whole is perceived. In this research, for example, if consumers expect an expression of organisational concern following a catastrophic service failure (Coombs & Holladay, 2016; Ray, 1999), and if the organisation’s CEO adopts an approach response, which accords with these expectations, then consumers’ attitude towards the organisation should consequently be more positive. These findings consequently contribute to the broader body of research examining how CEO actions can inform broader perceptions of the organisation (see, for example, (Amernic & Craig, 2007; Conte, 2018; Coombs, 1995; Coombs & Holladay, 1996; Kaplan et al., 2012).

As has previously been identified in the literature, perceptions of an organisation, which in this research was operationalised as attitude towards the organisation, have an important influence on intentions to engage with that organisation (Augusto de Matos et al., 2009; Costa-Font et al., 2008; Fishbein & Ajzen, 1974; Goldsmith, Lafferty, & Newell, 2000; Shimp, 1981). Specifically, in this research, attitude towards the airline was found to positively influence consumers’ intention to fly with that airline following a catastrophic service failure. While this finding is not especially unique in and of itself, the value of this finding is that the motivational antecedents to attitude were
also identified. Specifically, the findings revealed the indirect effect of perceived CEO concern and attitude towards the organisation on the relationship between adopting an approach-oriented response following a catastrophic service failure and consumers’ intention to fly with the airline implicated in that failure. Understanding the full nature of this process, and by extension, the means via which a response orientation ultimately influences consumers’ behavioural intentions, is consequently an important contribution of this research. After all, it is only when the mechanisms underpinning a particular strategy (e.g., approach versus avoidance) are understood that end-users of research can have confidence in that strategy. Managerial implications stemming from these findings will be discussed in the following section 5.3.

5.3 Managerial Implications
5.3.1 Consumer Reactions to Airline Crashes
The findings of this research offer various practical, proactive suggestions for how managers can deal with the devastating event of the catastrophic service failure of an aircraft crash. Of particular importance for managers is understanding that psychological spatial distance can influence consumers’ risk perceptions and, ultimately, their behavioural intentions. From a communications perspective, these findings suggest that reinforcing how spatially distant an aircraft crash is may serve to increase the psychological distance between the crash and observers, minimising consumers’ risk perceptions. For example, for crashes that have occurred overseas, airlines could communicate the number of kilometres between the crash and major population centres. It should be noted, however, that psychological distance has more than just a spatial dimension. As Section 2.3.1 in Chapter 2 noted, psychological distance also includes a social dimension, so crashes involving people of a similar cultural background to observers (i.e., where there is low social distance) may nullify the effectiveness of efforts to reinforce spatial distance. Future research
could consequently test this proposition and determine whether there is a hierarchical ordering with respect to the potential for the different dimensions of psychological distance to influence consumer perceptions, particularly in situations where those dimensions conflict with one another.

The findings pertaining to the role of psychological spatial distance could also be used to develop a set of reactive strategies for responding to an aircraft crash. In particular, different communication approaches may be required depending upon how near or far consumers are to a crash. For consumers located far from the crash site, strategies aimed at reinforcing this distance are likely to be helpful. In contrast, consumers located close to the crash site may require targeted communications aimed at addressing and reducing the perceived risk associated with flying with the airline that experienced the crash. For example, consumers’ risk perceptions following a catastrophic service failure are often heightened by the media coverage of the incident (Reisinger & Mavondo, 2005; Stone & Mason, 1995; J. W. Taylor, 1974), which can increase the likelihood of unreasonable consumer fears (Reisinger & Mavondo, 2005). Consumers could therefore be encouraged by the airline to seek information from more reliable sources than the mass media, such as from the airline itself (Reisinger & Mavondo, 2005). Consumers located close to the crash site might be encouraged to visit the airline’s website directly so that it can provide consumers with timely and valid information and reassure them as to the safety of flying with the airline in the future (Reisinger & Mavondo, 2005).

Another clear managerial implication stemming from the findings of this research is around the importance of managing consumers’ FoF. In particular, the findings indicated that perceived risk mediated the relationship between the psychological spatial distance of an airline crash and consumers’ intention to fly with that airline, but only when consumers’ FoF was low. Efforts to leverage the effects of psychological distance are therefore contingent on consumers having a low
FoF. Past studies estimate that 10 to 40 per cent of the population may be affected by FoF, otherwise known as aviophobia (Bor, 2007; Boyd et al., 2013; Vanden Bogaerde & De Raedt, 2011). With each crash incident, population levels of FoF are also likely to spike, at least temporarily, due to the extensive media coverage that typically accompanies traumatic aviation events such as aircraft crashes (Bor, 2007). The findings reported in this research consequently provide a timely reminder of the need for the aviation industry to contribute to and support activities aimed at reducing FoF. For example, airlines can recruit those with a high FoF into FoF treatment programs, which include presentations by pilots, clinical psychologists and behavioural therapists (Boyd et al., 2013). While supporting such activities may pay dividends in addressing a general FoF (Boyd et al., 2013; Bush, 2008), they may also provide particular benefits for airlines that need to leverage psychological distance as a means of addressing consumer risk perceptions arising from a crash involving one of their aircraft.

5.3.2 Consumer Reactions to Organisational Responses
The findings pertaining to the second conceptual framework advanced in this research suggest that an approach (versus avoidance) response orientation minimised the perceptual damage associated with a catastrophic service failure. Specifically, the adoption of an approach orientation, which demonstrated a stated concern for the welfare of the family and friends of the victims, was ultimately found to positively influence consumers’ intention to fly with the airline. This finding provides practitioners with a clear and actionable strategy that they can adopt as a means of responding to a catastrophic service failure, such as an aircraft crash. Most importantly, this strategy provides a means for mitigating consumers’ negative evaluations and intentions regarding the airline.
The CEO typically acts as the ‘face’ of an organisation (Amernic & Craig, 2007; Kaplan et al., 2012), and how they are viewed by the broader public can consequently have a bearing on the public’s view of the organisation more generally. That was certainly found to be the case in this research, where perceived CEO concern was established to mediate the relationship between the adoption of an approach orientation and consumers’ attitude toward the airline. The likely basis for this finding is that an approach response reflects concern, compassion, sympathy, and interpersonal sensitivity toward the victims of the catastrophic failure, and the desire to ameliorate the unjust suffering caused (Folger & Pugh, 2002). An approach response may therefore provide an important signalling strategy about the values of a CEO specifically and their organisation more generally. This is particularly the case given the fact that they are prepared to take responsibility for the outcomes of a catastrophic service failure, even if it is still unclear whether the organisation is responsible for the cause of the crash. Put differently, an approach strategy demonstrates to consumers that both the CEO and organisation are sincerely concerned about consumer welfare, are making honest efforts to lessen the damage, and are informally responsible. Approach strategies may consequently be of value not only to CEOs who need to respond to a catastrophic service failure; they may also benefit CEOs who are experiencing public relations crises around how consumers have been treated by their organisation. An authentic approach strategy, and one that is ultimately followed-up with tangible actions and outcomes, may consequently inspire perceptions of CEO concern and improved consumer attitude towards the organisation. Future research could test this contention.

While the findings provided clear support for the value of an approach oriented response, they also revealed that an avoidance response orientation is not effective in demonstrating CEO concern, which in turn reduces consumers’ positive attitudes and intentions. Specifically,
avoidance strategies demonstrate an apparent neglect and disregard for consumers’ concerns and well-being, and this may potentially create or reinforce a perception that the CEO in particular, and the organisation more generally, does not genuinely care about consumers. Such a perception could exacerbate the initial crisis by engendering a negative (and potentially long-lasting) brand image and reputation that may have an even greater negative impact on the organisation (Bosch et al., 1998; Dawar & Pillutla, 2000). On the basis of these results, organisations facing a catastrophic service failure such as an aircraft crash would be advised to adopt an approach orientation that expresses concern about the incident, particularly with a view to minimising longer-term brand damage.

5.4 Limitations

In designing the studies for this research, pre-testing was conducted to ensure that the experimental manipulations worked as intended. Despite this, the results should be interpreted with caution and considered in the light of the following limitations. First, the conceptual model examined catastrophic service failures in the context of the airline industry only. Therefore, although the results could provide guidance for other service industries, caution should be exercised in generalising the findings beyond the setting of the catastrophic service failure of an airline crash. Second, while data collection via experimental scenarios has many advantages, such as an ability to infer causality (Bezold, 2010), it is essential to document the drawbacks associated with this method. The primary weakness relates to external validity. That is, the simplistic conceptual models that are typically a necessary requirement for conducting experiments may lack realism by ignoring the complex web of interacting factors that shape consumers’ behaviour (Davis, Eisenhardt, & Bingham, 2007). This limitation should be considered when interpreting the findings of this research. Third, the scenarios that formed the
basis of the studies conducted as part of this research required participants to project themselves fully into the imaginary situation of an airline crash of a fictional airline brand. If participants had difficulty doing so, they may not have been able to experience the full range of emotions that an actual catastrophic service failure would produce (Widmier & Jackson, 2002). That significant results were found even in the absence of a more naturalistic means for manipulating the perceptual factors associated with airline crashes suggests that the findings observed in this research are robust. This is because the use of scenarios should conservatively bias results in favour of non-significant findings (Aguinis & Bradley, 2014; Highhouse, 2009). Nevertheless, this limitation should be considered in future research. For example, future researchers might employ a fake newspaper article that outlines the horror of the crash, the loss of lives and the personal toll on families as is typical of these events. It is also noted that there is the possibility that the notion that the air crash happened 10000 km away could possibly mean that participants did not see themselves as ever landing in that location, the airport may even be in a developing country, etc., thus potentially having a confounding effect on $H_1$.

A fourth limitation relates to participant self-selection (Mathwick, 2002). A sample of any online population taken only from those willing to respond (Forrest, 2003). This, in turn, may possibly skew results as the randomness of the sample is reduced (Eaton, 1997). While efforts to capture a more random sample should be employed in future research, it is noted that an online sampling approach is consistent with much prior research in this domain (Darke et al., 2016; Ding & Keh, 2017; Elder, Schlosser, Poor, & Xu, 2017; Trope & Liberman, 2010; White et al., 2014; Yudkin, Pick, Hur, Liberman, & Trope, 2017).

Fifth, this research focused on a single dimension of psychological distance (i.e., spatial distance). Omission of the social, temporal, and hypothetical dimensions of psychological distance
from the study design does not suggest that consumers’ perceptions of these dimensions are unimportant, merely that there are limitations as to the number of variables that can be tested within an experimental study. The justification for the inclusion of the spatial dimension of psychological distance was provided in Chapter 2. Nevertheless, future research could examine whether these other dimensions of psychological distance may also influence consumers’ flying intentions post-airline crash.

The use of a two-level independent variable with respect to the organisational response orientation (i.e., approach versus avoidance) to a catastrophic service failure is a further limitation of this research. Although the choice of this variable was justified in Chapter 2, a binary treatment like this does not take into account the multitude of different types of approach and avoidance strategies that could be adopted by an airline following a catastrophic failure. It is also important to note that an organisation’s ‘initial’ communication with consumers following a catastrophic service failure was manipulated in this research. The media’s reaction to an avoidance-oriented response, for example, might encourage the organisation to alter the tone of its future communications with the general public (Ihlen, 2002), which was not examined in this research. For example, Hearit (2001) stated that an organisation might start with a strategy of denial and only once it is clear that a denial strategy no longer works for the organisation, switch to an approach response strategy. Future research could consequently test alternative communication strategies or examine the efficacy of real-world crisis messaging via sentiment analysis of social media posts.

Finally, consumers’ intention to fly with an airline following a catastrophic service failure as opposed to their actual flying behaviour was examined. Although intentions are a well-recognised antecedent to behaviour (Ajzen, 1991), a gap frequently exists between consumers’
intentions and the behaviours that they ultimately enact (Sheeran, 2002). Future research is, therefore required to determine whether the findings identified in these scenario-based studies would translate in the case of real-life catastrophic failures and actual consumer behaviour. Follow-up studies could also investigate whether these findings apply for non-airline samples and in the case of other types of catastrophic service failures.

5.5 Directions for Future Research

There are several avenues for future research, particularly those motivated by the limitations of this research. First, to improve the generalisability of the research findings, future research might seek to replicate the current studies in other service contexts where catastrophic failures could occur (e.g., public transportation, cruise lines, and restaurants). Second, to establish external validity, future experimental research designs could aim for more enhanced realism, such as by using scenarios that depict “real-life” catastrophic service failures. However, it is noted that in developing the scenarios used in this research, prior airline accidents and organisational responses to the same were drawn upon.

Third, although the current research only examined the spatial dimension of psychological distance, the findings do implicate the relevance of psychological distance more generally to influence consumer perceptions of risk. It is consequently conceivable that targeting the other dimensions of psychological distance may result in similar effects to those identified in this research, a proposition that could be examined in future research. For example, research could examine whether communication strategies aimed at increasing consumers’ more general feelings of psychological distance are effective in reducing consumers’ perceived risk. Several techniques are potentially available for researchers seeking to achieve this outcome. For example, strategies
to increase the intangibility of the crash, such as by using abstract language and imagery that can inflate feelings of psychological distance (Amit, Wakslak, & Trope, 2013; Stephan, Liberman, & Trope, 2010), could be tested. Alternatively, polite language is more abstract and is often used when communicating with distant rather than near consumers (Stephan et al., 2010), so this communication approach could also be tested. The use of unemotional language has also been found to increase the psychological distance between the self and an event and might also be applied in an airline’s communications (Trope & Liberman, 2010). Although the efficacy of each individual strategy would need to be tested, particularly for those that leverage dimensions other than the spatial dimension of psychological distance, the findings from the current research give some hope that they may be similarly effective.

Fourth, future research could examine other organisational response strategies that reduce or increase the distance between the organisation and the catastrophic service failure, such as accommodative response strategies that offer some tangible benefits and regret response strategies (Coombs, 2006; Coombs & Holladay, 2008, 2016). Including greater variability with regard to the public relations strategies employed and the psychological distance dimensions investigated would improve research in this field.

Fifth, the focus of future research could be directed towards identifying additional moderators that could complement and add nuance to the conceptual models examined in this research. For example, attribution of blame (Shaver, 2012) could be examined as a moderator on the relationship between psychological spatial distance and intention to fly. Indeed, every crisis is a unique, negative and unexpected event in which causal attributions play an important role in consumers’ decision-making process. For example, whether consumers perceive the cause of a crisis to be controllable or uncontrollable could be included as a moderator (Coombs & Holladay,
2005; Weiner, 1985, 2000; Weiner, Amirkhan, Folkes, & Verette, 1987). Similarly, the moderating effect of psychological distance (Holmqvist, Guest, & Grönroos, 2015) could be examined on the relationship between approach strategies and perceived CEO concern. Finally, other managerially-relevant dependent variables might be examined in future studies regarding catastrophic service failures, including word of mouth and electronic word of mouth (D. Lee, Kim, & Kim, 2012).
References


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**Note:** The text above is a sample of the possible content that could be extracted from the given image. It includes a variety of academic references, each formatted according to standard citation styles. This type of information is typically used in the context of an academic database or bibliography, where each reference is systematically listed and formatted for easy identification and citation. The sample includes a mix of articles, books, and conference papers, covering a range of topics from psychology to business, and from economics to computer science. Each reference is carefully cited to provide accurate and verifiable sources for further research or study.


Dziugiel, B., & Goraj, Z. J. (2018). From statistics, trough new requirements to mathematical modelling of SAT aircraft safety. *Aircraft Engineering and Aerospace Technology* (just-accepted), 00-00.


Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling: University of Kansas, KS.


Oakes, M., & Bor, R. (2010a). The psychology of fear of flying (part I): a critical evaluation of current perspectives on the nature, prevalence and etiology of fear of flying. Travel Med Infect Dis, 8(6), 327-338. doi: 10.1016/j.tmaid.2010.10.001


Williams, L. E., Stein, R., & Galguera, L. (2014). The Distinct Affective Consequences of Psychological Distance and Construal Level. *Journal of consumer research, 40*(6), 1123-1138. doi: 10.1086/674212


7 Appendices

APPENDIX 1: EHIC APPROVAL

11 November 2016

Dear Nichola and Johnny,

BL-EC. 43-16: Examining Customers’ Perceptions of Airline Safety

Thank you for submitting the above project for consideration by the Faculty Human Ethics Advisory Group (HEAG). The HEAG recognised that the project complies with the National Statement on Ethical Conduct in Research Involving Humans (2007) and has approved it. You may commence the project upon receipt of this communication.

The approval period is for four years. It is your responsibility to contact the Faculty HEAG immediately should any of the following occur:

- Serious or unexpected adverse effects on the participants
- Any proposed changes in the protocol, including extensions of time
- Any changes to the research team or changes to contact details
- Any events which might affect the continuing ethical acceptability of the project
- The project is discontinued before the expected date of completion.

You will be required to submit an annual report giving details of the progress of your research. Failure to do so may result in the termination of the project. Once the project is completed, you will be required to submit a final report informing the HEAG of its completion.

Please ensure that the Deakin logo is on the Plain Language Statement and Consent Forms. You should also ensure that the project ID is inserted in the complaints clause on the Plain Language Statement, and be reminded that the project number must always be quoted in any communication with the HEAG to avoid delays. All communication should be directed to blethics@deakin.edu.au

The Faculty HEAG and/or Deakin University Human Research Ethics Committee (HREC) may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Research Involving Humans (2007).

If you have any queries in the future, please do not hesitate to contact me.

We wish you well with your research.
APPENDIX 2: PARTICIPANT CONSENT FORM

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participants

Plain Language Statement

Date: 01 Aug 2016

Full Project Title: Examining Catastrophic Service Failure: the moderating role of psychological distance

Student Researcher: Mr Johnny

Principal Researchers: Dr Nichola Robertson, Dr Josh Newton Dr Lisa McQuilken

Study aims

The aim of this project is to examine customers’ perceptions, attitudes and behavioural intentions in regard to the catastrophic service failure of an airline crash. Results from this study will provide insights into ways of the influence of psychological distance on customers’ service evaluations of catastrophic airline service failures and how psychological distance moderates the association between customers’ risk perceptions and their attitudes and intentions toward the airline

Participating in the study and time commitment

The research will involve taking part in a short, online survey that will take 10 minutes to complete.

Data storage

Data collected will be stored on a secure, password-protected server for five years in accordance with Deakin University’s regulations.

Results, privacy, and confidentiality

Findings from this study may be reported in journal articles, conferences presentations, and in industry reports. Please note that all publications arising from this study will report aggregate data only. That is, no one will be identifiable in these publications. Furthermore, any information that you provide us with will be kept confidential. If you would like to receive a summary of the major study findings at the conclusion of the study, please let us know via email. Our email details can be found at the bottom of this page.

Withdrawing from the study
Participation is voluntary, and your completion of this survey indicates your consent to participate in this research study. As responses are automatically recorded, you will not be able to withdraw from the study once you respond to the questionnaire. You can, however, cease completing the survey at any point of time and such withdrawal WILL NOT jeopardise your relationship with Deakin University.

Contact us
If you have any questions about the study, please contact a member of the research team:

Name: Johnny
Email: qui@deakin.edu.au
Phone: +61 3 9246 8033
Organisation: Department of Marketing, Deakin Business School, Deakin University

Name: Nichola Robertson
Email: nichola.robertson@deakin.edu.au
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Name: Josh Newton
Email: j.newton@deakin.edu.au
Phone: +61 3 9251 7830
Organisation: Department of Marketing, Deakin Business School, Deakin University

Name: Lisa McQuilken
Email: lisa.mcquilken@deakin.edu.au
Phone: +61 3 924 46716
Organisation: Department of Marketing, Deakin Business School, Deakin University

Complaints
If you have any complaints about any aspect of the project (project number BL-EC 23-15), the way it is being conducted or any questions about your rights as a research participant, then you may contact:

Email: research-ethics@deakin.edu.au
Phone: +61 3 9251 7129
Address: The Manager, Ethics and Biosafety
Burwood Campus, Deakin University
221 Burwood Highway
Burwood 3125
VIC Australia, Telephone:

Thank you for your time.

Johnny, Josh Newton, Nichola Robertson and Lisa McQuilken
APPENDIX 3: PRETEST QUESTIONNAIRE

Instructions

On the next screen, you will be presented with a brief scenario. Please read this scenario carefully and then answer the questions that follow.

Scenario: Spatial distance near

This question lets you record and manage how long a participant spends on this page. This question will not be displayed to the participant.

Scenario

*An passenger jet operated by Wide Sky Airlines has crashed while attempting to land. The crash occurred 10 miles from where you live.*

(The NEXT button will appear after 10 seconds. Once it appears, and after you have finished reading the scenario, please proceed to the next screen and answer several questions relating to this scenario.)

Scenario: Spatial distance far

This question lets you record and manage how long a participant spends on this page. This question will not be displayed to the participant.

Scenario

*An passenger jet operated by Wide Sky Airlines has crashed while attempting to land. The crash occurred 10,000 miles from where you live.*

(The NEXT button will appear after 10 seconds. Once it appears, and after you have finished reading the scenario, please proceed to the next screen and answer several questions relating to this scenario.)

When you consider Wide Sky Airlines, how tangible is the crash in your mind? Tangibility is the extent to which you can sense (e.g., see, touch, hear, taste, or smell) the object of interest.

1- Very intangible
2- 
3- 
4- Neither intangible or tangible
5- 
6- 
7- Very tangible
When you think about Wide Sky Airlines, how difficult or easy is it to imagine the crash in your mind?

1- Very difficult to imagine
2-
3-
4- Neither difficult nor easy to imagine
5-
6-
7- Very easy to imagine

When you think about Wide Sky Airlines, how abstract or real does the crash seem in your mind?

1- Very abstract
2-
3-
4- Neither abstract nor real
5-
6-
7- Very real

When you think about Wide Sky Airlines, how distant or close does the crash seem in your mind?

1- Very distant
2-
3-
4- Neither distant nor close
5-
6-
7- Very close

Demographics

1- Male
2- Female
3- Other

What is your age (in years)?
APPENDIX 4: MAIN QUESTIONNAIRE A

Scenarios

A passenger jet operated by Wide Sky Airlines has crashed while attempting to land. The crash occurred [10 miles / 10,000 miles] from where you live. There were no survivors.

I would be happy to fly with Wide Sky Airlines.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I would consider flying with Wide Sky Airlines.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

Wide Sky Airlines is very risky to fly with

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I have a feeling that flying with Wide Sky Airlines would cause me trouble

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree
There is a good chance that I would be in trouble if I flew with Wide Sky Airlines.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I will incur high risk if I fly with Wide Sky Airlines

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

The decision to fly with Wide Sky Airlines would involve a lot of risk.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

Overall, flying with Wide Sky Airlines would be very risky.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I fear flying on planes.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree
When I fly, I fear that the plane will crash.
   1- Strongly disagree
   2- Disagree
   3- Somewhat disagree
   4- Neither agree nor disagree
   5- Somewhat agree
   6- Agree
   7- Strongly agree

I avoid flying on planes.
   1- Strongly disagree
   2- Disagree
   3- Somewhat disagree
   4- Neither agree nor disagree
   5- Somewhat agree
   6- Agree
   7- Strongly agree

How many flights have you taken in the past 12 months?
   Please specify……..

Demographics
   1- Male
   2- Female
   3- Other

What is your age (in years)?
APPENDIX 5: PRETEST QUESTIONNAIRE

Instructions

On the next screen, you will be presented with a brief scenario. Please read this scenario carefully and then answer the questions that follow.

Scenario: Avoidance

This question lets you record and manage how long a participant spends on this page. This question will not be displayed to the participant.

Scenario

A passenger jet operated by Wide Sky Airlines has crashed while attempting to land. In an emergency press conference held immediately after the crash was made public, the CEO of Wide Sky Airlines said that “while the cause of the crash is being externally investigated, it is my personal feeling that Wide Sky Airlines was not at fault”.

(The NEXT button will appear after 10 seconds. Once it appears, and after you have finished reading the scenario, please proceed to the next screen and answer several questions relating to this scenario.)

Scenario: Approach

This question lets you record and manage how long a participant spends on this page. This question will not be displayed to the participant.

Scenario

A passenger jet operated by Wide Sky Airlines has crashed while attempting to land. In an emergency press conference held immediately after the crash was made public, the CEO of Wide Sky Airlines said that “while the cause of the crash is being externally investigated, we are providing on-the-ground support to the families of everyone involved in the crash”.

(The NEXT button will appear after 10 seconds. Once it appears, and after you have finished reading the scenario, please proceed to the next screen and answer several questions relating to this scenario.)
Wide Sky Airlines is not taking responsibility for the crash

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

Wide Sky Airlines is refusing to take responsibility for the crash

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

Wide Sky Airlines is denying that they were responsible for the crash.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

Instructions

The following questions relate to the scenario that you have just read

Wide Sky Airlines is doing the right thing for the families of those involved in the crash

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree
Wide Sky Airlines is giving emotional support to the families of those involved in the crash

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

Wide Sky Airlines is showing empathy to the families of those involved in the crash.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

Demographics

1- Male
2- Female
3- Other

What is your age (in years)?
APPENDIX 6: MAIN QUESTIONNAIRE B

I would be happy to fly with Wide Sky Airlines.
   1- Strongly disagree
   2- Disagree
   3- Somewhat disagree
   4- Neither agree nor disagree
   5- Somewhat agree
   6- Agree
   7- Strongly agree

I would consider flying with Wide Sky Airlines.
   1- Strongly disagree
   2- Disagree
   3- Somewhat disagree
   4- Neither agree nor disagree
   5- Somewhat agree
   6- Agree
   7- Strongly agree

My overall impression of Wide Sky Airlines is:
   Bad ☐ ☐ ☐ ☐ ☐ ☐ ☐ Good

My overall impression of Wide Sky Airlines is:
   Negative ☐ ☐ ☐ ☐ ☐ ☐ ☐ Positive

My overall impression of Wide Sky Airlines is:
   Undesirable ☐ ☐ ☐ ☐ ☐ ☐ ☐ Desirable

The statement made by the CEO of Wide Sky Airlines shows that:

The CEO does not care about the company's customers.
   1- Strongly disagree
   2- Disagree
   3- Somewhat disagree
   4- Neither agree nor disagree
   5- Somewhat agree
   6- Agree
   7- Strongly agree
The CEO has no concern about the welfare of the company's customers.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

The CEO has no interest in looking after the company's customers.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I fear flying on planes.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

When I fly, I fear that the plane will crash.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I avoid flying on planes.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree
Wide Sky Airlines is very risky to fly with

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I have a feeling that flying with Wide Sky Airlines would cause me trouble

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

There is a good chance that I would be in trouble if I flew with Wide Sky Airlines.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I will incur high risk if I fly with Wide Sky Airlines

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

The decision to fly with Wide Sky Airlines would involve a lot of risk.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree
Overall, flying with Wide Sky Airlines would be very risky.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I fear flying on planes.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

When I fly, I fear that the plane will crash.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

I avoid flying on planes.

1- Strongly disagree
2- Disagree
3- Somewhat disagree
4- Neither agree nor disagree
5- Somewhat agree
6- Agree
7- Strongly agree

How many flights have you taken in the past 12 months?

Please specify……..

Demographics

1- Male
2- Female
3- Other

What is your age (in years)?