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## Framing a mystery: Information subsidies and media coverage of Malaysia airlines flight 370



Sejin Park, Lindsey M. Bier\*, Michael J. Palenchar

School of Advertising and Public Relations, College of Communication and Information, University of Tennessee, 476 Communications Building, Knoxville, TN 37996, United States

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### ABSTRACT

This study examines from an information subsidies and framing theory perspective the media coverage of Malaysia Airlines Flight 370. Through a content analysis of Malaysian government information subsidies ( $N=78$ ), and Malaysian ( $N=155$ ) and Chinese ( $N=93$ ) newspaper articles, findings include differences of crisis frames and risk roles, the absence of crisis cause did not detract from attribution of responsibility in regard to risk arbiters' potential solutions to managing the crisis, among other key findings. Implications include the need for the inclusion of an unknown crisis type to the crisis communication typologies and models and theories, as well as supporting the argument of previous studies in regard to media coverage partially determined by the country's media system and Palmlund's (1992, 2010) generic roles of societal evaluations of risk.

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### 1. Introduction

Malaysia Airlines flight MH370 disappeared on March 8, 2014, while flying from Kuala Lumpur, Malaysia, to Beijing, China. The aircraft carried 12 Malaysian crew members and 227 passengers from 15 nations. Authorities confirmed in July 2015 a wing flap discovered on La Reunion, a remote Indian island, as the first recovered piece of debris from MH370. As of May 2016, five pieces from the aircraft have been found in various places in the Indian Ocean, yet little is known about the disappearance and the fate of those onboard (Associated Press, 2016; Jamieson & Ciganinero, 2015; McQuirk, 2016). In 2015, in compliance with an international agreement, the Malaysian government declared the MH370 disappearance an accident without survivors to allow insurers to pay the next of kin, which under the Montreal Convention international treaty includes an initial sum of approximately \$150,000–175,000 per deceased passenger. Although officially declared an accident, the cause of the crisis remains a mystery. Theories of mechanical failure and the nefarious plots of a rogue pilot or hijackers remain possibilities. For more than two years government agencies and private searchers have continued to examine a 46,000-square-mile part of the Indian Ocean, making this aviation investigation the most expensive in history (Australian Transport Safety Bureau, 2016; Wardell, 2014).

Examining media coverage within public relations-focused research projects is important for an organization and government in crisis because public opinions and attitudes are influenced by media reports (e.g., Coombs, 2006; Valentini & Romenti, 2011), and media coverage in different countries is critical for an organization with an international presence as negative media frames can harm a country's global image and reputation (Anholt, 2010). The disappearance of MH370

\* Corresponding author.

E-mail addresses: [spark37@vols.utk.edu](mailto:spark37@vols.utk.edu) (S. Park), [lbier@vols.utk.edu](mailto:lbier@vols.utk.edu) (L.M. Bier), [mpalench@utk.edu](mailto:mpalench@utk.edu) (M.J. Palenchar).

received extensive media coverage not only because of the loss of life and surrounding mystery of cause, but also because it was an international crisis. For example, in March 2014, the Malaysian government owned almost 70% of the stock of Malaysia Airlines, which operated the aircraft, while most of the MH370 passengers were Chinese; Boeing, a corporation based in the United States, manufactured the aircraft; and the search operation has involved 26 countries with Australia taking the lead. Research suggests media from different countries report the same event differently because media coverage is partially determined by the media system in the country in which the media is located (Valentini & Romenti, 2011). Further, scholars argue national interests play a critical role in media coverage of international events (Hook & Pu, 2006). Thus, it is expected that media from different countries reported the MH370 crisis differently, and numerous scholars contend additional crisis communication research that investigates how multiple organizations in multiple countries manage crises is needed (e.g., Heath, 2010; Storie, Madden, & Liu, 2014).

In crisis situations, most formal information comes from the organization in crisis via information subsidies (Choi, 2012). The content of information subsidies is regarded as official communication from the organization, and numerous studies support that information subsidies affect media framing (e.g., Curtin, 1999; Kim & Kioussis, 2012; Turk & Franklin, 1987). Previous studies have explored the role of information subsidies in a crisis context (e.g., Choi, 2012; Fung, Namkoong, & Brossard, 2011; Lee & Basnyat, 2013; Sweetser & Brown, 2008). Also, studies have explored the impact of information subsidies on media coverage. The majority of them, however, explored a crisis with a known cause. Moreover, such studies examined the role of information subsidies in traditional corporate crises (e.g., Benoit & Brinson, 1994; Choi, 2012; Harlow, Brantley, & Harlow, 2011; Kleinnijenhuis, Schultz, Utz, & Oegema, 2013; Muralidharan, Dillistone, & Shin, 2011; van der Meer, Verhoeven, Beentjes, & Vliegenthart, 2014), whereas there is limited research on such hybrid government crises (e.g., Lee & Basnyat, 2013), such as a national airline primarily owned by its government.

This study investigates from an information subsidies and framing theory perspective how Malaysia Airlines and its country of incorporation frame a crisis without a known cause through information subsidies to affect national and international media coverage about the crisis. Through a quantitative content analysis of Malaysia Airlines and government information subsidies ( $N=78$ ) and Malaysian ( $N=155$ ) and Chinese newspaper articles ( $N=93$ ), this study explores crisis frames and risk roles in a crisis without a known cause. The current study also examines how media use information subsidies in news coverage. As a whole, the findings contribute to understanding how an organization attempts to frame a crisis without a known cause, which could influence international media coverage and global public opinion. It also contributes to the field's understanding of how a crisis without an attribution of cause maintains an attribution of responsibility for those organizations whose products and services are part of the crisis.

## 2. Literature review

### 2.1. Public relations and crisis communication

Toth (2010) suggests crisis communication as an important paradigm in public relations, and two recent studies identify the significant role of crisis communication in the public relations literature (Avery, Lariscy, Kim, & Hocke, 2010; Ha & Boynton, 2014). Managing crisis situations is critical to public relations practitioners, and the development of crisis communication theory and adopting it to the practice are central to the public relations literature (Avery & Park, 2016). For more than twenty years, Coombs's (2015) situational crisis communication theory (SCCT) and Benoit's (1995) image restoration theory have been rigorously studied in crisis communication research in the field of public relations and have suggested useful recommendations for public relations practice (Avery & Park, 2016).

Crisis communication research is fundamentally about better understanding the role of communication processes in the onset, management, resolution, and meaning of crises. Crises can affect any type of organization, including government or private or hybrid organizations such as a national airline that is majority owned by its national government, and even those with good management, good products and a good reputation. Coombs (2015) developed a master list of 11 crisis types ranging from operational disruptions from disasters to organizational misdeeds.

As Coombs (2015) argues, "A crisis is the perception of an unpredictable event that threatens important expectancies of stakeholders and can seriously impact an organization's performance and generate negative outcomes" (pp. 2–3). The key to this perspective, according to Hearit and Courtright (2004), is crises are both objective and perceptual, affect stakeholders, are unpredictable but not unanticipated, and ultimately violate stakeholders' expectations. Important to consider is "crisis management is a distinctly communicative phenomenon in which participants construct the meaning crises hold" (Hearit & Courtright, 2004; p. 205).

According to Heath and Palenchar (2013), early crisis communication paradigms emphasized source-based explanations aimed at reputation and image management and repair. They included the classic paradigm of apologia, a complex of discourse options by which atonement is championed as a resource for recovery. Many crisis communication theories and much research is concerned with the public's perception and support of the crisis-generating organization during- and post-crisis, such as SCCT and image restoration theory. Coombs (2009) notes SCCT delineates crisis response strategies of the theory through attribution theory, which is based on the process of attribution – the process of characterizing others and oneself – which is the basic process of social cognition.

From this organization as agency approach, and similar to risk communication, crisis communication has moved toward a collaborative perspective based on relationships and socially-constructed meanings of crisis generators, arbiters, and bearers

to address crisis mitigation (Heath and Palenchar, 2013). From both ends of the spectrum, the study of those who are involved in the crisis event are key to public relations research, whether the role of media in framing the crisis to those who bear or act upon a risk or crisis. For example, Palmlund's (1992) role of social evaluation of risk proposes a typology of those involved in the risk/crisis, including risk bearers, risk advocates, risk generators, risk researchers, risk arbiters, and risk informers.

## 2.2. Information subsidies and media framing

Information subsidies provide information about an event and help an organization to include its perspectives and communication goals in media coverage (Gandy, 1980; Nucci, Cuite & Hallman, 2009; Park & Reber, 2010) in an effort to frame the issue or crisis and better manage the narrative of a crisis event. According to Turk (1985), there are proactive (e.g., press releases and press conferences) and reactive (e.g., answers to journalists' questions) subsidies. Proactive subsidies are triggered by public relations practitioners while reactive subsidies are initiated by journalists (Turk, 1985). In most crises, information subsidies are the primary method for delivering an organization's message to the media and, thus, to the public (Dier and Donohue, 2013; Harlow et al., 2011; Schultz, Kleinnijenhuis, Utz, Oegema, & van Atteveldt, 2012).

Implicitly, framing plays a crucial role in public relations (Hallahan, 1999) and by extension crisis communication. The practice of framing discordant news events is a dominant fact of contemporary journalism (McCombs, Einsiedel, & Weaver, 1991) – media are attracted to uncertainty and the risk (conflicts) about an issue. Framing theories are often presented as explanations for the influence of media coverage on issue developments, such as those related to a crisis event.

Entman (1993) asserts that framing “is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (p. 52). Framing guides social actors' thoughts and feelings about an issue (Gamson & Modigliani, 1989; Lee & Basnyat, 2013; Scheufele, 2000). Such thoughts and feelings can be valuable predictors of individual reactions (Price, Tewksbury, & Powers, 1997).

Frames have at least four locations in the communication process, including communicators, text, receivers, and culture (Entman, 1993). This paper focused on frames within the textual element of the crisis communication process yet discussed within the cultural (including political) context surrounding the disappearance of MH370. As Entman (1993) suggests, “The text contains frames, which are manifested by the presence or absence of certain key words, stock phrases, stereotypical images, source of information, and sentences that provide thematically reinforcing clusters of facts or judgments” (p. 52). The language selected by organizational information subsidies and by journalists in describing events influences perceptions of those events. As Edelman (1988) argues, “It is language about political events, not the events in any other sense, that people experience; even developments that are close by take their meaning from the language that depicts them” (p. 104).

In essence, information subsidies are framed products (Lee & Basnyat, 2013). If public relations practitioners readily provide journalists with information subsidies, the organization is more likely to have its voice present in media coverage (Curtin, 1999; Gandy, 1980; Lee & Basnyat, 2013; McCombs, 2004). Information subsidies often play a significant role in the production and framing of news media, which then has the potential to influence the public perception of the organization and the issue (Berkowitz 1990; Andsager & Powers, 1999).

Studies have examined the framing of information subsidies in crises such as the BP oil spill (Choi, 2012; Harlow et al., 2011; Kleinnijenhuis et al., 2013; Schultz et al., 2012), the H1N1 outbreak in Singapore (Lee & Basnyat, 2013), the Israel-Lebanon conflict (Sweetser & Brown, 2008), and other corporate disasters (van der Meer et al., 2014; van Greer & Moreland, 2003; Kiousis, Popescu, & Mitrook, 2007); yet little is known about the framing efforts using information subsidies in a crisis without a known cause and in the context of a multi-national government crisis.

**RQ1:** How did the Malaysian government frame the MH370 disappearance in information subsidies?

## 2.3. National interests and media framing

The news media are one of the most well-established information sources for the public (Andsager and Powers, 1999; Viswanath & Emmons, 2006). The public receives information from media, and media frames influence individual understandings, attitudes and behaviors related to an event or issue (Park & Reber, 2010). By highlighting some aspects of a certain event or issue more than other aspects, media can affect individual understandings, attitudes and behaviors in different ways (Storie et al., 2014).

The media system in the country in which the media organizations are located is a critical factor that affects media framing (Valentini & Romenti, 2011). This is because media coverage is closely related to national interests, cultural values, and ideologies (Shoemaker & Reese, 1996). Research supports the influence of national interests on media framing. For example, de Vreese, Peter and Semetko (2001) analyzed four European countries' media coverage of the European Union and found that the political and economic situations of each country affected the media framing. Also, Schultz et al. (2012) explored the differences in framing between U.S. and U.K. media coverage of the BP oil spill and suggested that U.S. media framing was associated more closely with BP's framing than was U.K. media framing. Therefore, it is expected that media in different countries frame the same event differently.

As previously discussed, Malaysia and China are arguably the countries most greatly affected by the MH370 disappearance as the Malaysian government holds majority ownership of the airline and most of the casualties were Chinese. In this situation, media from each country would likely frame the crisis differently because the countries have different national

interests: intuitively the Malaysian government wants to minimize the damage to its global image and reputation while Chinese citizens seek information and answers about their lost family and friends and require the largest compensations for the casualties.

**H1:** Malaysian and Chinese newspapers framed the MH370 disappearance differently.

#### 2.4. Information source, national interests, and media framing

There is a tug of war between journalists and public relations practitioners in crisis situations. For example, in crisis situations, the practitioners want to release information that helps minimizing possible reputational damages to their organizations while journalists seek exclusive information that can possibly be a scoop (Arpan & Pompper, 2003; Molotch & Lester, 1974). For organizations in crisis, deciding which information to deliver to the media and how to frame the crisis is important since crisis information and media frames affect the public perception of the crisis (Turk & Franklin, 1987). Therefore, organizations in crisis want their voice to be heard in media report; on the other hand, the media ideally try to maintain a balanced stance in reporting the event (Arpan & Pompper, 2003).

Unlike typical day-to-day public relations functions, public relations practitioners do not need to attract media attention during crises (Sweetser & Brown, 2008) and the influence of media framing on public perception becomes stronger in crisis (Storie et al., 2014). This is because, in crisis situations, available information for the public is limited and people seek information from the media. In a similar vein, van der Meer and Verhoeven (2013) propose that framing not only affects crisis evolution but also influences the attribution of meaning to a crisis.

Considering that the core of framing is to decide what information to include (Entman, 1993), the source of information (whether information is from the organization in crisis or from other sources) often plays a vital role in media reporting of a crisis as the content and quality of information are different from source to source (Arpan & Pompper, 2003; Molotch & Lester, 1974; Turk & Franklin, 1987). Therefore, exploring the influence of information source on framing is essential. In addition to that, as discussed, national interest is another important factor that can affect media framing (Hook & Pu, 2006; Schultz et al., 2012). Thus, it is worthwhile to explore how the source of information, media framing, and national interest interact in crisis without a known cause.

**RQ2:** How did Malaysian and Chinese media frame the MH370 disappearance according to the source of information?

### 3. Method

#### 3.1. Samples

Malaysian government information subsidies and Malaysian and Chinese newspaper articles about the MH370 disappearance were utilized for analysis. The information subsidies were obtained from two official websites: the Malaysia Airlines website (<http://www.malaysiaairlines.com/my/en/site/mh370.html>) and the Malaysian government website (<http://www.dca.gov.my/370newsroom/mh370.dca.gov.my/index.html>). It is assumed that information subsidies from Malaysia Airlines are information subsidies from the Malaysian government because the government owns the airlines. In fact, the Malaysian government held 69% of the airline's stock when MH370 disappeared, and, recently, the government announced that it will buy the rest of the stake (Flynn, 2014).

Since a purpose of this study is to investigate the initial framing efforts of a crisis without a known cause, information subsidies from March 8, 2014, the day that MH370 disappeared, to January 28, 2015, the day that the Malaysian government declared the event an accident, were identified. A total of 119 information subsidies were collected in the initial sampling process. The authors read all the subsidies and removed ones that were posted on both websites. As a result, 78 information subsidies were identified and analyzed: 35 media statements from the airline, 23 summaries of media briefings, 11 press statements from the government, and 9 other types of subsidies.

Newspaper articles published within the same time parameters were selected for this study based on the primacy of media in Malaysia and China and the availability of newspapers in the English language in the LexisNexis Academic database. One of the top English newspapers by circulation and the oldest newspaper in Malaysia is *New Straits Times*, and this source has been used in comparative research among domestic and international sources in communication research (Abbott & Givens, 2015; John, 2015; Kasam, Sani, Ismail, & Masri, 2015; Massey, 2000). The top English newspaper by circulation in China is the state-owned *China Daily*, which also has been used in media analysis studies (Luther & Zhou, 2005; Tai & Sun, 2007; Zhang, Jin, & Tang, 2014).

All articles related to flight MH370 from March 8, 2014, to January 28, 2015, inclusive, were obtained from the two newspapers through LexisNexis by keywords. A keyword search was conducted in each of the selected publications for full-text articles concerning MH370. The key words for identification of articles for this study were "MH370" and "Malaysia Airlines" and "Malaysia 370." Some articles related to flight MH370 also covered the crisis surrounding Malaysia Airlines flight MH17; which was presumably shot down over contested territory along the Russia-Ukraine border on July 17, 2014; and the crisis surrounding AirAsia flight QZ8501; which crashed into the Java Sea due to poor weather conditions on December 28, 2014.

In total, 155 articles from *New Straits Times* and 93 articles from *China Daily* were obtained. Since a purpose of this study is to explore the influence of information source on media coverage, newspaper articles that used information from

the information subsidies were identified. To find the news articles that used information from the subsidies, the authors reviewed news articles published after the subsidies were released and selected ones that used the exact same information in the subsidies or quoted the Malaysia Airlines and/or Malaysian government officials as a source. As a result, 41 news articles from *New Straits Times* and 26 news articles from *China Daily* were used for the analysis.

### 3.2. Coding scheme

First, to investigate how the MH370 disappearance was framed in terms of crisis type, the information subsidies and newspaper articles were coded according to twelve crisis types. A crisis type named “unknown crisis” was added to [Coombs' \(2015\)](#) eleven crisis types master list. For the subsidies and articles belonging to more than one crisis type, the coders selected and coded on the dominant type: (1) operational disruptions from disasters (when an organization operates at reduced capacity due to a disaster such as tornadoes or hurricanes), (2) workplace violence (when an employee commits violence against other employees), (3) rumors (when false information is intentionally circulated in order to harm the organization), (4) unexpected loss of key leadership (when an organization suddenly loses a key leader), (5) malevolence (when an outside person attacks the organization, such as product tampering or terrorism), (6) challenges (when the organization is confronted by discontented stakeholders with claims that it is operating in an inappropriate manner), (7) technical-error accidents (when the technology utilized fails and causes an industrial accident), (8) technical-error product harm (when the technology utilized or supplied by the organization fails and results in a defect or potentially harmful product), (9) human-error accidents (when human error causes an accident), (10) human-error product harm (when human error results in a defect or potentially harmful product), (11) organizational misdeeds (when management takes actions they know may place stakeholders at risk or knowingly violates the law), and (12) unknown crisis type (when the cause of the crisis is unknown and there is no attempt to predict the type of crisis).

Second, the same procedure was followed to code for the crisis types proposed by [Ulmer, Sellnow, and Seeger \(2007\)](#): (1) intentional crisis (such as terrorism or sabotage), (2) unintentional crisis (such as natural disasters or unforeseeable technical interactions), and (3) unknown intentionality crisis (when the intentionality of the crisis is unknown and there is no attempt to predict the intentionality of the crisis).

Next, the information subsidies and newspaper articles were analyzed using [Neuman, Just, and Crigler's \(1992\)](#) five distinguishable frames: (1) attribution of responsibility (offers causes of or potential solutions for the crisis and a way of attributing responsibility), (2) conflict (highlights disagreements among individuals, groups, organizations, or countries), (3) economic consequences (reports the financial significance of the crisis for individuals, groups, organizations, or countries), (4) human interest (presents a human face or an emotional angle to the crisis), and (5) morality (situates the event within the context of moral or religious values and/or social prescriptions).

Last, the role of social evaluation of risk developed and tested by [Palmlund \(1992\)](#) was analyzed: (1) risk bearers (when the focus of the article is the actual individuals or groups who bear the risk of the crisis event), (2) risk advocates (when the focus of the article is the heroic protagonists who speak on behalf of the risk bearers), (3) risk generators (when the focus of the article is those who have created the risk or, in this case, the actual crisis), (4) risk researchers (when the focus of the article is those who apply science to determine whether risks occur and, if so, how they can be abated or mitigated), (5) risk arbiters (when the focus of the article is those individuals or organizations who take action to save the risk bearers from present or future risks), and (6) risk informers (when the focus of the article is persons who stand outside of the conflict and make statements about it and comment on the actions, risks, policies, and outcomes).

### 3.3. Coding procedure

Two trained researchers conducted a content analysis independently. The unit of analysis was an information subsidy (i.e., a press release or a press statement) and an entire newspaper article, and the coders worked according to a codebook in which all of the measures were fully explained and each coding category was exhaustive and mutually exclusive.

Three meetings were arranged before the coding procedure began. In the first meeting, the coders utilized a sample of eight newspaper articles about the Malaysia Airlines MH17 crisis. After each coder independently coded the articles, the coders had a discussion session. When there were disagreements about coding, the coders shared their interpretations and a final decision was made by consensus. Based on the discussion, the codebook and the coding instrument were revised. In the second meeting, the coders followed the same procedure with 12 newspaper articles about MH370 and there was a discussion session. In the last meeting, the coders independently coded 48 articles that were randomly sampled from the data set and the final version of codebook and the coding instrument were developed. The final inter-coder reliability scores (Cohen's Kappa) ranged from 0.76 to 0.95, which is considered acceptable for content analysis ([Neuendorf, 2002](#)).

## 4. Results

### 4.1. Research questions 1

Research question 1 explores framing by the Malaysian government including Malaysia Airlines. First, as far as the crisis types, only three were identified among the twelve crisis types: unknown ( $n = 74$ , 94.9%), malevolence ( $n = 3$ , 3.8%), and

**Table 1**  
Crisis Frames by Media.

Media	Attribution of Responsibility, n(%)	Conflict, n(%)	Economic Consequence, n(%)	Human Interest, n(%)	Morality, n(%)
<i>NST</i>	97(62.6)	21(13.5)	3(1.9)	19(12.3)	15(9.7)
<i>China Daily</i>	67(72.0)	5(5.4)	6(6.5)	14(15.1)	1(1.1)

\* $\chi^2(4) = 14.76, p < 0.01$ .**Table 2**  
Role of Social Evaluation of Risk by Media.

Media	Risk Bearers, n(%)	Risk Advocates, n(%)	Risk Generators, n(%)	Risk Researchers, n(%)	Risk Arbiters, n(%)	Risk Informers, n(%)
<i>NST</i>	5(3.2)	37(23.9)	6(3.9)	10(6.5)	63(40.6)	34(21.9)
<i>China Daily</i>	8(8.6)	9(9.7)	4(4.3)	8(8.6)	40(43.0)	24(25.8)

\* $\chi^2(5) = 11.17, p < 0.05$ .

rumors ( $n = 1, 1.3\%$ ). Similarly, the majority of crisis type among the three crisis types was unknown intentionality ( $n = 75, 96.2\%$ ), followed by intentional ( $n = 3, 3.8\%$ ). Next, the five crisis frames were examined. The results showed that attribution of responsibility was the dominant frame used by the Malaysian government ( $n = 59, 75.6\%$ ), followed by human interest ( $n = 13, 16.7\%$ ), conflict ( $n = 4, 5.1\%$ ), economic consequence ( $n = 1, 1.3\%$ ), and morality ( $n = 1, 1.3\%$ ). Lastly, the most prominent social evaluation of risk was risk arbiters ( $n = 44, 56.4\%$ ), and other roles were similar in terms of their frequencies: risk generator ( $n = 8, 10.3\%$ ), risk advocates ( $n = 7, 9.0\%$ ), risk researchers ( $n = 7, 9.0\%$ ), risk informers ( $n = 7, 9.0\%$ ), and risk bearers ( $n = 5, 6.4\%$ ).

#### 4.2. Hypothesis 1

Hypothesis 1 tests whether two different Malaysian and Chinese media framed the crisis differently. First, there was no difference in crisis types in two media: twelve crisis types,  $\chi^2(4) = 5.04, p = 0.283$ ; three crisis types,  $\chi^2(4) = 2.48, p = 0.289$ . For both media, unknown crisis type was the most prominent crisis type (*New Straits Times*:  $n = 139, 89.7\%$ ; *China Daily*:  $n = 88, 94.6\%$ ). However, the two media used different crisis frames,  $\chi^2(4) = 14.76, p < 0.01$ . As shown in Table 1, the order of frequency for *New Straits Times* was attribution of responsibility ( $n = 97, 62.6\%$ ), conflict ( $n = 21, 13.5\%$ ), human interest ( $n = 19, 12.3\%$ ), morality ( $n = 15, 9.7\%$ ), and economic consequences ( $n = 3, 1.9\%$ ) while *China Daily* used attribution of responsibility most frequently ( $n = 67, 72.0\%$ ), followed by human interest ( $n = 14, 15.1\%$ ), economic consequences ( $n = 6, 6.5\%$ ), conflict ( $n = 5, 5.4\%$ ), and morality ( $n = 1, 1.1\%$ ). Finally, the social evaluation of risk was similar to the five crisis frames in that the most frequently used role for both publishers was risk arbiters (*New Straits Times*:  $n = 63, 40.6\%$ ; *China Daily*:  $n = 40, 43.0\%$ ), but the overall difference among the two media was statistically significant,  $\chi^2(5) = 11.17, p < 0.05$  (see Table 2 for details).

#### 4.3. Research question 2

Research question 2 examines whether media frames changed in newspaper articles when different sources were used (i.e., a news article used an information subsidy as a source versus articles utilized other information sources). First of all, crisis types were analyzed and the majority of the articles were categorized as unknown crisis/intentionality type for both newspapers (*New Straits Times*,  $n = 139, 89.7\%$ ; *China Daily*,  $n = 88, 94.7\%$ ; for both crisis types) and there was no difference between them (twelve crisis types:  $\chi^2(4) = 5.04, p = 0.283$ ; three crisis types:  $\chi^2(2) = 2.48, p = 0.289$ ). However, the results of crisis frames analyses were different. First, the majority of *New Straits Times* articles that used information subsidies as a source used the attribution of responsibility frame (75.6%), followed by human interest (17.1%) and conflict (7.3%) frames. No articles about economic consequences and morality were identified. On the other hand, *New Straits Times* articles that utilized other sources framed the MH370 disappearance differently. Although attribution of responsibility (57.9%) was still the dominant frame, conflict (15.8%) was the second frame used, followed by morality (13.2%), human interest (10.5%), and economic consequences (2.6%). The difference between the two was significant,  $\chi^2(4) = 10.64, p < 0.05$ . For *China Daily*, articles that relied on information subsidies versus other sources showed a similar pattern: attribution responsibility (65.4% and 74.6%, respectively) and human interest (19.2% and 13.4%, respectively) were the most frequently used frames and there was no difference between the two types of newspapers articles,  $\chi^2(4) = 3.96, p = 0.412$  (see Table 3).

Finally, the role of social evaluation of risk was explored. For *New Straits Times*, there was a difference between articles that used an information subsidy as a source and that used other sources,  $\chi^2(5) = 11.11, p < 0.05$ . The order of roles in articles that cited an information subsidy was risk arbiters (48.8%), risk informers (26.8%), risk researchers (12.2%), risk advocates (9.8%), and risk generators (2.4%). The order in articles that cited other sources was risk arbiters (37.7%), risk advocates (28.9%), risk informers (20.2%), and other roles (4.4% each). However, *China Daily* articles showed a similar pattern,  $\chi^2(5) = 8.68, p = 0.123$  (Table 4).

**Table 3**  
Crisis Frames by Source.

Source	Attribution of Responsibility, n(%)	Conflict, n(%)	Economic Consequence, n(%)	Human Interest, n(%)	Morality, n(%)
<i>NST</i>	$\chi^2(4) = 10.64, p < 0.01$				
Info. subsidy	31(75.6)	3(7.3)	0(0)	7(17.1)	0(0)
Other	66(57.9)	18(15.8)	3(2.6)	12(10.5)	15(13.2)
<i>China Daily</i>	$\chi^2(4) = 3.96, p = 0.412$				
Info. subsidy	17(65.4)	3(11.5)	1(3.8)	5(19.2)	0(0)
Other	50(74.6)	2(3.0)	5(7.5)	9(13.4)	1(1.5)

**Table 4**  
Role of Social Evaluation of Risk by Source.

Source	Risk Bearers, n(%)	Risk Advocates, n(%)	Risk Generators, n(%)	Risk Researchers, n(%)	Risk Arbiters, n(%)	Risk Informers, n(%)
<i>NST</i>	$\chi^2(5) = 11.11, p < 0.05$					
Info. subsidy	0(0)	4(9.8)	1(2.4)	5(12.2)	20(48.8)	11(26.8)
Other	5(4.4)	33(28.9)	5(4.4)	5(4.4)	43(37.7)	23(20.2)
<i>China Daily</i>	$\chi^2(5) = 8.68, p = 0.123$					
Info. subsidy	0(0)	3(11.5)	3(11.5)	2(7.7)	13(50.0)	5(19.2)
Other	8(11.9)	6(9.0)	1(1.5)	6(9.0)	27(40.3)	19(28.4)

## 5. Discussion

While the primacy of information subsidies to disseminate organizational messages in times of crises and the influence of information subsidies on media frames are widely accepted (Curtin, 1999; Dier & Donohue, 2013; Harlow et al., 2011; Kim & Kiouisis, 2012; Schultz et al., 2012; Turk & Franklin, 1987), there is little scholarship directly analyzing the impact of information subsidies produced by a government during a crisis with a mysterious cause on news media in multiple countries affected by the crisis. By measuring and tracing the frames in information subsidies produced by the Malaysian government to the frames in Malaysian and Chinese newspaper articles about the MH370 disappearance, this study investigates how a government frames an international crisis without a known cause and how media use information subsidies in news coverage about a mysterious crisis. The findings and relevant discussion are important for two key reasons. First, the current research suggests that crises with unknown cause could be the 12th crisis type in Coombs's (2015) SCCT. Second, by adding an unknown crisis cause to SCCT crisis type typology based on framing research, it appropriately fits into the initial of two proposed steps of SCCT: "to determine the frame stakeholders are using to categorize the process (Coombs, 2010).

### 5.1. Information subsidies frames

Research question 1 focused on how the Malaysian government (including Malaysia Airlines) framed the MH370 disappearance via its information subsidies. The results showed that the government did not specify the crisis type of the MH370 disappearance. That is, the government took an objective stance as limited clue of the cause of the accident has been found. However, when it comes to specific frames, the Malaysian government highlighted its efforts to find the cause (and clue) of the accident by frequently using the attribution of responsibility frame (75.6%) in its information subsidies. It is important to note that attribution of responsibility offers causes of or potential solutions for the crisis (e.g., finding the crashed plane and black box) and the later element is the most prominent attribution of responsibility frame. Considering that stressing organization's searching endeavors for a cause of crisis have positive effects on public perception (Seeger & Ulmer, 2002), the use of attribution of responsibility frame in Malaysian government information subsidies can be considered as an appropriate strategy. The finding of potential solutions as an important part of attribution of responsibility supports and refines four of Coombs (2010) ten overviews of the major recommendations offered by SCCT: care response. From this investigation, care response can potentially be understood as to include organizations' efforts to determine direct attribution of responsibility as to the cause of unknown crisis events. In addition, the government emotionally responded to the crisis by utilizing the human-interest frame (16.7%). For example, emotional expressions such as 'We are deeply saddened with the news on MH370' and "Our thoughts and prayers are with all passengers, our crew and their family members" were frequently included in the information subsidies. As the human interest frame can positively influence individuals' emotional response (Cho & Gower, 2006), expressing condolence in information subsidies was desirable in MH370 crisis.

One of the most important roles of a government is protecting its citizens (Norris, 1999). For this reason, people often expect a high level of caregiving from their government especially in large-scale crisis situations such as public health crisis (Lee, 2009). Palmlund's (2010) work suggests that government and government agencies' roles are typically as a risk arbiter. According to the results, in more than a half of information subsidies (56.4%), the government was identified as a risk arbiter (the character in the risk narratives who take actions to save the risk bearers from present or future risks), confirming Palmlund's generic roles in societal evaluations of risk even when the cause of the risk/crisis event is unknown.

The Malaysian government's role of societal evaluation of risk could also have been as a risk advocate (the heroic protagonists who speak on behalf of the risk bearers), though results show that the government played a risk advocate role

in less than ten percent of information subsidies (9.0%). This could be because the government's ownership of the airline. In other words, the government might not be able to play a more active role as a heroic protagonist (risk advocate) as it was directly involved in the disappearance of MH370 by its ownership of the airline. In addition, while no attribution of responsibility in terms of the cause of the crash was determined, that uncertainty, according to Palenchar (2008), limits the ability of governments and government agencies, such as the Malaysian government in this case, to act as a risk advocate for its citizens.

### 5.2. National interests and frames

Research question 2 focused on how the Malaysian and Chinese newspapers framed the MH370 disappearance. According to the results, two media framed the crisis differently. For example, although both media's dominant frame was the attribution of responsibility in regard to potential solutions for the crisis, *New Straits Times* focused more on conflict (13.5%) and moral issues (9.3%) while *China Daily* focused more on human interest (15.1%) and economic consequence (6.5%). Also, although both media's main role was a risk arbiter, *New Straits Times* highlighted its role as a risk advocate (23.9%) while *China Daily* often described itself as a risk informer (25.8%).

In sum, *New Straits Times* framed the crisis for the sake of the Malaysian people and government by advocating for the casualties and mentioning possible solutions for conflicts; on the other hand, *China Daily* was framing the crisis from the Chinese perspective by reporting the stories of Chinese casualties and their families and delivering information that could maximize the next of kin for Chinese casualties. These results support the argument of previous studies: media from different countries report the same event differently because media coverage is partially determined by the media system in the country in which the media is located (de Vreese et al., 2001; Schultz et al., 2012; Valentini & Romenti, 2011).

*New Straits Times* functioned as domestic media in the context of the MH370 disappearance. Controlled through legislation and licensure, Malaysian media are expected to reflect government positions and are censored more than media in most democracies (Abbott & Givens, 2015; Freitag & Stokes, 2009). Though not state-owned, *New Straits Times* is pro-government and nationalistic (Abbott & Givens, 2015; Sani, 2005). Similarly, *China Daily* was originally founded by the Chinese government to expose an international English readership to information about China (Luther & Zhou, 2005). Because *China Daily* is a state-owned extension of the government, *China Daily* articles are considered to represent information about China as the government expects it to be represented to the international community (Ostini & Fung, 2002). Not surprisingly, *China Daily* focused almost entirely on the activities of the Chinese government in relation to the MH370 disappearance. For example, *China Daily* articles emphasize the use of Chinese satellites and Chinese naval vessels to solve the MH370 mystery and portray Chinese government officials as advocates for Chinese citizens affected by the crisis.

### 5.3. Information source and frames

Research question 2 examines whether media frames changed in newspaper articles according to information sources. The results indicate that framing efforts of *New Straits Times* (e.g., five crisis frames and the social evaluation of risk) were different as the sources of information differed while *China Daily's* framing efforts remained the same regardless of the information source. For example, for five crisis frames, the most frequent framing of *New Straits Times* was attribution of responsibility (75.6%) followed by human interest (17.1%) and conflict (7.3%) when it used information subsidies as a source (no morality and economic consequence). However, the order of frames changed when *New Straits Times* used other sources: attribution of responsibility (57.9%) followed by conflict (15.8%), morality (13.2%), human interest (10.5%), and economic consequence (2.6%).

Theoretically, the information subsidies published by the Malaysian government and the articles published by the domestic newspaper both represent the official government position about the MH370 crisis as the medium is censored and controlled by the government (Abbott & Givens, 2015; Freitag & Stokes, 2009). However, *New Straits Times* did not always emphasize the same aspects of the crisis. Although the medium's frames were almost identical to the government's frames when it used information subsidies as source, in articles that utilized non-government sources, the frames of the newspaper were different from the government's frames. This could be because, the medium wanted to maintain its objectivity as a news medium; therefore, the newspaper focused on solving social issues (e.g., conflicts and lack of morality). Interestingly, there was no influence of information source on the frames of *China Daily*. That is, the medium maintained the same stance regardless of information source. This may be because *China Daily* is a government owned medium and so factors other than the Chinese government are not as critical. Thus, the results herein suggest that the government (in this study the Malaysian government) is an important source and/or influencer for national media (in this study *New Straits Times*) but is just one of different sources for international media (in this study *China Daily*).

### 5.4. Limitations and future research

The Chinese government, families of MH370 passengers, and international media reports criticized the Malaysian government for lack of leadership, transparency, and promptness as well for the dissemination of misinformation without reliable sources when handling the MH370 disappearance (Branigan, 2014; Pearson, 2014; Shankar, 2014). Since the MH370 crisis, Malaysia Airlines flight MH17, AirAsia flight QZ8501, and Germanwings flight 9525 have crashed with various known causes.



Considering the complex relationship between public relations practitioners and journalists and, thus, between information subsidies and news media, future studies should investigate the influence of information subsidies on media frames about other airline crises as well as examine other government or hybrid crises without a known cause.

Another prime area for future research is to address two aspects of attribution within a crisis that are intertwined. First, the inclusion of an unknown crisis type to our typologies and models and theories is needed (e.g., SCCT), and second, with unknown attribution of cause there still remains attribution of crisis response for the organizations that are deemed to be responsible for their products and services, regardless of whether the cause of the crisis is ever determined.

This study about the MH370 disappearance is not without weaknesses. The content analysis of Malaysian information subsidies and Malaysian and Chinese newspapers focuses on framing in news production. It does not address media effects theories, including the influence of MH370 coverage on various audiences. Moreover, this study does not include surveys or interviews with public relations practitioners about their decisions in producing information subsidies or surveys or interviews with journalists about their uses of information subsidies in producing news articles. These were not the intent of the study. Rather, this study focused on a content analysis of Malaysian government information subsidies and *New Straits Times* and *China Daily* newspaper articles due to the unique situation of unknown attribution of cause within a crisis. This is just the first step into such research, and more research about crisis types is necessary. Nevertheless, this study furthers a scholarly understanding of how a government (through its own direct information subsidies and indirect information subsidies released by a government-owned airline) frames a crisis without a known cause while holding responsibility for post-crisis behaviors and how such frames influence domestic and foreign media coverage.

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