

This is the authors' final version of an article published in Journal of Destination Marketing & Management

The original publication is available at: DOI: 10.1016/j.jdmm.2019.03.002

## **Journal of Destination Marketing & Management**

Research Paper: **How do destinations use twitter to recover their images after a terrorist attack?**

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### **Abstract**

The purpose of this paper is to investigate how the Destination Marketing Organizations (DMOs) of Barcelona and Cambrils communicated information about the terrorist attacks they suffered and what they have done to recover their image. The authors examine the tweets posted on the Barcelona and Cambrils profiles following a content analysis method focusing on three categories of analysis of the communication of information about: 1) the terrorist attacks, 2) the actions by the DMOs to manage them, and especially 3) the tourism-related decisions that were taken in order to recover the image of the destinations. The results reveal that to a great extent the destinations focused their communication efforts on managing the attack and to a lesser extent on messages to promote tourism in the region as a way to recover their image.

**Keywords:** Terrorist attacks; Terrorism; Destination image; Crisis communication; Crisis management; Twitter.

PLEASE CITE THIS ARTICLE AS:

Oliveira, A., & Huertas-Roig, A. (2019). How do destinations use twitter to recover their images after a terrorist attack?. *Journal of Destination Marketing & Management*, 12, 46-54. DOI: 10.1016/j.jdmm.2019.03.002

# **How do destinations use Twitter to recover their images after a terrorist attack?**

## **1. Introduction**

Today, the image of tourist destinations is a fundamental asset for territories trying to attract tourists and wealth. To achieve this, tourist destinations manage their communications strategically to successfully convey their identity and brand and to generate a positive image in their targeted audience (Morgan & Pritchard, 2004). Destinations seek to distinguish themselves through their own identities and personalities (Govers, Go, & Kumar, 2007) and through emotional attributes and values (Huertas & Marine-Roig, 2016; Morgan, Pritchard, & Piggott, 2003) that provide them with a good image, enhance their attractiveness, and generate greater tourist demand (Morgan, Pritchard, & Piggott, 2003).

The image of destinations has been widely studied by tourism academics for decades (Li, Ali, & Kim, 2015) and continues to be (Marine-Roig, 2017). From the 1970s to the present day, studies have shown that the image of destinations has a decisive influence on tourists' choices (Baloglu & McCleary, 1999; Chen & Tsai, 2007; Goodrich, 1978; Hunt, 1975; Lee & Gretzel, 2012; Nadeau, Heslop, O'Reilly, & Luk, 2008). Individuals who have formed a positive image of a destination are far more likely to consider visiting it (Lee & Gretzel, 2012).

Despite destination image being a key factor for predicting tourist behaviour and attracting visitors (Baloglu, Henthorne, & Sahin, 2014), it is a delicate factor that can be damaged as a result of a crisis (Scott, Laws, & Prideaux, 2008). Certain external factors such as political instability, natural disasters, and terrorists attacks cannot be controlled by the DMOs and have negative effects on destinations' images (Sönmez, Apostolopoulos, & Tarlow, 1999).

Studies on terrorism have shown that terrorist attacks have a major negative influence on tourism demand (Araña & León, 2008; Floyd, Gibson, Pennington-Gray, & Thapa, 2004; Kozak, Crotts, & Law, 2007; Quintal, Lee, & Soutar, 2010) and on the image of a destination (Beirman, 2003; 2014; Ritchie, 2004; Sönmez, Apostolopoulos, & Tarlow, 1999). Although terrorist attacks affect the image of destinations and completely escape the control of the DMOs, the latter can take relevant actions to minimize the impact so that destinations can recover their image more quickly by managing communication regarding the attacks effectively and implementing subsequent actions to improve their images (Ulmer, Seeger, & Sellnow, 2007; Ulmer & Sellnow, 2002). Consequently, during a crisis, communications about a destination through its DMOs is an important factor in the recovery of its image (Govers, Go, & Kumar, 2007). However, if few studies focus on how terrorism affects the image of destinations, even fewer analyse how the DMOs manage their communication to recover their image in the wake of an attack (Avraham, 2015; Ketter, 2016).

Some studies have analysed the communication strategies used by destination marketers to restore a positive image after political and social uprisings (Avraham, 2015), and others have analysed crisis communication and destination image recovery after natural disasters (Ketter, 2016), but there are no studies concerning crisis communication by DMOs following terrorist attacks. Some papers have dealt with crisis communication by airlines (Downing, 2004; Greer & Moreland, 2003) and by local public administrations with their citizens (Crijns, Cauberghe, & Hudders, 2017; Guo, 2017) after terrorist attacks, but none have dealt with communication by DMOs with their tourists from the perspective of tourism. Thus, the importance of the study lies in the novelty of the object of the research and its approach.

Moreover, given the importance of destination image when choosing to visit (Chen & Tsai, 2007; Morgan, Pritchard, & Piggott, 2003; Nadeau, Heslop, O'Reilly, & Luk, 2008), DMOs must carry out strategic crisis communication after a terrorist attack. The terrorist attacks of 17 and 18 August 2017 in Barcelona and Cambrils affected the image of the two destinations both because they are important Mediterranean tourist destinations and because many victims of the attacks were tourists. Hence, the aim of this paper and one of its main contributions is to investigate how the DMOs of Cambrils and Barcelona managed communication via their official Twitter platforms after the attacks in order to examine the communications strategies they employed to recover their image.

Another contribution of the study is the creation of an analysis template that may be useful for DMOs in analysing post-crisis communication strategies to recover their destination image after terrorist attacks. Thus, the template can be generalized and might serve for the evaluation and management of communications by destinations that suffer terrorist attacks in the future.

## **2. Theoretical framework**

### **2.1. The impact of terrorism on tourism and the image of destinations**

Academic studies on terrorism and its impact on tourism have discussed the influence of attacks on tourism demand at length (Araña & León, 2008; Pizam, 1999). Tourism demand is highly sensitive to terrorism and violence (Richter & Waugh, 1986; Ryan, 1993), and destinations are only visited when, in the minds of the public, they do not pose any risk, whether or not the risk is terrorism-related (Fuchs & Reichel, 2011). It has been shown that even when there is only the slightest risk, potential tourists change destinations (Araña & León, 2008; Rittichainuwat & Chakraborty, 2009). For this reason, terrorism has become a major concern for tourist destinations (Ryan, 1993).

Although most academic studies have focused on demonstrating the impact of terrorism on the decline of tourism demand (Araña & Leon, 2008; Liu & Pratt, 2017; Pizam, 1999; Pizam & Fleischer, 2002), it should be noted that few analyse the impact of the perceived risk on destination image creation (Chew & Jahari, 2014). Given that the image of destinations is crucial to generating greater tourism attraction and demand (Chen & Tsai,

2007; Morgan, Pritchard, & Piggott, 2003; Nadeau, Heslop, O'Reilly, & Luk, 2008), it is surprising that few studies have yet addressed this issue (Sönmez, Apostolopoulos, & Tarlow, 1999). However, some studies do deal with the impact of safety and security issues concerning how users form an image of a destination (Tasci, Gartner, & Cavusgil, 2007) and make their travel decisions and choices (Kim, Hallab, & Kim, 2012).

From a marketing perspective, Sönmez, Apostolopoulos, and Tarlow, (1999) were among the first authors to analyse the impact of terrorism on the image of tourist destinations. They asserted that sporadic terrorist acts influence tourism demand and the image of destinations while they are fresh in the minds of the public. By contrast, persistent terrorism affects destinations most, as it ends up creating an image of insecurity and little attraction (Avraham & Ketter, 2013). Terrorist attacks pose crises for the image of destinations (Ketter, 2016) and highlight the DMOs' great responsibility to manage such incidents.

The time between a terrorist attack and a return to normality, with all the negative publicity that is generated, is a period of crisis for the tourist destination whose image is tarnished (Sönmez, Apostolopoulos, & Tarlow, 1999). These authors acknowledge the need for recovery marketing or integrated marketing in the management of the crisis in order to recover the image of the destination. Their study presents exemplary cases of destinations that recovered their image through communicative action after suffering attacks and recommends that destinations should implement a crisis plan, a crisis committee composed of communications experts and public relations officers—among others—and a crisis management manual.

Many authors (Avraham, 2015; Avraham & Ketter, 2008; Beirman, 2003; 2014; Ketter, 2016; Ritchie, 2004; Sönmez, Apostolopoulos, & Tarlow, 1999) consider acts of terrorism as crises for tourism and agree regarding the need for planning possible strategies to limit or reduce their negative effects and recover the image of destinations (Avraham, 2015; Ketter, 2016). Ritchie (2004) proposed a crisis management model consisting of three stages: before, during, and after the crisis. He stressed the importance of a good communication strategy for managing the crisis, which could reduce its impact. Avraham and Ketter (2008) created a multi-step model to analyse communication strategies for image recovery. Avraham (2015) analysed media strategies employed by marketers in Middle Eastern countries to restore a positive image during the Arab Spring uprisings. Finally, Ketter (2016) analysed the crisis communication and destination image recovery strategies of Nepal after the Gurkha earthquake.

Several studies have focused on destinations' image-recovery strategies during crises (Avraham, 2015; Avraham & Ketter, 2008; Ketter, 2016; Tarlow, 2005), but theories, conceptual frameworks, and models are still scarce in the field of crisis communication and destination image recovery (Avraham, 2015), especially after terrorist attacks. Their development is required both to generate a theoretical foundation and effective communication strategies that can prove useful for DMOs in managing crises caused by terrorism and to recover the image of destinations.

## **2.2. The importance of crisis communication and social media to recover the image of tourism destinations**

As can be seen in the existing literature on terrorist attacks and the image of tourism destinations, attacks create crises for tourist destinations, and the best way to preserve or recover the image of a destination is by managing the crisis (Ritchie, 2004; Sönmez, Apostolopoulos, & Tarlow, 1999). However, crises may be opportunities to recover destination image (Ulmer, Seeger, & Sellnow, 2007; Ulmer, Sellnow, & Seeger, 2015). According to Avraham (2015), three types of strategies are used by marketers to restore a positive destination image: source, message, and audience; and, according to Ketter (2016), five techniques are employed to recover destination image after a crisis: advertising, public relations, sales promotion, direct marketing, and digital marketing. Thus, communication is approached as the key tool required to recover the good image of destinations. Authors from the fields of communication and public relations (Fink, 2002) as well as from the field of tourism (Sönmez, Apostolopoulos, & Tarlow, 1999) recognize that crisis communication is crucial because a poorly managed terrorist attack can lead to a more serious, longer-lasting crisis for the destination. Many authors that deal with crisis communication agree that crises, despite their negative effects, create opportunities (Mitroff, 2005; Ulmer, Seeger, & Sellnow, 2007; Ulmer, Sellnow, & Seeger, 2015) and that, therefore, an image damaged by a terrorist attack can be recovered and even enhanced through good communications management.

According to Coombs (2007), effective crisis communication in the event of a terrorist attack requires first that information be given about what has happened and how the DMO has handled it, always seeking to protect the public and tourists, and second, more importantly, security decisions and subsequent actions to promote tourism must be communicated so as to recover the image harmed by the crisis. These contributions by Coombs (2007) have been taken into account in the analysis of crisis communication after a terrorist attack.

In addition to providing information, crisis communication must include a degree of emotional content (Liu, Austin, & Jin, 2011). To achieve this, the DMOs must inform the public of the events, but they must also provide moral support and arouse empathy and admiration through their communications and actions. Such strategies, which will help to recover the image of the destination, have also been taken into account in the framework of this analysis.

Technology and social media have brought about major changes in and have introduced notable advantages for crisis communication (Avraham, 2015; Kotler, Keller, Ancarani, & Costabile, 2014; Sigala, 2011; Zeng & Gerritsen, 2014). In fact, these improvements are widely used in communication (Wang & Zhuang, 2017) when terrorist attacks or other disasters occur. For some authors (Takahashi, Tandoc, & Carmichael, 2015), social media still play a complementary role to traditional media in the communication of crises because, depending on the issuer, the information can be more informal and less official.

However, nowadays, the extensive use of technology and social media in crisis communication has surpassed traditional media because they produce speedy results and broad-based public participation (Hays, Page, & Buahlis, 2013), and they also provide a more humane and emotional perspective on the experiences of users. Social media are considered reliable information sources (Ketter & Avraham, 2012). Avraham (2015) and Ketter (2016) indicate that social media are key communication platforms for DMOs to restore a positive image after a crisis in tourism. Moreover, tourists use social media to seek information in the event of a crisis while they are travelling (Pennington-Gray, London, Cahyanto, & Klages, 2011; Schroeder, Pennington-Gray, Donohoe, & Kiouisis, 2013).

Of all social media, Twitter has been the most used in crisis communication (Sreenivasan, Lee, & Goh, 2011; Wang & Zhuang, 2017). Its use is particularly effective in dynamic, uncertain, and extreme situations (Zhang, Yang, & Mao, 2011) like terrorist attacks. Twitter owes its great potential in crisis communication to its instant and accessible nature (Fowler, 2017). Twitter's speed can save a great deal of time at critical moments and can even save lives (Coombs, 2015). Twitter's main contributions to crisis communication include its user-friendliness, the high frequency of publications it allows, and the fact that it has links to other sites should more detailed information be needed (Greer & Ferguson, 2011). Another important factor is the real-time interaction it enables (Knight & Carpenter, 2012), which is especially effective in encouraging the participation of the public in the crises (Briones, Kuch, Liu, & Jin, 2011).

### **3.Methodology**

#### **3.1. Case study**

The terrorist attacks of August 2017 in Barcelona and Cambrils in Catalonia (Spain) affected the tourism sector especially because a great number of victims were tourists. The attacks began on 17 August 2017 when at 5:00 pm a van ran over a large number of people in Las Ramblas, Barcelona, in front of the Boquería market, two of the destination's most visited attractions. In all, 17 people died and 131 were injured.

Nine hours after the Barcelona attack, at 1:15 pm on 18 August, five men thought to be members of the same terrorist cell drove into pedestrians in nearby Cambrils, killing one woman and injuring six other people. All five attackers were shot and killed by police (The Guardian, International Edition, 2017). Responsibility for both attacks was claimed by the Islamic State. The attacks struck fear in tourists and residents in Barcelona and Cambrils and shocked people around the world. They were the worst terrorist attacks in Spain since March 2004, when 192 people were killed and nearly 2,000 injured in a coordinated series of bombings on the Madrid rail system (*The Washington Post*, 2017).

Barcelona is the capital of Catalonia and has been a leading tourist destination since the 1992 Olympic Games (Marine-Roig & Anton Clavé, 2015). Its image is at the top of the rankings of world tourist destinations (Datzira-Masip & Poluzzi, 2014). More than 15

million tourists visited Barcelona in 2017. During the last quarter of the year, overnight stays in Barcelona increased by 4%, mainly accounted for by foreign tourists. The number of cruise ship passengers, which exceeded two million in 2017, has also continued to increase during 2018 (La Vanguardia, 2018). In contrast, Cambrils is a small fishing village and one of the main tourist destinations on the Costa Dorada, which is notable for its food and beaches. Thus, given the importance to tourism of the two destinations, the impact of the attacks was especially significant.

### **3.2. Aim of the study and research questions**

This study does not intend to demonstrate the importance of crisis communication to recover the image of destinations—as this has already been widely demonstrated (Avraham, 2015; Ritchie, 2004; Sönmez, Apostolopoulos, & Tarlow, 1999)—nor does it explore whether the DMOs studied succeeded in recovering their image after the attacks. The aim of this paper is rather to analyse post-crisis communication to investigate how the DMOs of Cambrils and Barcelona managed their communication via their official Twitter platforms in the wake of the attacks of August 2017 and thus ascertain what they communicated in order to recover their image. This study seeks to look in greater depth into crisis communication through Twitter and provide knowledge and recommendations to DMOs that suffer terrorist attacks so that they may recover their image as quickly as possible.

The study was approached on the basis of three research questions:

RQ1: What are the main contents that Barcelona Turisme and Cambrils Turisme published to manage the attacks?

RQ2: What is the origin of the messages that Barcelona Turisme and Cambrils Turisme published on their Twitter platforms during the attacks?

RQ3: What kind of reaction was generated among the public as a result of the messages posted by Barcelona Turisme and Cambrils Turisme following the attacks?

### **3.3. Template and content analysis**

To answer these questions, a content analysis was performed, through the creation of an analysis template, of the tweets published by the two DMOs during the month following the terrorist attacks. Both the tweets by these organizations intended for all users and the retweets made from other accounts were analysed.

To do so, we retrieved all of the tweets published using the advanced search on Twitter of the accounts @BarcelonaInfoEN and @CambrilsTurisme, filtering the results by date of publication (Barcelona from 17 August to 17 September and Cambrils from 18 August to 18 September). Our analysis focused on the first month following the attack for three reasons. The first is that the management of and the response to a crisis must be rapid.

According to Coombs (1998) and Ulmer, Seeger, and Sellnow (2007), in crisis communication, reaction speed is a key factor for its success. The second is that in our analysis we find that the two DMOs published more tweets during the first two weeks after the attacks (more than 75% of the tweets published by both DMOs) than during the third and fourth weeks. The third is that, a month after a terrorist attack, the real-time interaction and the instant nature of Twitter (Briones, Kuch, Liu, & Jin, 2011; Fowler, 2017) is not as powerful as at the time of an attack. A total of 139 tweets were obtained, 72 by Barcelona Turisme and 67 by Cambrils Turisme.

The different languages of the Twitter accounts were taken into account for the analysis. Barcelona Turisme has two Twitter accounts, one in English and one in Spanish, and it was decided to analyse the account in English, although both contained virtually the same tweets. Cambrils Turisme, however, only has an account in Catalan, which was the one analysed.

The content analysis template was designed on the basis of previous research and studies dealing with crisis management on Twitter as well as crisis management more generally speaking (Avraham & Ketter, 2008; Coombs, 2007; Fowler, 2017; Freberg, Palenchar & Veil, 2013; Liu, Austin, & Jin, 2011; Ulmer, Seeger, & Sellnow, 2007; Wang & Zhuang, 2017), adapting it to the special peculiarities and characteristics of terrorist attacks on tourist destinations and giving particular importance to the information that a destination has to communicate so that its image is affected as little as possible and will recover quickly.

Although Coombs' (2007) Situational Crisis Communication Theory is very useful for dealing with crises in organizations and companies, the variables (initial crisis responsibility, the crisis history, and the prior relational reputation) cannot be applied easily to crises due to terrorist attacks in tourist destinations (Avraham, 2015; Ketter, 2016). Tourist destinations are not companies but more complex entities with different publics. Moreover, the crises that occur in organizations are very different from the ones in destinations after a terrorist attack. For this reason, these variables could not be used in the analysis template. In this regard, and to answer RQ1, the structure of the analysis template followed Coombs' (2007) basic theory for crisis communication with two main categories: 1) to communicate what had happened and protect the stakeholders, and 2) to communicate strategically in order to recover the destination's image and reputation. Each of these categories was divided into two subcategories and various items for analysis.

The first category sought to analyse whether the communication of the attack and its handling were carried out effectively. This category included the subcategories: 1.1) information on what had happened and 1.2) information on the handling of the attack and protection for the stakeholders. Other authors (Liu, Austin, & Jin, 2011) have also highlighted the importance of emotional content and moral support for stakeholders in the recovery of destination image. The subcategory dealing with information about what had happened contained information about the attack and a description of the events and included such items as: what happened, when, where, and why. The subcategory dealing

with stakeholder protection included information on the actions and solutions that were put in place to manage the attack and included items such as: condemnation of the attack, assistance to tourists, information on safety and security, stopping rumours, and so on.

However, the second category, dealing with the strategic management of communication to recover the image of the destination, sought to examine whether the destination later carried out effective communication to reduce negative effects as much as possible and recover quickly. Many authors have highlighted the importance of specific variables and models in the recovery of destinations' image (Avraham, 2015; Avraham & Ketter, 2008; Ketter, 2016; Tarlow, 2005; Ulmer, Seeger, & Sellnow, 2007). From these studies, two important subcategories have been adopted for the analysis template: 2.1) actions regarding the safety and security of tourists in the future (Avraham & Ketter, 2008; Coombs, 2007) and 2.2) actions regarding the promotion of tourism and a discourse of renewal (Ulmer, Seeger, & Sellnow, 2007). The subcategory of actions regarding safety and security after the attack seeks to examine whether the destinations adopted appropriate policies and informed the public of their actions so that tourists would perceive them as being safe to visit, and it included items such as the creation of security measures in public and tourist spaces (bollards, alarms, cameras); the creation of apps, social media platforms, and web spaces offering information on public safety; the publication of regulations, advice, and guidelines on how to behave in the event of attacks; and so on. However, the subcategory of post-attack tourism promotion seeks to analyse communicative actions and the subsequent promotion of tourism by the destination in order to strengthen its image and that of its main tourist attractions and includes items such as information on exhibitions, concerts, and events at the destination; renovations and inaugurations of new tourist attractions; the creation of new materials to promote tourism at the destination; and the creation of new apps, among others.

Table 1 shows each of the items that were created to measure the categories and subcategories of content analysis.

Table 1. Content analysis template

<b>Categories of analysis</b>	<b>Subcategories</b>	<b>Items</b>
1) Information on what had happened and on protection for stakeholders.	1.1) Information about the attack (What happened?)	Description of the events (What? When? Where? Why?), identification of the perpetrator(s), number of injured, number of dead
	1.2) Information on the management of the attack and the protection of the stakeholders (What is being done?)	Solutions (capture or death of the perpetrator(s) of the attack), stop rumours, co-management of the crisis, attending to affected tourists or family members, solidarity with the victims or relatives and condemnation of the attack, provide useful information for tourists regarding safety (avoid the affected area, the locations of police roadblocks, road closures in certain areas, etc.), provide up-to-date information on the management of the attack (update information on the actions being carried out to manage the crisis), Acknowledgements.

Strategic management of communication to restore image and reputation.	2.1) Information on tourists' safety following the attack (How has the issue of tourists' safety been dealt with following the attack?)	Creation of safety/security measures in public and tourist spaces (bollards, alarms, cameras...), the creation of apps, social media platforms or websites containing information on public safety, the publication of regulations, advice, guidelines on how to act in the event of a terrorist attack, violence, crises, increased presence of the security forces.
	2.2) Information on tourism promotion following the attack (How has tourism been managed following the attack?)	Show the tourist attractions and spaces at the destination, information on exhibitions, concerts and events at the destination, renovations and inaugurations of new tourist attractions, the creation of new materials to promote tourism at the destination and the creation of new apps or platforms or social media applications for the dissemination of tourism, the creation of new tourism products and services, the creation and diffusion of souvenirs, attendance at tourism trade fairs, the creation of tourism workshops, fam trips for tourism bloggers, youtubers or instagrammers, tourists' experience.
<b>Origin</b>	Tweet (Does it allude to another user / official user) Retweet (Who?)	
<b>Support for the message</b>	Number of message 'likes'	
<b>Message dissemination</b>	Number of message retweets	

To answer RQ2, the analysis template considered the source of the message, distinguishing DMOs' own tweets from the retweets of other organizations. This is necessary in order to examine the involvement of the DMOs analysed in reporting the attack to the tourists, their level of communicative activity, and their subsequent reactions to recover the image of the destination.

Finally, to answer RQ3, the template sought to examine users' reactions to the tweets analysed by measuring the 'likes' achieved, which gauged the support for the tweet, and the number of times the tweet was shared, gauging its dissemination. In addition, the reactions show the success of the communication, which results in a better image and greater tourist demand (Usakli, Koç, & Sönmez, 2017).

A content analysis of the 139 tweets selected through this template was performed manually by one of the project researchers during the months of November and December 2017.

#### 4. Results

#### 4.1. Typology and content of messages published

If, in response to RQ1, we look at the contents grouped into the categories and subcategories of analysis, the first thing that can be seen is that of all the responses obtained from the two DMOs during the month after the attacks, 103 (69.1%) correspond to information about the attacks and their management, whereas only 39 (26.2%) correspond to the subsequent communication to recover the image of the destinations. Although Ulmer, Seeger, and Sellnow (2007) and Ulmer, Sellnow, and Seeger (2015) recommend communication as a means of recovering destination image, it seems that the DMOs do not take full advantage of it in this respect.

Table 2. Content analysis according to the categories and subcategories of the analysis template

	General		Barcelona		Cambrils	
	Frequency	%	Frequency	%	Frequency	%
1.1.Terrorist attack	4	2.7%	3	3.9%	1	1.4%
1.2.Protection for the stakeholders	99	66.4%	50	64.9%	49	68.1%
2.1.Post-attack safety/security	0	0.0%	0	0.0%	0	0.0%
2.2.Post-attack tourism	39	26.2%	17	22.1%	22	30.6%
Other	7	4.7%	7	9.1%	0	0.0%
<b>Total</b>	149		77		72	

If we focus on the first category of communication analysis on the attacks, major differences can be seen between the two subcategories, since only four tweets in total (2.7%) report on the attacks, whereas 99 of the tweets (that is 66.4%, the majority group) report on the management of the attack and the actions carried out to protect the stakeholders. Thus, there is little information about what happened in the attacks, which is not suitable for the proper communication of crises because people want to be informed about what has happened (Coombs, 2007). However, sometimes when crises occur, organizations prefer not to report on the subject so as to not generate further negative publicity and to avoid being associated with the incident, despite this not being the most appropriate response.

On the other hand, information on the management of the attacks is plentiful and therefore suitable for the proper communication of crises since such information demonstrates the effectiveness of the DMO, its interest in and moral support for the victims, and its empathy with them. This kind of communication, as Liu, Austin, and Jin (2011) state, will generate stakeholders' empathy and their approval of the DMOs, thereby inducing a positive image.

The differences between Cambrils Turisme and Barcelona Turisme in this category and its subcategories are minimal, since Barcelona Turisme published only two tweets more than Cambrils Turisme with information about the attack and one more on the management of the attack and protection of the stakeholders. Hence, the results are practically identical.

With regard to subsequent information provided in order to recover the image of the destination, it seems surprising that neither of the DMOs published any tweets about the security measures taken after the attacks to convey safety to tourists. These measures would help to recover a feeling of security and safety at the destinations, as Ulmer, Seeger, and Sellnow (2007) stated. However, only 39 tweets in all (26.2%) communicate the subsequent promotion of tourism. This percentage is not low, although a higher percentage would be advisable since it is the key communicative element for tourist destinations to recover their image following a crisis. The percentage of these tweets is higher in Cambrils Turisme (30.6%) than in Barcelona Turisme (22.1%), though the difference is minimal.

It should be noted that the ‘other’ option in the table, which represents 4.7% of cases, includes tweets concerning a variety of different issues that could not be allocated to any subcategory, such as information about the daily life of a hotel concierge, the appointment of the new secretary of the World Tourism Organization, and news about fair trade in Barcelona. These tweets were published by Barcelona Turisme only. Table 3 shows the issues dealt with in the tweets of the four subcategories of analysis.

Table 3. Content analysis of the published tweets

	General		Barcelona		Cambrils	
	Frequency	%	Frequency	%	Frequency	%
<b>1.1) Comm. of what had happened</b>	<b>4</b>		<b>3</b>		<b>1</b>	
Description of the events	4	100.0%	3	100.0%	1	100.0%
Identification of the perpetrator(s)	0	0.0%	0	0.0%	0	0.0%
Number of injured/wounded	0	0.0%	0	0.0%	0	0.0%
Number of deaths	0	0.0%	0	0.0%	0	0.0%
<b>1.2) Comm. of management and protection to stakeholders</b>	<b>99</b>		<b>50</b>		<b>49</b>	
Solidarity /condemnation	44	44.4%	7	14.0%	37	75.5%
Updated info on the attack	43	43.4%	27	54.0%	16	32.7%
Useful post-attack info	20	20.2%	13	27.7%	7	14.3%
Assistance to those affected	18	18.2%	18	36.0%	0	0.0%
Co-management of the crisis	5	5.1%	5	10.0%	0	0.0%
Acknowledgements	4	4.0%	4	8.0%	0	0.0%
Other	4	4.0%	2	4.0%	2	4.1%
Solutions	1	1.0%	1	2.0%	0	0.0%
Curb rumours	0	0.0%	0	0.0%	0	0.0%
<b>2.1) Communication of tourists' safety</b>	<b>0</b>		<b>0</b>		<b>0</b>	
Security measures	0	0.0%	0	0.0%	0	0.0%
Digital security measures	0	0.0%	0	0.0%	0	0.0%
Regulations and guidelines on how to act	0	0.0%	00	0.0%	0	0.0%
Presence of security forces	0	0.0%	0	0.0%	0	0.0%
<b>2.2) Communication and tourism promotion</b>	<b>39</b>		<b>17</b>		<b>22</b>	

Tourist attractions and spaces	27	69.2%	9	52.9%	18	81.8%
Events at the destination	12	30.8%	2	11.8%	10	45.5%
Tourism experiences	5	12.8%	1	5.9%	4	18.2%
New actions	2	5.1%	1	5.9%	1	4.5%
Other	2	5.1%	2	11.8%	0	0.0%
Apps to disseminate tourism	1	2.6%	1	5.9%	0	0.0%
New tourism products and services	1	2.6%	1	5.9%	0	0.0%
Souvenirs	0	0.0%	0	0.0%	0	0.0%
Attendance at fairs	0	0.0%	0	0.0%	0	0.0%
Tourism workshops	0	0.0%	0	0.0%	0	0.0%
Tourism promotional material	0	0.0%	0	0.0%	0	0.0%
Tourism influencers	0	0.0%	0	0.0%	0	0.0%

If we look at the contents of the tweets in the first subcategory of information on the attacks, they focused solely on the description of what had happened. At first, Barcelona Turisme reported that an incident had occurred in the centre of Barcelona, only later confirming that it had been a terrorist attack. For its part, Cambrils Turisme, in the only tweet it published about what had happened, reported that the explosives on belts worn by the terrorists were fake. On neither of the two platforms were messages found referring to the number of injured, the number of deaths, or the identification of the person(s) responsible for the attacks. Thus, it can be stated that the information on what had taken place is scarce and incomplete. It seems that the two DMOs, rather than informing in depth about the terrorist attacks, avoided reporting on them and minimized their gravity. However, for the proper communication of crises, maximum information about an attack is recommended.

With regard to the contents of the tweets in the second subcategory of information aimed at protecting the stakeholders, two stand out: the ones that deal with solidarity with the victims or relatives and condemn the attack (representing 44.4% of the tweets) and the ones that deal with updated information on the actions that the various agencies, such as the City Council ('Ajuntament'), the regional police ('Mossos'), and the emergency services (called '112') were carrying out to deal with the attacks (43.4% of messages). Some examples are:

@BarcelonaInfoEN retweeted @bcnajuntament Aug. 20 2017: We are opening a book of condolence online for victims of the Las Ramblas attack in Barcelona.

@CambrilsTurisme retweeted @ajcambrils Aug. 18 2017: 'A les 12 hores farem 5 minuts de silenci davant de l'Ajuntament de #Cambrils per mostrar el rebuig als atemptats de #Cambrils i Barcelona' (@CambrilsTurisme retweeted @ajcambrils Aug. 18 2017: At 12 o'clock there will be 5 minutes' silence outside the Town Hall in #Cambrils to show our rejection of the #Cambrils and Barcelona attacks).

The two types of content are important in crisis communication because they both generate a good image of the organization, especially the ones that display solidarity with the victims, as they establish sympathetic relationships between stakeholders' and the agency (Liu, Austin, & Jin, 2011).

Regarding the differences between the two DMOs, more than 75% of the tweets posted by Cambrils Turisme involved content expressing solidarity with victims or relatives and condemnation of the attack by referring to the decree of three days of mourning in the town, participation in and dissemination of the demonstration condemning the attacks held in Cambrils, the solidarity march by the security and emergency services, the floral homages in the town centre, etc. However, Barcelona Turisme published less than a quarter of its tweets on the subject of solidarity and condemnation of the attack, while more than half gave updated information on the attack, providing information on the activation of the terrorism emergency plan, live broadcasts of the press conferences given by the authorities, news coverage of the signing of the books of condolence, the minute's silence in Plaça Catalunya, etc. While expressions of solidarity with the victims create a better image among stakeholders (Liu, Austin, & Jin, 2011), it is totally understandable that Barcelona Turisme devoted more tweets to updated information on the Barcelona attack, due to the high number of casualties and the fact that the perpetrator was not caught until a few days later. However, the management of the crisis by Cambrils, posting a higher number of tweets in solidarity with the victims, contributed more directly to the recovery of its image among the public.

To a lesser extent, again within the subcategory of protection for stakeholders, the topic of useful information for tourists was dealt with in 20% of the tweets by the two DMOs. Barcelona can be seen to have published almost twice as many tweets as Cambrils on this issue (27.7%) since, given the differences between the severity of the attacks and the size of the destinations, it was far more necessary in the case of the former.

For example @BarcelonaInfoEN tweeted Aug. 18 2017: Barcelona Subway Service: Liceu (L3) and Catalunya (L1 and L3) lines closed #metrobcn. Likewise, information concerning traffic jams due to police roadblocks, recommendations to avoid unnecessary travel, phone numbers for general information about the attack, recommendations for tourists to keep informed by means of official sources, etc were also communicated. With regard to the issue of attention to tourists, persons affected, and family members, only Barcelona Turisme published messages on this subject (with 36% of its posts in this category) reporting the existence of a call centre for those affected and their families, as well as an offer of accommodation for tourists who had missed their flights on the day of the attack. Thus, this information shows appropriate crisis communication by Barcelona Turisme, which was necessary given the number of victims and the severity of the attack, which, fortunately, was not the case for Cambrils Turisme.

Requests to co-manage the crisis (5.1%), acknowledgements (4.0%), others (4.0%), and solutions (1.0%) account for a third set of issues dealt with far less frequently within the subcategory of protection for stakeholders. Unlike Barcelona Turisme, Cambrils Turisme did not publish any tweets on these issues. With regard to the co-management of the crisis, people who might have information about the attack were asked to come forward and people who were safe were asked to contact their families through social networks to prevent the telephone network from collapsing.

With respect to the tweets in the post-attack tourist information subcategory, the issue that warranted the most attention by the two DMOs was showing the destinations' attractions

and tourist sights. Cambrils Turisme did so in more than 80% of its tweets in this category, while Barcelona Turisme did so in 52.9% of cases. Thus, Cambrils Turisme communicated strategically to recover the image of the destination (Ulmer, Seeger, & Sellnow, 2007; Ulmer, Sellnow, & Seeger, 2015). Barcelona Turisme provided information about the particular features of the various districts of the city, of its attractiveness as an inclusive city adapted to disabled tourists, etc., while Cambrils Turisme opted for messages with photos of different natural landscapes in the region. To a lesser extent, the two DMOs disseminated information on exhibitions, concerts, and events at the destination, with around 30% of the messages in this category. Cambrils Turisme published far more tweets than Barcelona Turisme announcing the Cambrils 'fiestas' (festivities), concerts, and the town's wine fair, while Barcelona Turisme dedicated just a few tweets to events at the destination, concentrating on the ESC Congress on Cardiology.

Within this same subcategory is a set of less dealt-with issues (with 15% of the tweets) such as tourism experiences (12.8% of the tweets), renovations to and the opening of new tourist attractions (5.7%), the creation of new apps, platforms, and social media applications for the dissemination of tourist information, and the creation of new tourism products and services (both with 2.9%). Cambrils Turisme published some tweets about tourism experiences in the region, but there was no dissemination of other topics on its platform. However, Barcelona Turisme reported on the new application created to promote purchases by Chinese tourists in Spain, the creation of a new service called 'technotourism' that offers technological facilities to guests with an increasingly digital profile, and the recovery of the Ciutadella science park. Nevertheless, certain issues do not appear even once on either of the two platforms, such as the production and marketing of souvenirs, attendance at tourism trade fairs, tourism workshops, the creation of new materials to promote tourism at the destination, and familiarization trips.

Finally, the issues of the post-attack safety and security information subcategory do not appear once in the tweets of the two DMOs throughout the period analysed. This absence is surprising given the importance of such content in creating an image of a safe destination following an attack (Ulmer, Seeger, & Sellnow, 2007; Ulmer, Sellnow, & Seeger, 2015). It would seem to us that the DMOs do not take advantage of this content, which is fundamental for restoring the image of the destinations.

#### **4.2. Origin of published messages**

Having analysed the contents of the tweets, we can observe their origin or provenance (RQ2). The two DMOs produced slightly over half of the published tweets themselves (55.4%), whereas the remainder (44.6%) were retweets from other agencies, such as the City Council ('Ajuntament'), the regional police ('Mossos'), and the Government of Catalonia ('Generalitat de Catalunya'). However, there are major differences between the two DMOs regarding their own production. Barcelona Turisme had a far higher percentage of its own tweets (76.4%) than Cambrils Turisme (32.8%), which mainly retweeted information from other agencies. Some examples are:

[@BarcelonaInfoEN](#) retweeted [@mossos](#) Aug. 17 2017: REMIND (+34) 900 400 012 family members for relatives affected [#Rambles#Barcelona](#).

[@CambrilsTurisme](#) retweeted [@emergenciescat](#) Aug.18 2017: ‘En [#Cambrils](#) ya se puede circular con normalidad. [@mossos](#) confirma q cinturones de los individuos eran explosivos simulados [#ProteccioCivil](#)’ ([@CambrilsTurisme](#) retweeted [@emergenciescat](#) Aug. 18 2017: In [#Cambrils](#) traffic is now moving normally. [@mossos](#) confirms that the belts of the individuals were fake explosives [#ProteccioCivil](#))

This is important since it shows the communicative activity of the DMOs and how they reacted in the face of the attacks. For recovering the image of the destination (Ketter, 2016), Barcelona Turisme’s communication strategy was far more effective than that of Cambrils Turisme, which posted only 32.8% of its own tweets.

Table 4. Origin of published tweets

	General		Barcelona		Cambrils	
	Frequency	%	Frequency	%	Frequency	%
Tweets	77	55.4%	55	76.4%	22	32.8%
Retweets	62	44.6%	17	23.6%	45	67.2%
<b>Total</b>	139	100%	72	100	67	100%

### 4.3. Reactions to published messages

Finally, we analysed the users’ reactions to the tweets published by the DMOs (RQ3) to learn the power of attraction of the messages posted by means of ‘likes’ and how users help to disseminate the message via ‘shares’. Users’ reactions show the success of the communication implemented (Usakli, Koç, & Sönmez, 2017) and the users’ empathy towards the information published, which together generate a positive image.

Table 5 shows that the users’ ‘likes’ are more numerous for the retweets of others agencies than for the DMOs’ own tweets. DMOs should achieve more user ‘likes’ with their own tweets in order to generate a positive image. Among its own tweets, Cambrils Turisme obtains a third more ‘likes’ than Barcelona Turisme, but the highest figure with a difference (29,869) of ‘likes’ is achieved by the retweets of other organizations published by Barcelona Turisme. They are retweets by agencies and emergency and security services offering practical information for citizens.

Table 5. Users’ reactions to the published tweets

	Likes	%	Shares	%
Barcelona Tweets	209	0,5%	192	0,6%
Cambrils Tweets	302	0,8%	146	0,5%
Barcelona Retweets	29,869	76,4%	24,660	84,5%
Cambrils Retweets	8718	22,3%	4193	14,4%
<b>Total</b>	39,098	100%	29,191	100%

Following a similar pattern, there are fewer 'shares' in general than 'likes'. 'Shares' are low in the case of the DMOs' own tweets and far higher for the retweets of other entities. Therefore, we can affirm that the DMOs' own tweets generate few 'likes' and 'shares' and therefore achieve very low indices of reaction and attraction.

## **5. Conclusions**

One of the most important conclusions of the study is that despite Twitter's great potential for the communication of information about terrorist attacks (Fowler, 2017) and the importance of good crisis communication to recover destination image (Ritchie, 2004; Sönmez, Apostolopoulos, & Tarlow, 1999), in general the DMOs analysed did not produce many of their own tweets for these purposes. Cambrils Turisme created only one-third of the tweets published on its Twitter platform and the rest were retweeted from other agencies, in particular with regard to issues related to the attack. As previously mentioned, crisis communication is a key tool for further reinforcing the image of the destination following a crisis (Mitroff, 2005; Ulmer, Seeger, & Sellnow, 2007). In the cases under study, the crises were managed, but full advantage of the potential of crisis communication was not taken. With regard to the contents of the tweets of the two DMOs and taking into account the contents for crisis communication suggested by the experts (Coombs, 2007), two-thirds focus on information about the attack and solidarity with the stakeholders and only one-third of them contain further information to recover the image damaged by the crisis. In conclusion, while the crisis communication carried out by the DMOs was most suitable with regard to the management of the attacks, it could have been better with respect to image restoration.

Moreover, communication concerning the attacks was scarce and poor, which is highly inadvisable according to experts in crisis communication who assert that information about what has happened is of fundamental importance to the stakeholders (Coombs, 2007). However, extensive, suitable communication can be seen in the management of the attacks and solidarity with the stakeholders. As Liu, Austin, and Jin (2011) stated, DMOs must foment moral support for the stakeholders and through their communication achieve empathy and admiration among them. This will help to recover the image of the destination. Therefore, in this case, crisis communication was very well managed in recovering the images of the destinations (Coombs, 2015; Liu, Austin, & Jin, 2011). However, most such tweets were retweeted from other organizations, especially the security forces.

The communication on the security measures taken is non-existent on the Twitter platforms of the two DMOs. This is most surprising since this information is crucial for the destinations to generate an image of safety and security (Coombs, 2007). Despite knowing, for example, that Barcelona had installed fixed barriers in Las Ramblas to prevent similar attacks from happening again, it is odd that the stakeholders were not informed of this as a subsequent action taken regarding tourists' safety. Coombs (2007) showed that security decisions and subsequent actions are extremely important in promoting tourism and in recovering the

image harmed by the crisis. In conclusion, in this instance, the crisis communication opportunity for destinations to recover their image was missed by the DMOs studied.

Nevertheless, the reactions by users to the tweets published show that the most-liked tweets that generated the greatest engagement were precisely the retweets of other institutions. Thus, users were not very attracted to the tweets written by the DMOs themselves. Taking into account that users' reactions display empathy, the sharing of opinions, and the generation of an emotional bond with the organizations, it is a pity that the two DMOs' own tweets received few 'likes' and 'shares', as this would have helped them to recover their image. As many authors have recognized (Briones, Kuch, Liu, & Jin, 2011; Sreenivasan, Lee, & Goh, 2011; Wang & Zhuang, 2017), Twitter has a great potential for crisis communication. This social media platform allows real-time interactions with users (Knight & Carpenter, 2012) and encourages their active participation (Briones, et al., 2011). However, as shown by the results, in this study users' reactions and participation were minimal. Consequently, the DMOs did not take full advantage of all Twitter's potential in their crisis communication. In contrast, Barcelona began an advertising campaign in March 2018 to recover its destination image.

Thus, it can be said that crisis communication was carried out by the two DMOs right from the start of the attacks, focusing especially on attention to the stakeholders and on aspects of tourism promotion to recover the image of the destinations. However, their communicative potential was not used fully to inform about the attacks, particularly about the security measures subsequently taken to recover destination image. Similarly, Cambrils Turisme published few of its own tweets and basically retweeted those of other institutions, which, in turn, were the ones that gained the greatest success and reactions between the two DMOs. Despite the fact that crises can create opportunities (Mitroff, 2005; Ulmer, Seeger, & Sellnow, 2007; Ulmer, Sellnow, & Seeger, 2015) and a destination image that is damaged by a terrorist attack can be recovered and even enhanced through good crisis communication (Avraham, 2015; Ritchie, 2004), not all DMOs take advantage of these opportunities. It can be concluded that while the two DMOs analysed carried out crisis communication, a more strategic use of this communication to further encourage the recovery of the image of the destinations might have had an even greater effect.

The main contributions of this study are the recommendations and lessons for DMOs that emerge from its conclusions. The first recommendation is that DMOs should be more involved in post-attack communication and produce more of their own tweets instead of limiting themselves to mainly retweeting those of other organizations. Secondly, DMOs should encourage interaction with users through Twitter and be empathetic with victims in order to encourage favourable reactions and a positive image.

Another contribution of the study is the creation of a template of analysis which, from a crisis communication perspective, will assist with the evaluation and management of communication by destinations that suffer terrorist attacks. In addition, the application of the template to this case study has shown that it is capable of analysing whether a DMO's crisis communication is suitable for facilitating the appropriate recovery of the destination image.

This study also has some limitations. Firstly, a relatively small number of tweets have been analysed as few tweets were posted by the DMOs in any given month. Secondly, this is a crisis communication study that cannot verify whether the DMOs analysed did in fact recover their image after the attacks. Further research on the image of the two destinations studied, by analysing hashtags, the reactions of users, or data on tourist arrivals, would be useful to demonstrate that the template of analysis created does indeed help to produce crisis communication that effectively recovers destinations' images after terrorist attacks.

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