ISCTE Business School
Instituto Universitário de Lisboa

IN THE EYE OF THE (FIRE)STORM: BETTER SAFE OR SORRY?

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To my mum, dad and grandma.

Thank you.

Para ser grande, sê inteiro: nada
Teu exagera ou exclui.

Sê todo em cada coisa. Põe quanto és
No mínimo que fazes.

Assim em cada lago a lua toda
Brilha, porque alta vive

Ricardo Reis, in "Odes"

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Abstract

In the past, Word of Mouth used to be overlooked and undervalued by marketers as a legitimate marketing strategy, but nowadays, organizations incentivize consumers to engage in online conversations.

Over the last few years, the investments made on social network sites have increased significantly. Nevertheless, all these efforts can be seriously compromised once a social media crisis arises.

Online firestorms, as termed by Pfeffer *et al.* (2014), pose serious threats to people, companies, or groups in social media networks, and thus must be addressed carefully and thoroughly.

Considering the characteristics and dynamics of social media, this sudden discharge of large quantities of negative WOM and complaint behaviour, often paired with intense indignation, can occur at a staggering pace, jeopardizing the sustainability and even the subsistence of its target.

The present research used a 2 x 3 factorial experimental design, that comprised two levels of *image repair strategies* (*corrective action*; *apology*), and three levels of *online firestorm triggers* (*unethical behaviour*; *core business problem*; *communication issue*).

An online questionnaire was distributed, and 564 responses were obtained, whose objective was to investigate the effect of the *image repair strategy* employed by an organization under attack following an incident, on Facebook users' *perceptions*, *forwarding* and *negative WOM intentions*.

Results indicated that a response strategy that incorporates a *corrective action*, as *image repair strategy*, is more effective than a response strategy that incorporates an *apology* following *core business*- and *communication*-related incidents, whilst none of the strategies under analysis showed to be more effective than the other one following *unethical behaviour*-related incidents.

Furthermore, the effect of *image repair strategy* on *perceptions*, *forwarding* and *negative WOM intentions* is moderated and mediated by Facebook users' *attributed responsibility* and *brand attitude*, respectively.

Last, the absence of an organizational response following an incident has a negative effect on Facebook users' *brand attitude*.

Keywords: *online firestorm*; social media crisis; crisis communication, crisis management
JEL Classification System: M31 - Marketing; M37 – Advertising

Resumo

No passado, o Passa-Palavra era subvalorizado pelos *marketers* como uma legítima estratégia de marketing, mas atualmente, as organizações incentivam os consumidores a interagirem online.

Nos últimos anos, os investimentos realizados ao nível das redes sociais aumentaram significativamente. Porém, todos estes esforços podem ser seriamente comprometidos na presença de uma *crise online.*

As *crises online,* assim descritas por Pfeffer *et al.* (2014), representam uma séria ameaça a pessoas, empresas, ou grupos, nos canais dos media sociais, e como tal, devem ser geridas de forma cuidadosa e criteriosa.

Tendo em conta as características e as dinâmicas dos media sociais, esta transmissão repentina de grandes quantidades de passa-palavra negativo e comportamento de reclamação, frequentemente aliada a uma forte indignação, pode ocorrer a um ritmo alucinante, prejudicando a sustentabilidade e mesmo a subsistência do seu alvo.

O presente estudo utilizou um design experimental 2 x 3, composto por dois níveis de *estratégias de resposta* (*ação corretiva*; *pedido de desculpa*) e três níveis de *desencadeadores* de *crises online* (*comportamento não ético*; *incidente operacional*; *incidente comunicacional*).

Foi distribuído um questionário online, e foram obtidas 564 respostas, cujo objetivo era investigar o efeito que a *estratégia de resposta* empregada por uma organização sob ataque tem, ao nível das *perceções* e *intenções comportamentais* de utilizadores da rede social Facebook.

Os resultados indicaram que uma *estratégia de resposta* que incorpore uma *ação corretiva*, como *estratégia* de *reparação de imagem*, é mais eficaz que uma *estratégia de resposta* que incorpore um *pedido de desculpa* para *incidentes operacionais* e *comunicacionais*, enquanto que nenhuma das estratégias mostrou ser mais eficaz que a outra para incidentes relacionados com *comportamento não ético* por parte de uma organização.

O efeito da *estratégia de resposta* ao nível das *perceções*, *intenções* de *partilha* e *transmissão* de *conteúdo negativo* acerca de uma organização é moderado e mediado, respetivamente, pela *responsabilidade atribuída* ao incidente pelos utilizadores do Facebook e pela sua *atitude* em relação à organização.

Por último, a ausência de uma resposta organizacional após um incidente afeta negativamente a *atitude* dos utilizadores do Facebook em relação a uma organização.

Palavras-chave: *crise online*; media sociais; comunicação de crise; gestão de crise
Sistema de Classificação JEL: M31 – Marketing; M37 – Advertising

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1. Introduction

Heraclitus of Ephesus, a 6th-century BCE Greek philosopher, known for his visionary doctrines is reputed to have said, "*Change is the only constant*".

Little did some of his sceptics know how accurate his claim was at the time, but also how valid, clearer and enlightening it would become in the future.

In line with his statement and by today's standards, it is not reasonable to elaborate on *change* without mentioning the relevance of *globalization* in it, whose role has been important, and even at times decisive throughout the years. It is undeniable that globalization has unequivocally affected the way people live, and thus the world has undergone many different transformations that have had major repercussions on society.

In the literature, there are many definitions of globalization. However, in most of them, there are no references to the spatial connections that the process encourages (Block, 2004). According to Held *et al.* (1999: 15), globalization refers to those "*spatio-temporal processes of change which underpin a transformation in the organization of human affairs by linking together and expanding human activity across regions and continents. Without reference to such expansive spatial connections, there can be no clear or coherent formulation of the term*".

Despite the crucial role of globalization, it is important to note that like any other process, there are advantages and disadvantages that are worth mentioning and discussing. In respect to this dynamic process, Friedman (2000: 19) states that "*globalization is everything and its opposite. It can be incredibly empowering and incredibly coercive. It can democratize opportunity and democratize panic*. (…) *While it is homogenizing cultures, it is also enabling people to share their unique individuality farther and wider*. (…) *It enables us to reach into the world as never before and it enables the world to reach into each of us as never before*".

In the beginning of the twenty-first century, the Internet turned into a truly global information and communication network, allowing the publication and dissemination of data on the World Wide Web (WWW) without direct contact, and the interaction among users on a person to person basis (Hurley and Schönberger, 2000; Block, 2004). The evolution occurred in the information and communication technologies led to a "*communication revolution*" that highly contributed to enhance the exchange of ideas and information at a global scale (Hurley and Schönberger, 2000). More precisely, Web 1.0 started thereby allowing users to find information, connect with each other, and express their concerns more easily than with traditional communication channels. The advent of the Internet with its communication capabilities transformed the way consumers started communicating their experiences about

products and services, permitting them to make their thoughts, feelings and viewpoints easily accessible to the global community of internet users, and thus engaging in the so-called electronic word of mouth (eWOM) communication (Hong and Lee, 2005; Hennig-Thurau *et al.*, 2004).

Word of mouth is not new. In fact, it has ancient origins that go back to humankind's oral traditions. One of the earliest written texts, published 2300 years ago by Aristotle, had already acknowledged its importance (Williams and Buttle, 2014).

Over the last few years, social network sites (SNS) have developed at a staggering pace, due to the enjoyment, number of people using them and usefulness they provide. Therefore, they have become the major media by which people expand their personal network online (Lin and Lu, 2011). Facebook, for instance, like many other social network sites, has contributed to change how consumers convey information, giving them the possibility of sharing their experiences with more and more people. Thus, it has transformed considerably the way individuals interact, build and maintain social relationships (Lin *et al.*, 2014; Correa *et al.*, 2009).

On the emergence of Web 2.0, often referred to as "*interactive web*", Tim O'Reilly highlights its reinforced capacity of empowering users largely to voice complaints, enhancing the promotion of interactions and allowing them to create web content (O'Reilly, 2009). As a new technological stream, the Web 2.0 encompasses all "*the online activities, sites and applications that allow individuals to interact in online communities, directly exchange information with one another and create their own content online*" (Eikelmann et al., 2007:1). Moreover, the relative anonymity found online is an aspect that prompts people to verbalize online in a way they would not consider doing face-to-face (Alonzo and Aiken, 2004).

Recently, it has started to be particularly worrying for organizations, such as companies, brands or non-profits, the spread of any negative statement made by potential, actual, or former consumers on these platforms, concerning a product or a service, since the intrinsic dynamics of social media can amplify its reach across the Internet (Hennig-Thurau *et al.*, 2004; Pfeffer *et al.*, 2014).

Negative word of mouth (NWOM) as it is known is a consumer response to dissatisfaction and can be defined as: "*interpersonal communication among consumers concerning a marketing organization or product which denigrates the object of the communication*" (Richins, 1984: 697).

It is widely regarded that it has a negative impact on organizations in terms of profitability, customer retention, loyalty, business acquisition and reputation (Sharp, 2010; East

et al., 2006; Reichheld and Teal, 1996; Cheng *et al.*, 2006; Wangenheim, 2005, as cited by Williams and Buttle, 2014). It can also adversely affect the attitudes and purchasing intentions of customers and organizations' image, as well as lead to undesirable long-term consequences, such as brand dilution, volatility in stock returns and the overall erosion of firm value (Bambauer-Sachse et Mangold, 2011; Verhagen *et al.*, 2013, as cited by Balaji *et al.*, 2016). As if this was not already dangerous enough, the arrival of new phenomena involving negative WOM communication has started posing new obstacles to organizations and their future.

Thus, there has been a relatively new phenomenon that has drawn the attention from academia, and more contributions are needed to extend its body of knowledge. It is known as "*online firestorm*" (Pfeffer *et al.*, 2014), "*social media (fire)storm*", "*social media backlash*", "*collaborative brand attack*" (CBA) (Rauschnabel *et al.*, 2016) or "*paracrisis*" (Coombs and Holladay, 2012).

It is a social media crisis, characterized by having high message volume, indignant tonality, negative opinion climate against brands, celebrities or politicians, in response to moral misconducts, transgressions and failures (Johnen *et al.*, 2017; Einwiller *et al.*, 2017). Even though it only lasts for a short period, it may lead to resignations, dismissals, reputation damages, and even financial losses (Hewett *et al.*, 2016, as cited by Johnen *et al.*, 2017).

Conceptually, Pfeffer et al. (2014: 118), terms an *online firestorm* (OF) as "*an online phenomenon that describes the sudden discharge of large quantities of negative WOM and complaint behaviour against a person, company, or group in social media networks, often paired with intense indignation that has shifted its focus from an actual point of criticism*".

1.1.1. Examples of *online firestorms*

1.1.2. H&M

In the beginning of 2018, one of the world's leading fashion brands, the H&M Group, henceforth referred to as H&M, was compelled to apologise following the online backlash received for using an image of a black child on their website, as being part of a new campaign to model a sweatshirt with the slogan: "*coolest monkey in the jungle*". Shortly after, social media users started labelling the advert as "*racist*", "*offensive*", "*unacceptable*", "*insensitive*" and "*outrageous*".

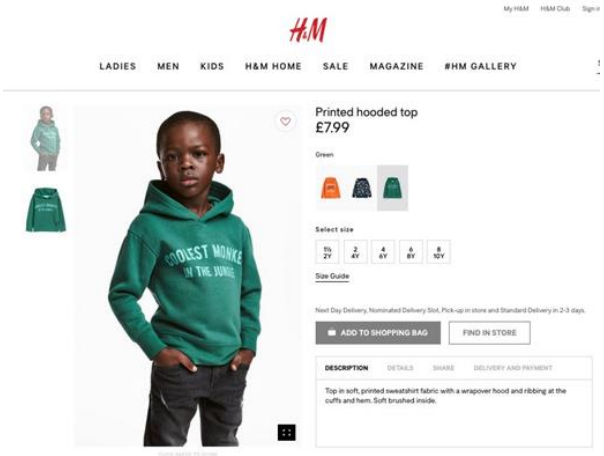
In a matter of hours, there were already many thousands of messages generated on social network sites, expressing disapproval towards the controversial marketing campaign. Later,

traditional media started covering this incident enhancing its reach and contributing to more indignation on social media.

As a result, several celebrity endorsement contracts were immediately terminated, which resulted in loss of money and prestige for the brand, and many H&M stores were vandalized. Despite the huge amount of criticism and attention received, this firestorm ceased in the following days, after the apology issued by the brand.

Months later, the brand communicated the appointment of a "*Global Leader for Diversity and Inclusiveness*".

Figure 1. H&M controversial 2018 campaign.



Source: Telegraph (2018).

1.1.3. The American Red Cross

In August of 2017, in the aftermath of Hurricane Harvey, the most powerful storm in over a decade in the United States of America, The American Red Cross, one of the best-known charities in the country, faced a barrage of criticism over allegedly inadequacies in responding to the tropical storm Harvey, as well as to past disasters.

During the early stages of the Hurricane Harvey relief distribution, a "*NoRedCross*" hashtag started circulating widely on SNS, especially on Twitter, appealing people to stop donating to the non-profit.

The critics were so harsh that forced Red Cross volunteers to take to social media to defend the non-profit and refute the negative comments. The negative buzz made the amount of donations decrease substantially and led to many resignations, including the CEO of Red Cross Texas Gulf Coast Region.

Figure 2. #NoRedCross 2017 movement.

Source: NoRedCross.org (2017).

The examples above, perfectly illustrate what *online firestorms* can do to organizations regardless of their reputation and even mission.

In the first example presented, H&M was forced to incur extra costs to remove the marketing campaign from their stores worldwide, and that impacted negatively its profitability, let alone the decrease in sales it suffered. H&M managers anticipated that this was the best decision to take to avoid more severe repercussions for the brand. It is plausible to think that many dissatisfied customers would have simply stopped shopping in H&M stores had the company not removed the controversial campaign.

In the second example, even though the Red Cross CEO and president publicly defended the institution accused of irresponsible spending and distribution of funds to the victims of the Hurricane Harvey in 2017, that was not enough to refrain people from stop donating to the charity.

It is important to mention, though, that examples like these are not crises yet in the true sense of the word. However, they are incidents that can later lead to crises and are a frequent form of public communication that takes place online affecting brands, public institutions, celebrities, politicians or other individuals (Johnen *et al.*, 2017).

The consequences shown above, demonstrate the astonishing impact that these "*social media backlashes*" as they are mostly referred to by traditional media, can have on organizations' future. Therefore, it is of interest for organizations to have strategies at their disposal they can ably use, to cope with these backlashes whose appalling effects can be truly unpredictable.

Usually, social media users create these waves of online outrage within just a few hours in reaction to questionable statement or activity. In further stages, the negative WOM is intended to be offensive and free from content or arguments (Pfeffer *et al.* 2014).

Today, organizations try to encourage and support conversations between consumers via word-of-mouth marketing (WOMM) to generate a positive feedback that might influence others. Yet, they tend to neglect the negativity that can take place in case something does not go as planned.

It is then safe to say that despite the benefits that globalization has brought over the years, it has also carried along the way new challenges and potential threats that organizations and its leaders must cope with.

For this reason, when formulating marketing strategies, organizations must allow room to acknowledge the implications of both its positive and, more importantly, potential negative effects (Reddy and Vyas, 2004).

Therefore, it is of paramount importance for them to make use of adequate crisis response strategies, capable of intervening in the right place at the right time, to provide protection against the negative WOM that may arise without warning and harm the whole organization.

Even though OFs are amongst the most discussed issues related to social media among practitioners, there is still a profound lack of understanding when and how such online attacks occur and under which conditions they are amplified or mitigated. As such, managers often lack profound research results that might indicate how to cope with social media crises.

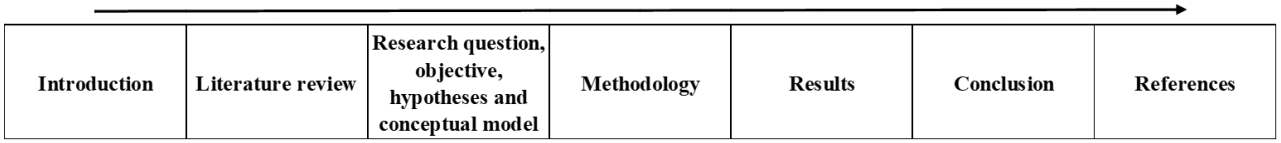
Existing theories on crises, such as Image Repair Theory (IRT, Benoit, 1995) and Situational Crisis Communication theory (SCCT; Coombs, 2007), exclusively address offline crises, and thus are not applicable to fully explain social media crises that occur in online environments. Therefore, given the importance of the phenomenon for today's organizations, the present research aims to extend its body of knowledge, focusing particularly on *online firestorms*.

Throughout this research, the word organization is used to mean both public and private organizations, as well as non-profit organizations that may deal with crisis situations in online and offline environments.

1.2. Dissertation structure

The present dissertation is divided into seven distinct sections. Accordingly, figure 3 illustrates its overall structure.

Figure 3. Dissertation structure.



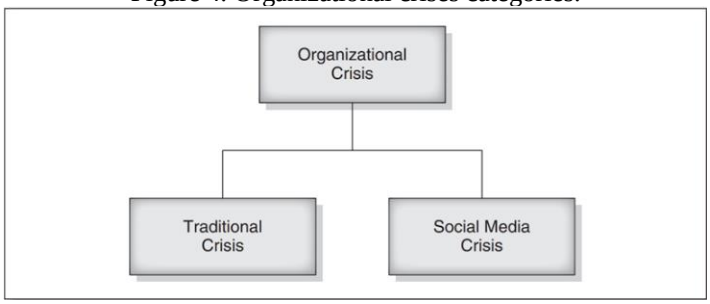
Source: Developed by the researcher.

2. Literature review

2.1. Traditional crises

A *crisis* appears when there is a discrepancy between an organization's actions and society's expectations, and it can be described as "*a sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and a reputational threat*" (Coombs, 2007: 164). According to Coombs (2015), *organizational crises* can be divided into *traditional crises* and *social media crises*. Organizational crises are those experienced by organizations such as corporations and non-profits and can be labelled as *traditional crises* or *operational crises*, whilst social media crises are termed as *reputational crises*. Even though both types of crisis are related, the former focus more on issues of public safety and welfare capable of creating an actual or potential disruption to organizational operations such as fires, explosions, CEO criminal actions, and product harm-driven recalls (e.g. the explosion-prone Samsung Galaxy Note 7 case of 2016), whilst the latter can be defined as events that are in or are amplified by social media and threaten to inflict serious damage on an organization's reputation (Coombs, 2014).

Figure 4. Organizational crises categories.



Source: Coombs (2014).

As previously mentioned, crises pose significant threats to organizational operations or reputations, and can lead to negative consequences, if not handled properly. Thus, it is imperative for organizations to rely on crisis management to protect their tangible and intangible assets.

Crisis management is a process designed to prevent or diminish the damage a crisis can inflict on an organization and its stakeholders, and it was initially created to address traditional crises. An effective crisis management handles the threats sequentially. A threat is "*the amount of damage a crisis could inflict on the organization's reputation if no action is taken*" (Coombs, 2007: 166), and crises can generate three different types of threats: (1) *public safety*, (2) *financial loss*, and (3) *reputation loss*. All of them are interrelated. For example, injuries or

deaths may result in financial and reputation loss, whilst reputations may have a financial impact on organizations. Crises such as industrial accidents and product harm, can lead to injuries, loss of lives and they can cause financial loss by disrupting operations, creating a loss of market share/purchase intentions, or spawning lawsuits related to the crisis (Coombs, 2014).

Crisis management is a process that can be divided into three distinct phases: (1) *pre-crisis*, (2) *crisis response*, and (3) *post-crisis*. First, the pre-crisis phase, encompasses prevention and preparation in respect to a potential crisis. Second, the crisis response phase, focus on when management must respond to an existing crisis. Third, the post-crisis phase, seeks for ways to better prepare for the next crises and fulfils commitments made during the crisis phase including follow-up information (Coombs, 2007). In case a crisis arises, the priority must always be to protect stakeholders from harm, i.e., the primary concern must be public safety, as a failure to address this priority intensifies the subsequent damage. Reputation and financial concerns are approached only after public safety has been addressed.

For an organization to be successful in respect to crisis management, it is mandatory to make use of crisis response strategies to repair the reputation, to reduce negative affect and to prevent negative behavioural intentions (Coombs, 2007). According to Coombs (1995), protecting the organizational reputation is the main purpose of crisis response strategies, which aim to *shape stakeholders' attributions* regarding the crisis; *change stakeholders' perceptions* regarding the organization affected by the crisis and *reduce the negative effects* generated by the crisis. Since reputations shape how stakeholders interact with organizations, protecting the reputation provides behavioural benefits as well (Coombs, 2007).

Therefore, over the years, crisis response strategies have long been studied extensively in management and communication (Bradford and Garrett, 1995; Marcus and Goodman, 1991; Siomkos and Shrivastava, 1993; Allen and Caillouet, 1994; Benoit, 1995, as cited by Coombs, 2007).

2.2. Stakeholders

According to *Organizational Theory*, an organization's environment is surrounded by stakeholders, and crises can make stakeholders perceive the organization much less favourably. Stakeholders are any group that can affect or be affected by the behaviour of an organization (Bryson, 2004, as cited by Coombs, 2014), and are generally defined as "*any persons or groups that have an interest, right, claim or ownership in an organization*" (Coombs, 2014: 35). They can be categorized according to two different groups: *primary* and *secondary*. Primary and secondary stakeholders are interdependent with an organization, thereby the relevance of their

relationship. They are linked in some way to the organization from an economic, social, and political interest.

Primary stakeholders are those people or groups whose actions can be damaging or beneficial to an organization. Failure to maintain a continuous interaction with a primary stakeholder can lead to failure of an organization. Typical primary stakeholders may include: employees, investors, customers, suppliers and the government.

In respect to secondary stakeholders or influencers, these can affect and be affected by the actions of an organization, the media, activist groups and competitors. Even though they cannot stop an organization from functioning, they can jeopardize it (Clarkson, 1995; Donaldson and Preston, 1995, as cited by Coombs, 2014).

Crises can harm stakeholders, such as community members, employees, suppliers and stockholders on a physical, emotional and financial domain (Coombs, 2007). Since crises give people reasons to turn against an organization, they represent a serious threat to them in terms of reputation (Coombs, 2007).

Nowadays, news media and the Internet play a decisive role in amplifying crises' reach and most stakeholders learn about them from the news reports. For this reason, media coverage is an important aspect to take into consideration in respect to reputation management (Carroll, 2004; Carroll and McCombs, 2003; Meijer, 2004, as cited by Coombs, 2007).

2.3. Reputation

A reputation is an evaluation that stakeholders make about an organization. This aggregate evaluation stakeholders make about how well an organization meets their expectations based on its past behaviours (Wartick, 1992, as cited by Coombs, 2007) is developed through the information they receive about the interactions they have with it, mediated reports (including news media and advertising) and second-hand information from other sources (e.g. WOM and social media) (Fombrun and van Riel, 2004, as cited by Coombs, 2007).

Reputations are considered a valuable intangible asset capable of attracting customers, generate investment interest, improve financial performance, attract top-employee talent, increase the return on assets, create a competitive advantage as well as gather positive comments from financial analysts (Carmeli and Tishler, 2005; Davies *et al.*, 2003; Fomrun and Gardberg, 2000; Fombrun and van Riel, 2004, as cited by Coombs, 2007).

It is important to mention, though, that they are easily susceptible to change under the influence of many different factors. In case a reputation shifts from favourable to unfavourable,

for instance, its stakeholders may alter the way they interact with it, and the prior benefits of a favourable reputation may be lost. Later, in a hypothetical worse scenario, stakeholders may lessen ties to the organization and start spreading negative WOM, contributing to its ruin from a reputational capital perspective. The reputational capital is an organization's "*stock of perceptual and social assets – the quality of the relationship it has established with stakeholders and the regard in which the company and brand is held*" and is accumulated overtime (Fombrun and van Riel, 2004: 32, as cited by Coombs, 2007). Once a crisis occurs, some reputational damage is done to the organization, and then some reputational capital is inevitably lost. Organizations with a more favourable pre-crisis reputation have a protective layer or shield against the reputational capital lost during a crisis and will also have a stronger post-crisis reputation due to a greater amount of reputational capital at their disposal to spend, than an organization with an unfavourable or neutral prior reputation. This implies that an organization with a favourable prior reputation tend to suffer less and can recover faster in case a crisis appears.

In respect to the exposure and vulnerability of an established reputation, Warren Buffet, one of the most successful American investors, once warned: "*It takes 20 years to build a reputation and five minutes to ruin it. If you think about that you will do things differently*".

Since reputations are evaluative, points of comparison are needed for stakeholders to compare what they know about an organization to some standard, to determine whether an organization meets their expectations or not in terms of how it should act and behave. Thus, reputations are based on how stakeholders evaluate an organization's ability to meet their expectations. Frequently, a failure to meet specific expectations, i.e., the existence of an expectation gap, is rather problematic for any organization's image.

2.4. Brand image

Even though reputation and brand image are two different concepts, they are strongly correlated, and often trend in the same direction. In some situations, a strong brand image can overcome reputation problems and vice versa.

Brand image has been defined as "*perceptions about a brand as reflected by the brand associations held in memory*" (Keller, 1993: 3). This implies that brand image is based upon linkages a consumer holds in its memory structure regarding a brand. These linkages, or "*brand associations*", are then developed from a variety of sources including brand and product category experiences, product attributes, price information, positioning in promotional

communications, packaging, user imagery (e.g., typical brand users), and usage occasion (Keller, 1993).

Moreover, it is important to refer that the immediate set of associations of an individual in response to one or more messages from or about a brand (Cornelissen, 2014) can be influenced when a brand becomes linked with a crisis.

Over the last decades, an extensive body of knowledge concerned with crisis communication and crisis management has been developed, as well as several theoretical approaches for responding to organizational crises.

Two of the most influential, and thus widespread conceptualizations that aim to understand crises and crisis response strategies are: Image Repair Theory (IRT) and Situational Crisis Communication Theory (SCCT) posited by Benoit (1995) and Coombs (2007), respectively.

2.5. Image Repair Theory (IRT)

Image repair theory posits that *image* is important, and when it is in danger, some steps must be followed to protect it. An attempt to repair one's reputation when faced with allegations is inevitable for four reasons (Benoit, 1995).

The first one is that the world has scarce and limited resources, particularly money, and the allocation of those resources is not always consensual by those who aspire to a different distribution. Second, circumstances beyond people's control can prevent them from meeting their responsibilities. Third, people make mistakes, either voluntarily or involuntarily, and have different interests that may lead to conflicts with others.

Considering Benoit (1995) and Coombs (2007) findings, an attack on an organization's image has two basic elements worth noting: (1) an offensive act has occurred, (2) the accused is responsible for that act. For someone's image to be threatened, an offensive act must have occurred that the public perceives it as negative. Second, someone is held responsible for the action if the public believes that someone was responsible. Even if the person accused did not commit the offensive act, it must be treated as an attack on the person's image. However, there is no need to respond to allegations if the person is not perceived as responsible for the action in question.

The image of an organization and the threat to that image are perceptual, and communication may be used to mitigate such threat. Benoit's IRT is drawn upon the theory of Corporate Apologia but expands on the topic to create five *image repair strategies* with subcategories, which might be employed by an organization under attack to respond to image

threats. The categories are *denial*, *evasion of responsibility*, *reducing offensiveness of an event*, *corrective action*, and *apology* (*mortification*) (Benoit, 1995).

Denial, evasion of responsibility, and reducing offensiveness of event have various subcategories, and each *image repair strategy* lists several strategic options that the affected organization may use to correct the damage done to its image.

The first *image repair strategy*, denial, comes from apologia theory. Benoit states that there are two different types of denial: simple denial or evasion of responsibility. In respect to simple denial, this strategy implies that the accused did not commit the act that they are accused of.

Evasion of responsibility attempts to shift the blame by arguing that they "*were provoked and responded to the act of another, argue defeasibility due to a lack of information or ability, or claim the event was an accident, or that it had good intentions*" (Holtzhausen and Roberts, 2009: 168)

Reducing offensiveness is another *image repair strategy*, which can be employed in multiple ways. One can reduce offensiveness through bolstering, minimization, differentiation, transcendence, attacking the accuser, or compensating the victim. Bolstering refocuses the attention onto past positive acts to reduce the negative perception, whilst minimization attempts to show that the "*act is not as serious as presented*". Differentiation tries to prove that the act is not as offensive as other similar acts (Holtzhausen and Roberts, 2009), whilst transcendence depicts the act in a more positive circumstance to reduce negative perception. Moreover, the accused can attack the accuser's credibility or compensate the victims of the offensive act (Winters, 2015).

The last two *image repair strategies* are *corrective action* and *apology*. These strategies are often used together, even though they are analysed separately throughout this research. When an offensive action takes place, the person at blame is expected to apologize to those they offended. If this *apology* seems sincere, the audience is more likely to forgive them. In the case of *corrective action* and *apology*, these are the two strategies most aligned with a sincere *apology*. On the effectiveness spectrum, *corrective action* and *apology* were highest ranked and followed by the strategies of good intentions, accident, and compensation (Benoit and Drew, 1997). Therefore, throughout this research, *corrective action* and *apology* (mortification) will be analysed in more detail, as they are perceived as the most effective and appropriate to repair an organization's image. The *corrective action* strategy involves the accused showing commitment to preventing another offensive act from occurring, whereas with the *apology* strategy the accused admits its responsibility and asks for forgiveness (Winters, 2015). There

is no guarantee that any strategy or combination of strategies will necessarily repair an image. It is possible, though, to at least mitigate some of the inflicted damage, by accurately responding to the threat. The accurate response depends on factors such as identifying the nature of the crisis, identifying the relevant audiences, and determining appropriate response strategies for each audience (Benoit, 1995). Therefore, IRT focuses on accounting for the organizational actions that caused the crisis and repairing the threat to the image through different communication strategies. The strategies are shown in figure 5.

Figure 5. Image Repair Theory strategies (IRT).

Strategy	*Key Characteristic*	*Illustration*
Denial		
Simple Denial	Did Not Perform Act	Coke Does Not Charge McDonald's Less
Shift the Blame	Act Performed by Another	Exxon: Alaska and Caused Delay
Evasion of Responsibility		
Provocation	Responded to Act of Another	Firm Moved Because of New State Laws
Defeasibility	Lack of Information or Ability	Executive Not Told Meeting Changed
Accident	Act Was a Mishap	Sears' Unneeded Repairs Inadvertent
Good Intentions	Meant Well in Act	Sears: No Willful Over-Charges
Reducing Offensiveness of Event		
Bolstering	Stress Good Traits	Exxon's Swift and Competent Action
Minimization	Act Not Serious	Exxon: Few Animals Killed
Differentiation	Act Less Offensive	Sears: Preventative Maintenance
Transcendence	More Important Considerations	Helping Humans Justifies Tests
Attack Accuser	Reduce Credibility of Accuser	Pepsi: Coke Charges McDonald's Less
Compensation	Reimburse Victim	Disabled Movie-Goers Given Free Passes
Corrective Action	Plan to Solve or Prevent Problem	AT&T Promised to Improve Service
Mortification	Apologize for Act	AT&T Apologized

Source: Benoit (1997b).

2.6. Situational Crisis Communication Theory (SCCT)

This theory represents a strategic approach to crisis management and posits: "*A crisis can be viewed as the perception of an event that threatens important expectancies of stakeholders and can impact the organization's performance. Crises are largely perceptual. If stakeholders believe that there is a crisis, the organization is in a crisis unless it can successfully persuade stakeholders it is not. A crisis violates expectation; an organization has done something stakeholders feel is inappropriate*" (Coombs, 2009: 100). This theory is drawn upon *Attribution Theory* and uses this approach to assess the reputational threat caused by a pending crisis (Coombs, 2014).

Accordingly, three factors determine the size of a reputational threat: *crisis type*, *crisis history*, and *prior reputation*.

Crisis type refers to the type of incident, such as challenges, rumours, or human-error accidents (Coombs, 2014). Depending on the reputational threat, crisis types can be divided into clusters that are differentiated considering the level of *attributed responsibility*: the victim cluster, which encompasses types of crises for which the organization has very little *attributed responsibility*. Then, the accidental cluster, where the organization has a low *attributed responsibility*. Last, the preventable cluster, in which the organization faces strong attributions of responsibility. A crisis for which the organization faces a strong attribution of guilt represents the most severe threat, as "*stronger attributions of responsibility produce greater reputational damage*" (Coombs, 2014).

The second factor used to evaluate the size of a reputational threat is crisis history, which is related to how a reputational threat is much higher, if an organization had a similar crisis in the past. In case an organization has a prior bad reputation, a crisis is likely to increase in severity. This is regarded as the *velcro effect*, a concept contrary to the *halo effect*, which may shield an organization with a good reputation in the presence of a reputational threat (Coombs and Holladay, 2006).

Based on the evaluation of crisis type, and pending reputational threat, SCCT outlines ten response strategies that an organization may rely upon to repair reputational damage from a crisis. The strategies are drawn upon prior work, and as such SCCT incorporates both the perspectives of *Corporate Apologia* and Image Repair Theory in its framework (Coombs, 2014). The ten strategies are then divided into four, embracing postures as illustrated in figure 6.

Figure 6. Situational Crisis Communication Theory strategies (SCCT).

Primary crisis response strategies

Deny crisis response strategies

Attack the accuser: Crisis manager confronts the person or group claiming something is wrong with the organization.

Denial: Crisis manager asserts that there is no crisis.

Scapegoat: Crisis manager blames some person or group outside of the organization for the crisis.

Diminish crisis response strategies

Excuse: Crisis manager minimizes organizational responsibility by denying intent to do harm and/or claiming inability to control the events that triggered the crisis.

Justification: Crisis manager minimizes the perceived damage caused by the crisis.

Rebuild crisis response strategies

Compensation: Crisis manager offers money or other gifts to victims.

Apology: Crisis manager indicates the organization takes full responsibility for the crisis and asks stakeholders for forgiveness.

Secondary crisis response strategies

Bolstering crisis response strategies

Reminder: Tell stakeholders about the past good works of the organization.

Ingratiation: Crisis manager praises stakeholders and/or reminds them of past good works by the organization.

Victimage: Crisis managers remind stakeholders that the organization is a victim of the crisis too.

Source: Coombs (2007: 170).

2.7. Social media

Social media are "*web-based communication tools that enable people to interact with each other by both sharing and consuming information*". The "*social*" part refers to interacting with other people by sharing information with them and receiving information from them, whilst the "*media*" part refers to an instrument of communication, as it is the Internet (Lifewire, 2018). With social media people talk, participate, share, network, and bookmark online. Most social media services encourage discussion, feedback, voting, comments, and sharing of information from all interested parties. It is a two-way conversation, rather than a one-way communication vehicle. The idea of being connected or linked to other sites, resources, and people is what mostly defines social media (Jones and Fox, 2009).

Web 2.0 was the foundation for social media, i.e., for the collection of online technologies that allows users to share insights, experiences, and opinions with one another. That sharing of data that can be in the form of text, audio, video, or multimedia (Safko and Brake, 2009). This array of online communication channels/tools have five characteristics in common: (1) *participation*, as anyone can create and give feedback on content; (2) *openness*, as most social media permits people to post content and feedback; (3) *conversation*, as it facilitates two-way interaction; (4) *communities*, as groups with similar interests can form quickly; and (5) *connectedness*, as there is heavy use of links to other content. It is important to note that interactivity is the key factor connecting these five characteristics (Coombs, 2014).

One of the particularities of the Internet that keeps attracting public relations people is the way online communities form. Online communities are groups of people with similar goals or interests that connect with one another and exchange information using web tools (Owyang, 2008), and social media has thereby increased the speed and ease with which online communities are created.

Public relations (PR) is the way organizations, companies and individuals communicate with the public and media. A PR specialist communicates with the target audience directly or indirectly through media with an aim to create and maintain a positive image and create a strong relationship with the audience. PR is of utmost importance for the organizations in the information age. When acknowledging PR's importance, Bill Gates, one of the founders of Microsoft Corporation, once stated: "*If I was down to my last dollar I would spend it on PR*".

Online communities are rather important stakeholders for an organization, as the comments and actions of these communities may have a significant effect on an organization. That potential to affect organizations is what makes online communities and social media very

important to crisis communication and crisis management (Coombs, 2014). The primary value of social media is then listening to what stakeholders are saying, not in sending them information, and providing access to information when stakeholders might need it (Coombs, 2014). Consequently, the information that stakeholders create and share online, i.e., consumer-generated media, might include activities such as blogging, micro blogging and social network sites. Thus, the active sharing of information by stakeholders it is what makes social media of concern to crisis managers, since in case they share negative information about an organization, that can create a crisis that could spread very fast to many people in a short amount of time.

This was exactly what happened to H&M in the winter of 2010, when the brand sparked fury across the Internet after unsold clothing was found shredded and discarded outside a New York City store. Initially, H&M ignored the situation and did not issue any comment on the incident. However, the controversy spread to social network sites and H&M's irresponsible clothes shredding became a trending topic. Later, H&M management publicly expressed that the action was not a standard practice and assured that an incident like that would never happen again, since H&M's own policies are to donate unused clothing to charity.

H&M, a brand that was generally viewed as socially responsible, was in this situation caught being irresponsible and violating behaviours it was supposed to support. The persistent communication of indignant people forced the company into making the change since the controversy appeared very actively and very visibly in the online environment. The promise of not to letting this happen again had some credibility in the eyes of the stakeholders, and shortly after, the controversy faded, as stakeholders seemed satisfied with H&M's response.

Therefore, it is important for organizations to consider what it is said online if they want to engage in an effective crisis management.

2.7.1. Social network sites (SNS)

Today, the electronic exchange of information, the dissemination of personal opinions, the commenting, as well as the rating by internet users, occurs on varied platforms, applications and sites on the Internet, such as blogs, discussion forums, reputation rating tools, commercial sites, newsgroups and, more importantly, social network sites (Cheung and Lee, 2012, as cited by Einwiller *et al.*, 2017).

Social network sites are platforms known for enhancing the speed at which opinions are spread.

Boyd and Ellison (2008: 211) defines social network sites as "*web-based services that allow individuals to construct a public or semi-public profile within a bounded system,*

articulate a list of other users with whom they share a connection, and *view and traverse their list of connections and those made by others within the system*". SNS such as Facebook, Instagram, Twitter, LinkedIn and MySpace, allow users to find and link to other people. Once linked or connected, they can keep up to date with that person's contact info, interests and posts. Many people can even connect to people with whom they may have lost contact with in the past. According to Jones (2009), it brings the world together like nothing else has ever been able to.

2.8. Social media crises

As previously mentioned, social media crises are primarily reputational concerns in which the affected organizations experience large attributions of guilt. Therefore, Coombs (2014: 22) defines social media crises as "*events that can harm an organization and arise in or are amplified by social media*" and further divides social media crisis into three, distinct categories:

1. *Organizational misuse*: a social media crisis caused by an organizational misuse of a social media channel;
2. *Dissatisfied customers*: a social media crisis caused by a customer relation's problem;
3. *Challenges*: a social media crisis that occurs because an organization's behaviour or policies are perceived as inappropriate or irresponsible;

In general, definitions of social media crises are very broad, and the concept is intertwined with several other pseudonyms and closely related concepts. For instance, Pfeffer *et al.* (2014) use the term "*online firestorm*", which is be the adopted term throughout this research.

2.9. *Online firestorms*

In recent years, different organizations have learned of several cases where they found themselves in the middle of situations in which the sudden discharge of a considerable number of online complaints, or an *online firestorm* (Pfeffer et *al.*, 2014), sparked controversy and even prompted calls for a boycott of the organization (Lim, 2017).

Pfeffer *et al.* (2014: 118) terms an *online firestorm* as "*the sudden discharge of large quantities of messages containing negative WOM and complaint behaviour against a person,*

company, or group in social media networks. In these messages, intense indignation is often expressed, without pointing to an actual specific criticism".

From a reputational standpoint, it is considered particularly dangerous when journalists give coverage to *online firestorms*, because "*reputations are fragile assets that can easily be destroyed by media-hyped negative WOM*" (Williams *et al.*, 2012: 11, as cited by Einwiller *et al.*, 2017), as the potential for reputational damage increases when the mainstream media report about the online criticism thereby potentially reaching more targets (Schultz and Wehmeier, 2010, as cited by Einwiller *et al.*, 2017).

In this regard, the potential harm from OFs should not be neglected since they can affect organizations' stakeholder relations and the organizational reputation (Lim, 2017).

Although OFs share some similarities with rumours, they are rather different in terms of the level of aggression involved, and are opinion-based messages, thus carrying a high emotional nature attached.

2.9.1. Characteristics

OFs seem to share characteristics with moral panics (Goode and Ben-Yehuda, 1994, as cited by Johnen *et al.*, 2017).

A moral panic is a collective behaviour during which "*a condition, episode, person or group of persons emerges to become defined as a threat to societal values and interests*" followed by stereotypical presentations as well as moral condemnations by societal elites (Cohen, 1972:1, as cited by, Johnen *et al.*, 2017). Goode and Ben-Yehuda (1994), as cited by Johnen *et al.* (2017), identify five core characteristics of moral panics.

The first one is *concern*, and it is a potential threatening behaviour of a person or group against moral values. Second, *hostility*, is a potential threat towards the accused. Third, *disproportionality*, is the exaggerated concern regarding the objective threat. Fourth, *consensus*, is the perceived agreement about a threat by a group of people. Last, *volatility*, as moral panics emerge and fade quickly. In addition, opinions expressed in OFs contain hostility and indignation towards the accused and arise within a short period (Pfeffer *et al.*, 2014, as cited by Johnen *et al.*, 2017).

All characteristics above resemble those involved in the forming of *online firestorms*, where a moral concern shared by a multitude of participating users, is no more than an exaggeration in terms of becoming a real threat to the society. Despite the similarities shared between moral panics and *online firestorms*, some authors consider, though, that OFs are a

specific form of moral panics that are different than traditional moral panics due to the amplification provided by the online communication context (Johnen *et al.*, 2017).

In conclusion, OFs are classical forms of protest from the offline world, that now have found a place in the digital world (März, 2010, as cited by Einwiller *et al.*, 2017). They are "*joint event-induced, dynamic, and public offenses from a large number of internet users via social media platforms on a brand that are aimed to harm it or to force it to change its behaviour*" (Rauschnabel *et al.*, 2016: 382), and can even be considered an attempt at scandalization, i.e., "*a communication process in which alleged transgressions or failures of public figures, groups, organizations, or institutions are denounced with the aim of eliciting public outrage*" (Geiß, 2017, as cited by Einwiller *et al.*, 2017). Figure 7 summarizes the OFs characteristics.

Figure 7. *Online firestorms* characteristics.

Characteristic	Explanation
Event-induced and dynamic	OFs do not develop slowly overtime, but are induced by a particular event on a social media platform. In many cases, they develop and grow within several hours or days in an uncontrolled way.
Large number of participants	OFs usually involve a large number of participants.
Joint	In OFs, partcipants attack the target in group.
Public	OFs develop and spread on social media platforms.

Source: Rauschnabel *et al.* (2016).

2.9.2. Triggers

According to Rauschnabel *et al.* (2016), OFs may be triggered by three different types of incidents: *unethical behaviour*, *core business problem* and *communication issue*.

Perceived *unethical behaviour* of an organization refers to a perceived false behaviour of an organization regarding social, legal, ecological or political issues. It is important to note that the perception of this behaviour is highly subjective. Thus, an OF may arise even if the organization's behaviour is aligned with legal and regulatory rules of the context in which it operates. Usually, groups such as non-governmental organizations (NGOs), interest groups, or other social communities are more prone to targeting unethical behaviours (Rauschnabel *et al.* 2016).

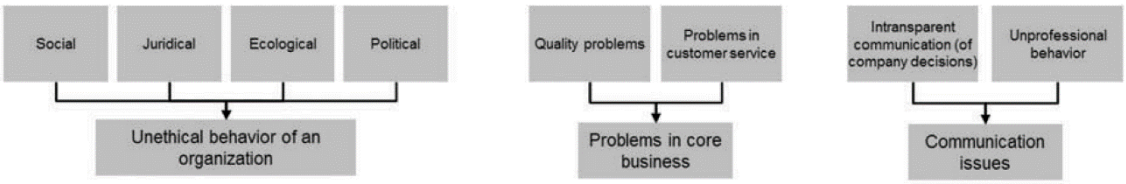
Going back to the first example shown in the introductory section, in January of 2018, and despite the good intentions of H&M at the time it published the advert on their website, it is now clear that something did not work as intended, and the campaign failed its purpose. Not only did the advert miss its main objective, but it also generated awareness towards a sensitive topic such as racism. The incident was on the spotlight for a few days due to the coverage of media from all around the globe. After acknowledging the *unethical behaviour* of H&M, people were stunned since they were not expecting at all that such mistake could take place in a company like H&M, which gives so much importance to diversity and inclusiveness. Then, the indignation led many to join the OF as a protest and to prevent similar campaigns from happening in the future.

In respect to perceived business problems, these can be triggered by perceived quality problems in the core business of a brand, such as problems in products (faulty products), or problems related to customer service. Sometimes brands are not aware of such problems in their core businesses until internet users give voice to their concerns (Rauschnabel *et al.* 2016).

This was exactly what happened with Kryptonite brand, after a biking enthusiast posted a video on the Internet showing how to use a Bic pen to open a Kryptonite lock. The company faced an unexpected public relations firestorm shortly after.

In respect to perceived unfair or unprofessional communication behaviour, sometimes, from the internet users' point of view, companies fail to communicate clearly and transparently their organizational decisions to stakeholders, which can trigger an OF. In these cases, internet users have the perception that the brand managers do not communicate with them properly or engage in communication that is not perceived as appropriate for a brand of the such reputation (Rauschnabel *et al.* 2016). Figure 8 presents an overview of the OF triggers.

Figure 8. *Online firestorms* triggers.



Source: Rauschnabel et al. (2016).

2.9.3. Amplifying factors

OFs may escalate rather quickly. Rauschnabel *et al.* (2016) outline some their amplifying factors.

The first amplifying is the absence of a fast and appropriate reaction by the organization under attack. This may be problematic since when organizations do not respond immediately i.e., when OFs are still in their early stages, or if they react in a perceived "*wrong way*", they contribute to the growth of OFs. When organizations disregard negative content, deny mistakes, or communicate in a non-transparent manner, OFs can develop at a staggering pace, as such actions motivate internet users to continue their attack.

The second amplifying factor is related with the perceived unfair use of an organization's power, also termed as the *Robin Hood effect* (Rauschnabel *et al.*, 2016). This occurs when not affected internet users perceive that an organization makes use of its power unfairly, once after the attack has started. This behaviour has an amplifying effect since it encourages unaffected users to join the OF as they find the power misuse as non-acceptable, and thus want to support the initial attackers. When social media users allege that an organization exploits its power unfairly, OFs tend to develop faster and more intensely. It is also considered that unfair behaviour by an organization towards one user of a group is often viewed as an attack on the whole group and this may be explained by the sense of community of people who engage in common activities (Algesheimer, Dholakia, and Herrmann 2005; Bagozzi and Dholakia 2002, as cited by Rauschnabel *et al.* 2016).

The third amplifying factor is when influential organizations, such as NGOs, traditional media, or informal interest groups, identify or communicate OF related information. Usually, these organizations have a loyal community and a trustworthy image which increases substantially the likelihood of getting attention from potential OF contributors. Consequently, OFs develop more quickly and become stronger.

The last amplifying factor is the appealing trigger-related content to share. In general, well-produced content increases the likelihood that consumers will perceive, watch/read, and share OF related content.

2.9.4. Targets and initiators

In respect to OFs targets, Rauschnabel *et al.* (2016) argue that they may include an organization, and all its sub structures. Other targets may be individuals (e.g. CEOs) associated with an organization.

Regarding the beginning of OFs, these are usually started by internet users and they can be divided into the following categories: *customers who are dissatisfied with an organization*; lobbying groups, journalists, or NGOs, which see OFs as a useful way of drawing attention and achieve high impact for their interests, and *social media users who are not necessarily*

customers of the brand. This latter might decide to engage in an attack moved by of various motivations, such as the desire to change the organization's behaviour, to punish wrongdoing, or simply for fun or to alleviate boredom or tediousness.

2.9.5. Mainstream media

OFs are often an attempt at scandalization. Thus, despite the role of the Internet in it, the negative mass media coverage of accusations towards a person or an organization remains the main driver of scandalization. Entman (2012), as cited by Einwiller *et al*. (2017), reinforces the idea that digital communication channels could not create by themselves scandals without the assistance of the mainstream mass media channels. As such, journalists play a crucial role in the public scandalization process as cases of norm violations are dragged into the public spotlight (Einwiller *et al.*, 2017).

Due to the internet offers, new opportunities for journalistic research and social media have become important information sources for many contemporary journalists (Machill and Beiler 2009; Neuberger and Welker 2008; Spangenberg 2015; Paulussen and Harder 2014, as cited by, Einwiller *et al.*, 2017).

2.10. *Online firestorms* vs traditional crises

In practice, what triggers OFs is different than what triggers traditional crises. OFs refer to relatively minor events, and thus, when compared to traditional crises triggers, do not held the potential to initiate a brand crisis in presocial-media world. Some triggers that lead to OFs can be caused by a mere subjective lack of quality, which does not necessarily exist from an objective perspective. This implies that, contrary to what happens in traditional crises, OFs do not require major quality problems to be triggered, yet it is sufficient that the products do not meet the expectations of consumers.

Traditional crises occur because of events that are external or incidents on a strategic level, such as product recalls (e.g. the explosion-prone Samsung Galaxy Note 7 case of 2016) or fraud (Coombs 2007, as cited by Rauschnabel et al. 2016), whilst OFs may be triggered by a variety of factors that are, at least from an organizational perspective, rather minor, that are caused by individuals and based on subjective perceptive actions of other individuals, and that are unpredictable. The unpredictability results from the difficulty of managers in identifying which communication behaviour or action is perceived as wrong by internet users with the responsibility being fully attributed to the brand. While offline brand crises are mostly initiated

by journalist articles or formal or informal institutions, OFs can be initiated by any internet user.

In most of the cases, the language used in OFs is emotional, offensive, aggressive, insulting, or threatening and thus very different from the objective and rational tone used in traditional offline crises. For instance, in OFs, several other forms of content are used such as pictures (*memes*) and videos, compared to traditional offline crises. The content of verbal material in traditional crises is articles in newspapers and magazines, written mostly by professional journalists, whilst in OFs the share of harsh, insulting and unprofessional content is much higher than in offline communication crises.

Most OFs start on organization's social media platform. However, that are cases where OFs emerged on external platforms unrelated to the organization and later emerged to other social media platforms. Usually, traditional crises develop in the offline world and spread via traditional media. However, recently, increasingly traditional media reports transfer to social media too. Conversely, OFs begin in social media and gain attention of journalists of traditional media. This originates a transfer of social media content to traditional print and television media.

In terms of reaction and strategy, there are some similarities but also differences between traditional crises and OFs. OFs emerge quickly, are often unpredictable, and require a swift response by the brand in comparison to offline crises. Therefore, a 24/7 webcare and an emergency plan for reaction is required.

Strategies such as counter-statements and appeasement exist for both traditional crises and OFs. However, the former strategy might be far less effective in the online world as discussions in social media are more emotionally dependent, and everyone can contribute to the discussion/attack. Attackers expect a quick apology as well as an observable change in the brand's behaviour. Moreover, social media organizations get into direct contact with customers or users and listen to their issues – a reaction that is often rather appreciated by users. Such strategy is only possible to take due to the technological advancement, and hence it appears to be more replicated for OFs as compared to traditional crises.

Even though the duration of OFs is typically shorter than crises in traditional media, user generated content and reports thereof, often formulated harsh, offensive language, typically remain visible in blogs, YouTube videos, and other social media platforms, for a long time. That is, the crisis itself, its trigger, and the brand's reaction are all well documented and visible on the Internet.

In sum, traditional crises are typically triggered by events more substantial and more objective than those leading to OFs, such as natural diseases, industrial accidents, violated laws, product recalls, and others. In general, such triggers have their origin at higher hierarchical levels in the organization (e.g., strategic mistakes). OFs, on the contrary, can be induced by minor mistakes, even from few individual employees at lower hierarchical levels.

In traditional situations, mass media mostly spread information about the crises, whilst OFs start on social media platforms. Later, during the crisis, OFs may be transferred over to traditional media (e.g., "United Breaks Guitars" case of 2009); thereby reaching audiences that typically do not use social media.

Whereas traditional media usually cover crises in a rather moderate, often neutral, and focused manner, this is often not the case for social media communication around regarding OFs. First, users' tonality tends to be aggressive, insulting, and threatening. Second, the focus of an OF related discussion may shift towards unrelated topics.

The crisis process observed in OFs might be explained by at least three important characteristics of social media. First, the large number of participants in combination with their heterogeneous background, motives, and objectives leads to a high level of variance in writing style and content. Second, the high level of anonymity leads certain participants to adopt a communication style they would not show in a context in which their identity could be tracked or revealed. Third, the lack of coordination and transparent governance mechanisms does not determine a clear direction for the contributions individuals make to the overall communication that a given OF involves.

The consequences of OFs and traditional crises can be quite similar. Both can result in negative implications for organizations, such as a loss of reputation, negative effects on financial performance, and so forth. However, substantial differences exist with respect to the crisis process and the effectiveness of response strategies. Therefore, it is crucial to understand to what extent classical response strategies may be effective in a social media context during an OF.

A comparison between traditional crises (as described by SCCT) and *online firestorms* is shown in figure 9.

Figure 9. *Online firestorms* and traditional crises (SCCT) comparison.

TRADITIONAL CRISES (SCCT) VS. ONLINE FIRESTORMS		
TRADITIONAL CRISES (SCCT)		**ONLINE FIRESTORMS**
Real harm to stakeholders or environment caused by disasters, accidents, or misconducts.	**TRIGGERS**	Perceived wrong behaviour in terms of quality, ethics or communication of an organization.
Critics by journalists and TV hosts in selected TV and print media contributions.		Critics by a large number of (affected and/or unaffected) social media users.
Crisis history and organization's reputation.	**AMPLIFIERS**	Appealing content and NGOs/informal groups involvement. Lack of fast and/or appropriate response.
Reaction expected within days by official press release or CEO statement. Denial and counter-statement responses might be adequate.	**REACTIONS**	Immediate reaction by the organization. Denial and counter-statement responses are not adequate.
Negative press and maybe UGC. Loss of reputation. Financial.	**CONSEQUENCES**	Negative UGC and maybe press. Loss of reputation. Financial.

Source: Rauschnabel et al. (2016).

After addressing the root causes, development, and implications of OFs, the next section outlines the research question, the objective, the hypotheses and the proposed conceptual model for the present research.

3. Research question, objective, hypotheses and conceptual model

As already addressed, *online firestorm* is a contemporary phenomenon capable of compromising the future of any organization. Thus, organizations must be prepared to counter these "*large quantities of messages containing negative WOM and complaint behaviour*" Pfeffer *et al.* (2014: 118) that are highly amplified by social and traditional media. In a social media crisis, communication plays a decisive role in its escalation.

Before assessing potential *image repair strategies* that organizations can rely on, it is imperative to understand what *online firestorms* are in its essence, under what circumstances they are spread and what they may represent in terms of short and long-term consequences.

Being viral is one of the most important factors that make possible the escalation of a social media crisis. Mills (2012: 163) states how "*the term* '*viral*' *connotes infection*: *rapid spreading across individuals and communities, growing exponentially with each cycle*. *The key to such rapid and successive spreading is that the virus is contagious and therefore distribution is both self-propelled and exponential*". *Virality*, i.e., the willingness of publics to share or forward messages is a driver of social media crises and has been argued that is driven by physical arousal, such as anger, provocation or surprise (Utz *et al.*, 2013; Berger and Milkman, 2013).

When crisis response strategies successfully reduce the offensiveness of an event, a crisis threat may be mitigated (Coombs, 2014). Therefore, it possible to deduce that appropriate crisis management may reduce stakeholder intentions of engaging in secondary crisis communication. This is crucial for the further escalation of a crisis, as social media crises are powered by stakeholder engagement (Trittin, 2013).

Since virality is a basic prerequisite of social media crises, as a stakeholder challenge on social media is unlikely to turn into a social media crisis by itself, i.e., without a viral spread, virality is an amplifier effect that has serious implications for crisis management on social media. Therefore, secondary crisis communication, such as the willingness of publics to share or forward messages, is positioned as an important driver of crises that emerge in online environments (Utz *et al.*, 2013).

Considering this reasoning, it is likely to expect that in respect to organizations under attack, the more they refrain SNS users' from *forwarding* and conveying *negative WOM* messages, the closer they get to mitigating incoming damage or even avoiding an *online firestorm*.

To accomplish this, the use of adequate *image repair strategies* is mandatory as these can absorb the damage that may occur in case an *online firestorm* arises. This way, the impact generated by an *online firestorm* will not be as strong as it could be if more SNS users kept sharing and forwarding negative user-generated content such as complaints for example and conveying negative opinions on the Internet against an organization. In addition, this can also allow organizations to buy some time to implement other crisis response strategies more tailored to the situations that they may face.

According to Benoit and Drew (1997), who analysed the appropriateness and the effectiveness of fourteen specific image repair strategies, *corrective action* and *apology* (mortification) are perceived as more effective and appropriate than other strategies to repair the image of an organization. In his research, *apology* scored the highest in the tests conducted overcoming *corrective action* by a small margin. As such, when using both strategies within the scope of the present research, the following research question and objective is derived:

3.1. Research question

Which *image repair strategy* (*corrective action* vs. *apology*), if any, employed by an organization under attack, has a higher positive (i.e. lowers to a greater extent) effect on *forwarding* and *negative WOM intentions*?

3.2. Objective

Evaluate which *image repair strategy* (*corrective action* vs. *apology*) is most effective for an organization under attack to employ, to lower *forwarding* and *negative WOM intentions*.

3.3. Hypotheses

Some studies have found that *corrective action* and *apology* are amongst the most effective strategies to repair an organization's image. As stated previously, Benoit and Drew (1997), who analysed the appropriateness and the effectiveness of fourteen specific image repair strategies, found that *corrective action* and *apology* (mortification) are perceived as more effective and appropriate than other strategies. In his research, *apology* scored the highest in the tests conducted overcoming *corrective action* by a small margin.

Conversely, Coombs and Holladay (2008) demonstrated divergent results in a similar research. Considering the results verified in their research, *apology* is often overpromoted and incorrectly considered the best alternative. According to them, frequently, the value of an

apology is established by comparing how people react to an *apology* and to other less victim-centred/accommodative responses. This unfair comparison skews the results and makes *apology* appearing to be the best alternative, which is not true. In their research, *apology* is compared to more equivalent crisis response strategies to more accurately determine whether *apology* is the best strategy. The results suggested that people react similarly to any victim-centred/accommodative strategy, thus contradicting prior studies.

These divergent results show the need for further research. Therefore, and adapting to the scope of the present research, it is hypothesized that *apology*, as an *image repair strategy* employed by an organization under attack, has a higher positive (i.e. lowers to a greater extent) effect on Facebook users' *forwarding* and *negative WOM intentions* than *corrective action*.

Accordingly, the first pair of hypotheses is suggested:

3.3.1. Hypothesis 1a

Apology has a higher positive effect on *forwarding intentions* than *corrective action*.

3.3.2. Hypothesis 1b

Apology has a higher positive effect on *negative WOM intentions* than *corrective action*.

It was previously acknowledged how social media crises are mainly reputational concerns, in which the affected organizations experience large attributions of guilt (Coombs, 2014). The attribution of responsibility is important, as the perceived level of responsibility for the crisis attributed to the organization, influences how the organization may react to crisis threats (Jin *et al*., 2014). In the event of high attributions of responsibility, it is advisable to use more accommodative strategies, as those incorporated in the rebuilding posture of the SCCT framework (Coombs, 2014; Ki and Nekmat, 2014). Moreover, research has provided mixed support for the hypothesis that when an incident results in a more severe outcome, more responsibility will be attributed to a potentially responsible actor (Robbennolt, 2000).

For instance, an experiment conducted by Walster (1966), suggested that the more serious the consequences of an accident, the more responsibility for the occurrence will be attributed to a person potentially at fault. This implies that people attribute greater responsibility for the outcome of a negative incident when that outcome is more severe than when the outcome is less severe. However, the strength of the correlation varies depending on which type of judgment participants are asked to make (Robbennolt, 2000). While a number of subsequent

studies have replicated Walster's (1966) original findings (e.g., DeJoy and Klippel, 1984; Gleason and Harris, 1976; Wilson and Jonah, 1988), other studies have either failed to find a relationship between outcome severity and judgments of responsibility (e.g., Shaver, 1970a, Study 1; Shaw and McMartin, 1977; Thomas and Parpal, 1987) or have even found a slight inverse relationship (e.g., Shaver, 1970a, Study 3), cited by Robbennolt, (2000).

The notion that as the severity of the outcome of an action increases, the *attributed responsibility* to the actor increases has been termed as *defensive attribution*. Fiske and Taylor (1991: 85), as cited by Robbennolt (2000), described defensive attribution stating that: "*as the consequences of an action become more severe, they become more unpleasant, and the notion that they might be accidental becomes less tolerable. The fear that the same thing might involve the self becomes a realistic possibility. Seeing the actions as avoidable and blaming a person for their occurrence makes the actions more predictable and hence avoidable by the self*". Thus, attributing responsibility to an actor makes the incident seem somehow controllable and, accordingly, avoidable.

Furthermore, it is known that the threat posed by a crisis extends to behavioural intentions. Increased attributions of organizational responsibility for a crisis result in a greater likelihood of *negative WOM* about the organization and reduced purchase intention from the organization. Early research also suggests that lessons designed to protect the organization's reputation will help to reduce the likelihood of negative WOM and the negative effect on purchase intentions as well (Coombs, 2007).

Therefore, considering some prior studies that showed divergent results, and following the same reasoning within the scope of the present research, it is hypothesized that *attributed responsibility* moderates the effect of the *image repair strategy* employed by an organization under attack on Facebook users' *forwarding* and *negative WOM intentions*.

Accordingly, the second pair of hypotheses is suggested:

3.3.3. Hypothesis 2a

Attributed responsibility moderates the effect of *image repair strategy* on *forwarding intentions*.

3.3.4. Hypothesis 2b

Attributed responsibility moderates the effect of *image repair strategy* on *negative WOM intentions*.

Sengupta and Johar (2002), found that *brand attitude* functions as a predictor for intended (future) behaviour. Other research also acknowledged that *brand attitude* is strongly associated with purchase intentions and brand loyalty (Chaudhuri and Holbrrok, 2001; Keller, 2003), for example.

Conceptually, *brand attitude* is the general brand evaluation, based upon beliefs or automatic affective reactions (Murphy and Zajonc, 1993; Walla *et al.*, 2011). It does combine a strong emotional component (Thompson *et al*, 2006), as well as cognitive aspects in terms of brand associations (Low and Lamb, 2000), and includes the extent to which an organization can create emotional connections with consumers (Lemon *et al.*, 2001; Walla *et al.*, 2011).

Acknowledging this construct's centrality in marketing, researchers have manipulated *brand attitude* for years through brand-related stimuli (e.g., Hoch, 2002; Labroo, 2006). Initially considered as steady over time (Allport, 1935; Petty, 1981), *brand attitude* appears to vary prior to or upon purchase (Krishnan, 1998; Shen, 2007).

For organizations, the creation of a positive *brand attitude* is of utmost importance (Walla *et al.*, 2011), since individuals' behaviours can be highly affected by their attitudes towards a product/brand (Friedkin, 2010), and thus, the attitude's positivity towards a brand will probably have a positive influence on brand loyalty and purchase behaviour. This can then increase the value of a brand to promote its positive affective response, which in turn is the point of origin for brand profitability and brand equity (Chaudhuri and Holbrrok, 2001; Sweldens and Janiszewski, 2010). Over time, consumers' *brand attitudes* can significantly affect organizations' performances.

Most of the studies done on *brand attitude* are highly regarded, which is not surprising considering *brand attitude's* value for explaining brand-related issues and consumer behaviour.

According to some studies, consumers' behaviour can be explained by the *Theory of Planned Behaviour*. This theory posits that attitude, subjective norm, and perceived behavioural control influence an individual's intention to perform a given behaviour.

In most of brand attitude-related studies, *brand attitude* either serves as a dependent variable when testing for various effects in advertising (Sweldens and Janiszewski, 2010; Mackay *et al.*,2009) or as predictor for purchase intention (Gresham and Shimp, 1985; Batra and Ray, 1986).

Within the scope of the present research, *brand attitude* is tested as a predictor not for purchase intentions, but in respect to *forwarding* and *negative WOM intentions*.

Therefore, it is hypothesized that *brand attitude* mediates the effect of the *image repair strategy* employed by an organization under attack, on Facebook users' *forwarding* and *negative WOM intentions*.

Accordingly, the third pair of hypotheses is suggested:

3.3.5. Hypothesis 3a

Brand attitude mediates the effect of *image repair strategy* on *forwarding intentions*.

3.3.6. Hypothesis 3b

Brand attitude mediates the effect of *image repair strategy* on *negative WOM intentions*.

Some studies suggest that the absence of a response provided by an organization targeted by negative WOM engenders negative responses in consumers. For example, Lee and Song (2010) exposed participants to negative WOM that was either followed or not followed by an accommodative response in which a company under analysis tried to redress the complaint expressed in the negative WOM. The results indicated that an accommodative response has a more favourable effect on how individuals evaluate the company than no response at all. In a similar research, Kerkhof *et al.* (2010) also demonstrated that any form of accommodative response (e.g. *apology* or financial compensation) to *negative WOM* evokes positive cognitive responses in consumers.

While some scholars defend that it is crucial to provide an organizational response following negative WOM, Lyon and Montgomery (2013: 751) outline how an organization may make a deliberate choice to "*not communicate at all on a given topic*". Nevertheless, prior research, such as Bradford and Garrett (1995) studies, showed that if corporate executives do not respond, third party observers' perceptions of a corporation's image are negatively impacted by accusations of unethical organizational behaviour. This finding is particularly meaningful, since it implies that corporate executives should focus on how to respond, not on whether to respond to accusations of unethical organizational behaviour. If executives remain silent, the research revealed that third-party observers are likely to process the accusers' negative information and lower their perceived image of the accused corporation.

Conversely, Lee (2004: 613) found that when an organization uses a *No Comment* strategy, rather than a minimization strategy, it generates significantly more trust in the organization and the organization is viewed as having less responsibility for the crisis. Lee

attributes this to a cultural difference between Western and Eastern societies. Accordingly, Eastern societies are more tolerant of "*a silent, reserved gesture*", thus pointing to the possibility that culture might influence how image repair strategies are perceived.

Therefore, these divergent results show the need for further research, particularly within the scope of the present research.

Therefore, it is hypothesized that the absence of an *image repair strategy* employed by an organization under attack has a negative effect on Facebook users' *brand attitude*.

Accordingly, the fourth hypothesis is suggested:

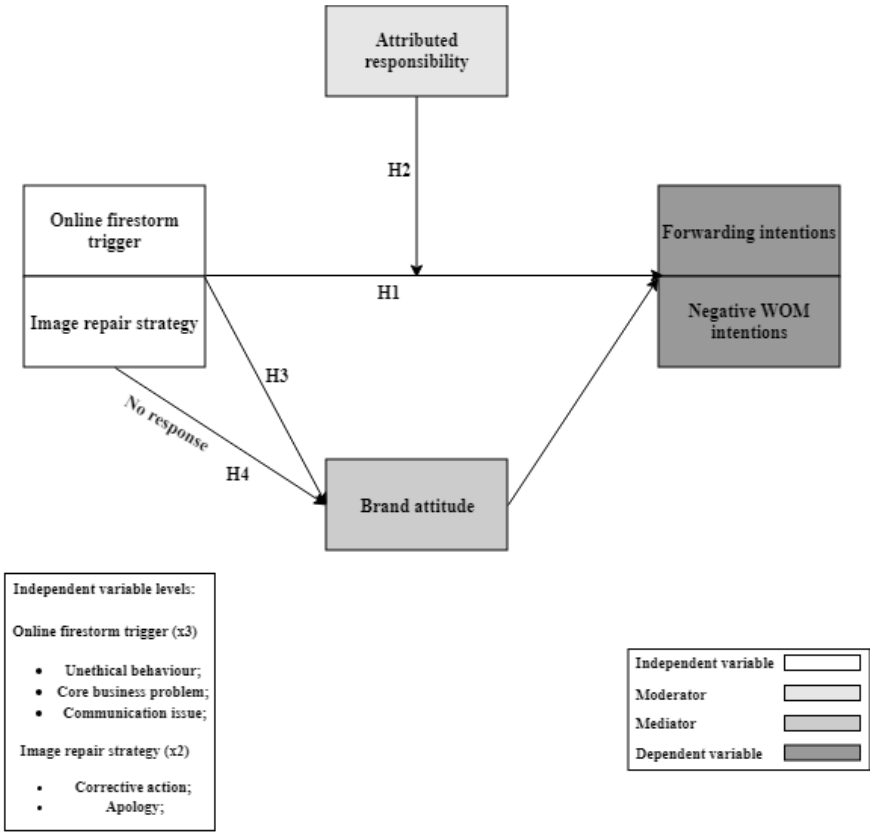
3.3.7. Hypothesis 4

The absence of *image repair strategy* has a negative effect on *brand attitude*.

3.4. Conceptual model

A research model including all hypotheses is proposed in figure 10 to explain how the research was constructed.

Figure 10. Proposed conceptual model.



Source: Developed by the researcher.

4. Methodology

In this section, it is outlined the reasoning behind the application of specific procedures, as well as the approach taken to investigate and respond to the research question proposed.

Thus, the methodology section aims to provide answers to the following questions:

- What research and quantitative approach was taken?
- How was the research designed?
- How was the data collected?
- How was the data analysed?

4.1. Research approach

The present research used a deductive approach, which required that the researcher based upon what is known about in a specific domain and of theoretical considerations in relation to that domain, deduced a hypothesis (or hypotheses) that were then subjected to empirical scrutiny (Bryman, 2012). Considering Robson's (2002) framework of deductive research, the research undertaken followed the five stages below:

1. Deduce hypotheses from the theory;
2. Express the hypotheses in operations terms, which propose a relationship between specific variables;
3. Test the operational hypotheses;
4. Examine the specific outcomes of the inquiry;
5. Modify existing theory in the light of the results, if necessary;

The previous section presented seven hypotheses that were deducted based upon the literature review investigated, and their experimental testing makes up the background for the examination of the research question.

The hypotheses were formulated based on the recommendations of Wimmer and Dominick (2013: 212), who outline some of the characteristics a useful hypothesis must have. According to them, it should be compatible with current knowledge in the area, logically consistent, stated concisely, and testable. Besides this, a deliberate choice of not stating null hypotheses was made, as each research hypothesis has a logical alternative (Wimmer and Dominick, 2013).

Collaboratively, the seven hypotheses guided the design of the present research. Hence, the research design needed to produce data that would expose causal relations between specific variables in relation to the variables under analysis, to corroborate or contradict the proposed hypotheses. Therefore, a quantitative research approach was selected.

The research conducted draws upon current academic knowledge and aims to contribute to the body of knowledge of the topics approached, by actively addressing the lack understanding of the effects of different *image repair strategies* on perceptions and behavioural intentions.

4.2. Quantitative research

A quantitative research is described by Bryman (2012: 35) as "*a research strategy that emphasizes quantification in collection and analysis of data*". Thus, the aim is to explain phenomena by collecting numerical data that are analysed using mathematically based methods, such as statistics (Muijs, 2010). Therefore, to test the hypotheses proposed, a quantitative research method was applied. More precisely, a questionnaire research was used, drawn upon the experimental vignette methodology.

The questionnaire research approach was chosen due to the possibility of researching relationships between variables, and since a quantitative questionnaire allows the comparability amongst groups of respondents as well as its quantification.

Experimental vignette methodology

A vignette is a "*a short, carefully constructed description of a person, object, or situations, representing a systematic combination of characteristics*" (Atzmüller and Steiner, 2010: 128), and may be presented in a variety of formats, such as written text, images, or video, and either independently or as a combination of different media types (Aguinis and Bradley, 2014). Atzmüller and Steiner (2010) distinguish between three types of vignette experiments, and that in respect to a within-subject design, where each participant judges only one vignette, was chosen for the present research design.

The vignette technique is a method that can elicit perceptions, opinions, belief norms, and attitudes from responses to scenarios and situations (Finch, 1987). Atzmüller and Steiner (2010: 128) outline how a quantitative vignette research consists of two components: "(1) *a vignette experiment as the core element* and; (2) *a traditional questionnaire for the parallel and supplementary measurement of additional respondent, specific characteristics, which are used as covariates in the analysis of vignette data*". Thus, the experimental vignette methodology

consists of presenting participants to carefully constructed and realistic scenarios, to evaluate dependent variables such as intentions, attitude and behaviours (Aguinis and Bradley, 2014).

Furthermore, the present research took the form of a "*paper people research*", where participants were prompted to judge a vignette consisting of both images and text that represented a hypothetical situation (Aguinis and Bradley, 2014). This approach allowed the assessing the effects of *image repair strategy* and *online firestorm trigger* in relation to SNS users' perceptions and intentions on social media.

Research context

As already stated, an *online firestorm* is a contemporary phenomenon capable of compromising the sustainability and subsistence of an organization. Thus, organizations must be prepared to counter them in the most efficient and effective way possible. To accomplish this, an adequate communication strategy is decisive.

On a global scale, several organizations, even the highly reputed ones, have faced *online firestorms* in recent years and this is expected to continue for many years to come. All of them experienced how the rise of new, digital media have enabled their stakeholders to turn inquiries or challenges into crises.

Therefore, *online firestorms* are a well-known phenomenon that needs to be fully addressed, and more contributions are needed for further developing the body of knowledge in relation to crisis communication and crisis management fields.

Facebook, as a social network site

The social network site Facebook is the biggest and most popular SNS in the world with more than 2.3 billion monthly active users worldwide (Ebizmba, 2018). In Portugal, approximately 6 million people use Facebook, which surpasses the number of users from other social network sites, such as Youtube, Instagram or Twitter. This makes Facebook the most used SNS in Portugal.

This SNS is also one of the most versatile of the biggest and most popular platforms, as it provides a wide range of functionalities for both users and organizations (Kietzman *et al.*, 2011). It is a platform that provides high levels of information and network access to its users, and it does not only foster peer to peer interactions, but also opportunities for "*pervasive awareness*", since individuals regularly broadcast and receive information from their networks (Hampton *et al.*, 2011).

Moreover, the programming algorithms, which shape the news feed of users, favour posts with high activity, regardless of the sentiment attached (Ott and Theunissen, 2015). Thus, Facebook facilitates information flows amongst users that may turn into *online firestorms*. Moreover, the negative user-generated Facebook content may have major impact, as it has been found that stakeholders' perceptions of organizations are significantly less positive after having been exposed to negative Facebook posts (Haig and Wigley, 2015).

Even though several studies have examined the implications of Twitter for crisis management (e.g. Gruber *et al.*, 2015; Brumette and Sisco, 2015; Schultz *et al.*, 2011), especially in the context of *online firestorms*, the lack of use of this SNS in Portugal, leads to limiting the research to exclusively focus on Facebook. This choice is further supported by the technical characteristics that Twitter presents, and significantly more varied options of communication forms of Facebook. Therefore, Facebook is the platform selected in the research conducted.

4.3. Study design

To investigate the research question and the hypotheses proposed, a factorial experimental design was used. This approach was taken since a factorial design allows for the simultaneous investigation of two, or more, independent variables (Wimmer and Dominick, 2013), and permits researchers to explore the possibility that the employed variables are interdependent at their effects on the dependent variables. Wimmer and Dominick (2013) further highlight three other advantages of applying an experimental research:

- The experimental approach provides evidence of causality, thus allowing to establish a cause and effect relationship between variables;
- The experimental approach can be replicated. Consequently, future researchers can reaffirm the results of the given research;
- The experimental approach provides researchers high levels of manipulation in respect to the settings of the research, the recruitment of participants, and variables;

The research used a 2 (*image repair strategy*: *corrective action*, *apology*) x 3 (*online firestorm trigger*: *unethical behaviour*, *core business problem*, *communication issue*) design.

Six distinct vignettes are used as independent variables, and the dependent variables measures consist of measures divided within two categories: *forwarding intentions* and *negative*

WOM intentions. The dependent measures are collected based upon 7-point Likert scales, using the anchors of "*strongly disagree*" and "*strongly agree*".

Independent variables

In respect to the independent variables, the research is limited to a 2 x 3 design, though a larger design could produce a richer dataset. This is a pondered decision, as a smaller design allows for a more careful and thorough analysis of the dataset. Furthermore, several researchers (e.g. Schultz *et al.*, 2011; Liu *et al.*, 2013; Utz *et al.*, 2013) have done their research drawn upon similar designs.

Thus, the present design comprises two types of crisis response strategies (*corrective action, apology*) combined with three types of *online firestorm triggers* (*unethical behaviour, core business problem, communication issue*).

Crisis response strategies

In respect to the crisis response strategies, it is used response strategies drawn upon the Image Repair (IRT) and Situational Crisis Communication (SCCT) theories posited by Benoit (1995) and Coombs (2007), respectively. These two dominant crisis communication theories have proven to be an important approach for understanding corporate crisis situations, and the most influential and thus widespread conceptualizations that aim to understand crises and crisis response strategies.

The SCCT framework is a widely reputed, and experimentally tested, theory. It is based upon a synthesis of prior work, and thus it incorporates both the perspectives of Corporate Apologia and Image Repair Theory. SCCT theory claims that an organization should accept its *attributed responsibility* of a crisis, and highlight its responsibility, in the communication response to its stakeholders. This translates into four distinct organizational postures, into which the specific crisis response strategies are grouped. It was specifically designed to provide organizational communicators with scientific evidence to help guide their decisions in the event of a crisis (Coombs, 2014). Therefore, it is applicable to real-life scenarios, and very accessible, which makes it an ideal fit within the scope of the present research.

IRT builds upon theories of Apologia and Accounts, outlining strategies that can be employed to repair an image in an event where reputation has been damaged (Benoit, 1995).

Since image is essential to organizations as well as individuals, IRT has been considered a viable approach for use in developing and understanding messages that respond to corporate image crises. Accordingly, using *image repair strategies* representing different organizational

approaches, allows for the construction of vignettes that are consistent in terms of message, but adjustable across the *online firestorm triggers* and representative of two different response strategies.

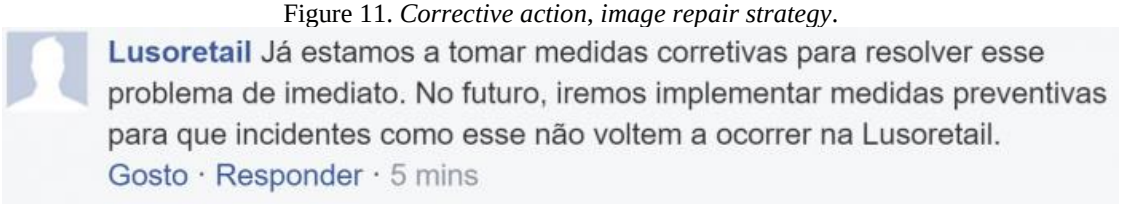
According to Benoit and Drew (1997), who analysed the appropriateness and the effectiveness of fourteen specific image repair strategies, *corrective action* and *apology* (mortification) are perceived as more effective and appropriate than other strategies to repair the image of an organization. Therefore, the present research focus on these two strategies and uses them within its scope. The strategies are as follows:

Corrective action: Those accused of wrong-doing may offer to take *corrective action*. The speaker may offer to repair existing damages or to take steps to prevent recurrence of the offensive act (Benoit, 1997b: 156).

Apology: the accused may admit the wrongful act and ask for forgiveness ("*concessio*n" or "*apology*"). Mortification may include expressions of regret (for one's role in the offensive act, or for the consequences of the act, or both), and requests for forgiveness (Benoit, 1997b: 156).

The crisis response strategies depicted in each experimental scenario are shown in figure 11 and figure 12 with the corresponding translation.

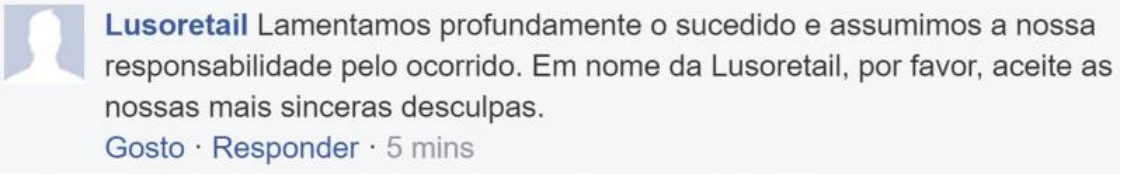
Figure 11. *Corrective action, image repair strategy*.



Translation – Lusoretail: We are already taking corrective actions to solve the problem immediately. In the future, preventive actions will be taken to prevent an incident like this from happening again at Lusoretail.

Source: Developed by the researcher.

Figure 12. *Apology, image repair strategy*.



Translation – Lusoretail: We are very sorry for what happened, and we take our responsibility. On behalf of Lusoretail, please, accept our sincere apologies.

Source: Developed by the researcher.

Form of communication

On Facebook, organizations have profiles that share similarities with those of individual users, the so-called pages. Pages are profiles that allow organizations to share content, connect with people, host events, and engage in various forms of communication.

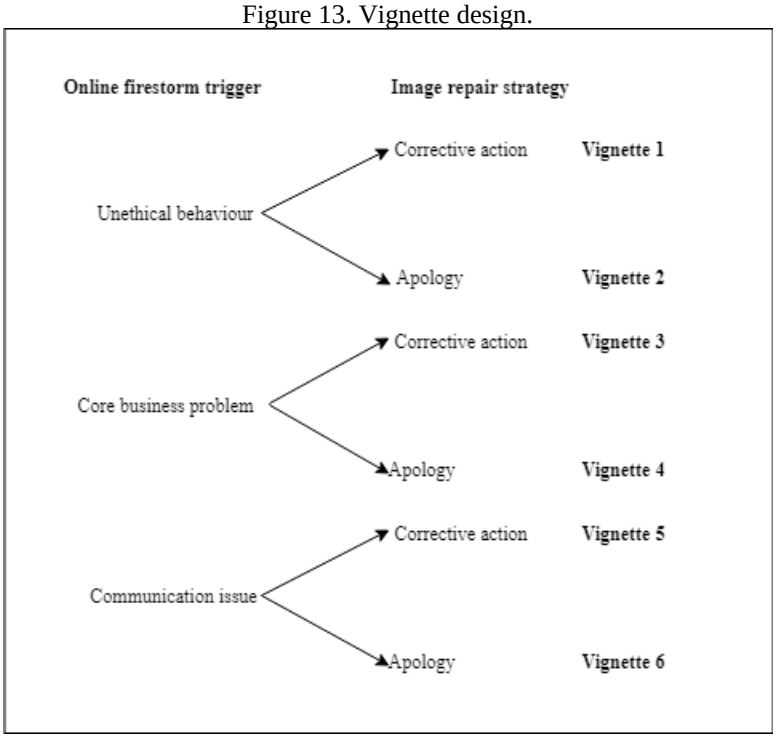
With respect to crisis management on Facebook, organizations may use the communication forms of: *private direct messaging*; *direct comment* on the post of an inquiry or challenge; *various statements or messages* published on their own page wall; *video*; *image*; uploaded *press releases* or other fixed formats on their wall; or through *redirecting* stakeholders to another channel of communication.

To respond to the research question and test the hypotheses, the direct reply form, i.e., the textual comment made directly on the stakeholder inquiry or challenge by the organization under attack was the adopted communication form.

Vignettes

A total of six vignettes were designed, and used as independent variables, which corresponded to a 2 x 3 design, as illustrated in figure 13.

Figure 13. Vignette design.



Source: Developed by the researcher.

Vignettes were designed to mimic the interface of Facebook, i.e., to make the scenarios as realistic as possible. Thus, the original Facebook layout was maintained to keep the look and

feel of a real corporate response in this social network site. The "*like*", "*share*", and "*comment*" options were also depicted to ensure authenticity.

In each vignette, an interaction between the organization and its stakeholders was depicted, i.e., participants were presented with a Facebook post that represented a complaint posted by a dissatisfied SNS user on a brand's page following an incident. The incidents were drawn upon similar real-life situations involving online firestorms.

The manipulation of the *online firestorm trigger* and the *image repair strategy* was obtained through the customization performed in the semantics and the contents shown in each complaint and respective organizational response.

Considering the Portuguese research context, the vignettes were written in Portuguese, as this guaranteed that language proficiency was not troublesome for responding to the questionnaire. Therefore, the use of Portuguese was considered necessary to create the six crisis scenarios.

Depicted scenarios

To assess the effects of the *online firestorm trigger* and the *image repair strategy* depicted in each scenario, fictitious crisis situations were depicted. The scenarios featured an indignant Facebook user named João, who criticised vehemently "*Lusoretail*", a fictitious Portuguese shoe brand, either over its *unethical behaviour*, a problem found in its *core business* or its *communication*. The incidents capable of triggering *online firestorms*, as well as the responses provided by the brand, were drawn upon similar real-life social media crises that occurred in recent times to the best of the researcher's knowledge.

In the first scenario depicted, figure 14, an *online firestorm* unfolded following a complaint posted by João on Lusoretail's Facebook page, where he questioned the brand's *unethical behaviour* over the throwing of waste in a river that flows through a city.

In the second scenario depicted, figure 15, João posted a comment on Lusoretail's Facebook page, criticising the inoperative customer service that made him wait over two weeks without having an answer to his problem.

In the last scenario depicted, figure 16, João accused Lusoretail due to its unprofessional communication, since according to João, the brand deleted his comment from their Facebook page and did not issue any response.

For each scenario, one of the two *image repair strategies* (*corrective action* vs *apology*) was shown after assessing Facebok user's (pre-response) *brand attitude*.

Coombs (2014) outlines how the factors of crisis history and prior reputation directly affect the size of the reputational threat. Thus, it was determined that basing the scenarios on a real brand, eventually a widely recognized brand, would affect how participants reacted to crisis communication efforts. It is plausible to presume that Facebook users' perceptions of a real brand would have influence and interfered in the way they evaluated their attitude towards the brand, as well as their behavioural intentions and attributed responsibility.

Therefore, the use of a fictitious brand removed any preconceived notions about an existing brand, which could have skewed the results. Additionally, this approach guaranteed that no intellectual property rights were infringed in the data collection process. The three scenarios can be found below with the corresponding translation.

Figure 14. Scenario 1, *unethical behaviour*-related incident.

Translation – Joao: How were you capable of throwing waste – that you created – in the river that flows through the city? You are polluting the environment and affecting public health! DEPLORABLE and SHAMEFUL!!!
Source: Developed by the researcher.

Figure 15. Scenario 2, *core business*-related incident.

Translation - Joao: I have been trying to contact your customer service for over 2 weeks now and without success. And there are other clients in the same situation! UNACCEPTABLE and OUTRAGEOUS!!!
Source: Developed by the researcher.

Figure 16. Scenario 3, *communication issue*-related incident.

Translation – Joao: How were you capable of deleting my comment without responding to me? And apparently, I am not the only one complaining! INCOMPREHENSIBLE and UNFORGIVABLE!!!
Source: Developed by the researcher.

Dependent measures

The effects of *online firestorm trigger* and *image repair strategy* were assessed according to a total of 5 measures.

The dependent measures *forwarding intentions* and *negative WOM intentions* were collected based on 7-point Likert scales, with the anchors of "*strongly disagree*" and "*strongly agree*" (Bryman, 2012). To each response was assigned a numerical value that corresponded to the level of agreement. Accordingly, "*strongly disagree*" was coded as 1, whilst "*strongly agree*" was coded as 7. The intermediate levels of agreement were coded from 2 up to 6, having the median level coded as "*neither agree nor disagree*".

Throughout the present research, the dependent measures were considered continuous variables, following the same reasoning used by some scholars that consider Likert scales as continuous variables, such as Lord (1953) and Gaito (1980).

The categories, and their respective measures, are as follows.

Forwarding intentions, as dependent variable

Facebook users' intent to forward the complaint posted on the brand's Facebook page by a dissatisfied user (João, in this case), after acknowledging the brand's response, was measured by a scale used by Chiu *et al.* (2007) and adapted to the scope of the present research. and consisting of the following two items:

1. This Facebook post is worth sharing with others;
2. I will recommend this Facebook post to others;

Negative WOM intentions, as dependent variable

Facebook users' intentions of engaging in *negative WOM*, following the complaint posted by João and the respective brand's response, were measured according to a scale used by Zeithaml *et al.* (1996), adapted to the scope of the present research, and consisting of the following two items:

1. I would make negative comments about Lusoretail on Facebook;
2. I would use Facebook to discourage friends and relatives to buy products from Lusoretail;

Attributed responsibility, as moderator

According to Coombs (2007), there are three crisis clusters based upon attributions of *attributed responsibility* by crisis type. First, the victim cluster has very weak attributions of *attributed responsibility* (natural disasters, workplace violence, product tampering and rumour) and the organization is perceived as a victim of the event. Second, the accidental cluster has minimal attributions of *attributed responsibility* (technical-error accident, technical-error product harm and challenge), and the event is considered unintentional or uncontrollable by the organization. Third, the intentional cluster has very strong attributions of *attributed responsibility* (human-error accident, human-error product harm and organizational misdeed) and the event is considered purposeful.

Considering the information above, a researcher-made scale was created for measuring *attributed responsibility* with the anchors "*low responsibility*" and "*high responsibility*". To each response was assigned a numerical value that corresponded to the level of *attributed responsibility*. Thus, "*low responsibility*" was coded as 1, whilst "*high responsibility*" was coded as 7. The intermediate levels of responsibility were coded from 2 up to 6, having the median level coded as "*moderate responsibility*".

Therefore, the measurement of the *attributed responsibility*, looking for moderation effects, was assured by using a new scale constructed for this purpose by the researcher and consisting of a single item asking participants to rate brand's responsibility on a scale from 1 to 7, and consisting of the following item:

1. Which level of responsibility would you attribute to Lusoretail?

Brand attitude as dependent variable, and (post-response) *brand attitude* as mediator

Pretest-Posttest design was conceived using *brand attitude* as a dependent variable and *image repair strategy* and *online firestorm trigger* as independent variables. Pretest-Posttest designs are widely used in behavioural research, primarily for comparing groups and/or measuring change resulting from experimental treatments (Dimitrov, 2003). This design involves the researcher in measuring the dependent variable both before and after the participants have been exposed to the independent variables.

In this case, *brand attitude* was measured in each of the six groups, for each *online firestorm trigger* (*unethical behaviour*, *core business problem*, *communication issue*), at two different points in time, before (pre-response *brand attitude*) and after (post-response *brand attitude*) the organization's response following the complaint posted on the brand's Facebook page by the dissatisfied Facebook user.

The organization's response was one of the independent variables i.e., the *image repair strategy* (*corrective action* vs. *apology*) employed by the organization under attack, whilst *brand attitude* was temporarily assumed as a dependent variable. Post-response *brand attitude* was also measured to look for mediational effects. The measurements used the same scale developed by Spears and Singh (2004), consisting of the following five items:

1. Unappealing/appealing;
2. Bad/good;
3. Unpleasant/pleasant;
4. Unfavourable/favourable;
5. Unlikable/likable;

Demographic measures

Apart from the dependent measures, participants were asked to provide demographic information, namely, age, gender, education and profession.

Procedure

The questionnaire constructed was as an online questionnaire using Qualtrics software that is made available for students by ISCTE Business School – Lisbon, Portugal.

In this procedure, participants were randomly assigned to one of the six scenarios/conditions available through a link shared on different platforms. The process ensured

that every participant accessed the questionnaires automatically and instantly. A prior customization was done in Qualtrics to allow an evenly distribution of the participants per scenario/condition, thereby ensuring a uniform sample population. The participants following the invitation link were not aware that a previous random assignment to one of the six scenarios/conditions had previously been programmed.

Once in the questionnaire, after a short introduction, participants were presented with a brief information about the conversation occurring between the brand under attack, Lusoretail, and the accuser, João, following an incident. They were also asked to imagine being exposed to the scenario they were observing, as if it was in their own Facebook feed.

In the scenarios, Lusoretail was presented as being a Portuguese shoe brand and João as being an indignant Facebook user who posted a comment on the brand's page following an incident.

Then, the participants were exposed to the complaint, a comment posted by João directly on Lusoretail's Facebook page. After being exposed to the complaint, participants were asked to rate their *attitude towards the brand (*pre-response *brand attitude*). Shortly after, they were exposed to one of two crisis response strategies (*corrective action* vs *apology*) used by the brand to repair its image, followed by another question asking them to rate their *attitude towards the brand* (post-response *brand attitude*).

In the last section of the questionnaire, participants were prompted to respond to some questions to assess their behavioural intentions, namely, their *forwarding intentions* and *negative WOM intentions*. One last question was presented to them, to assess their level of responsibility attributed to Lusoretail, after acknowledging the incident and the brand's response.

Before the end of the questionnaire, demographic information was collected. (See appendixes A and B for questionnaire in English and Portuguese, respectively)

Pretest

A pretest was conducted before the launch of the final version of the questionnaire to find any eventual ambiguities or inconsistencies (Wimmer and Dominick, 2013). The pre-test sample consisted of six participants recruited within the researcher's network, who were randomly allocated to examine only one of the six depicted scenarios/vignettes each, plus another participant out of the researcher's inner circle (to prevent any bias), who was prompted to screen all the six depicted scenarios. Afterwards, comparisons were made, and opinions were

formed between both groups on what could be done to improve the depicted scenarios/vignettes in terms of language, comprehensibility, clarity and objectives to be achieved. As a result, minor corrections were made considering their feedback, i.e., some questions were shortened, rephrased, and some scenarios were slightly modified to become clearer.

Therefore, the pretest was crucial to ensure that the experiments were well thought-out towards a correct implementation capable of generating enlightening results regarding the effects of the independent variables *online firestorm trigger* and *image repair strategy* on the dependent variables *forwarding* and *negative WOM intentions*. To accomplish this, both groups executed their tasks successfully and as it was intended.

4.5. Data collection

Participants

The questionnaire was made available online on July 21, 2018 and closed on September 1, 2018.

Participants were recruited by two sampling procedures, specifically availability sampling and snowball sampling. An invitation to participate contained a short description of the contents of the questionnaire, and the context of the research, prompted respondents to participate in the questionnaire. Participants were also invited to share the questionnaire with their network. The invitation was published on Facebook by the researcher, in the Facebook networks of various demographic groups such as students, private and public-sector employees (teachers), all from different age groups. As the questionnaire was meant to be answered in less than five minutes, no incentives were given to potential respondents.

The population was determined to be all composed by Portuguese Facebook users, since the scenarios were all written in Portuguese and were all Facebook-related.

Sample and conditions

When applying statistics to a population sample, Reinard (2006) recommends at least 25 people per group, per level of independent variable. He argues that: "*when one looks at tables used for testing statistical significance (such as the t table) at a frequently used level ($p < .05$), the critical values seem to round to the same numbers (at least to the nearest tenth) whether they come from samples of about 30 or an infinite sample size. There is a catch, however. This reasoning assumes that the sampling is truly random*" (Reinard, 2006: 37).

Accordingly, the sample size of the research surpassed the threshold of 25 participants per condition. The number of participants allocated to each group is depicted in table 1.

Table 1. Participants allocation.

ONLINE FIRESTORM TRIGGER	Unethical behaviour		Core business problem		Communication issue	
IMAGE REPAIR STRATEGY	Corrective action	Apology	Corrective action	Apology	Corrective action	Apology
TOTAL SAMPLE (564)	**GROUP 1** (92)	**GROUP 2** (92)	**GROUP 3** (94)	**GROUP 4** (94)	**GROUP 5** (96)	**GROUP 6** (96)

Source: Developed by the researcher.

4.6. Data analysis

The questionnaire data was exported from Qualtrics software and imported as one combined dataset for further analysis in IBM SPSS 25.0 and Microsoft Excel 2016.

Data scan

Missing data, or missing values, appear when there are not data values stored for the variables under analysis. While missing data is a common occurrence, it can have a significant effect on the findings that can be drawn from the data (Fidell and Tabachnick, 2003).

Therefore, in the dataset of the present research, responses with missing data were removed. This was done manually, as the data set was of a limited size.

Then, the questionnaire was set up so that all items required an entry, which meant that all missing values were due to participants having only partially completed the questionnaire. Participants' responses that did not respond correctly to the existence trap questions were considered invalid, and thus removed from the dataset.

According to Muijs (2012), reliability and validity are crucial concepts in quantitative methods, and both relate to measurement.

Reliability

Reliability investigates the extent to which a measuring procedure generates similar results, if it is repeated. Furthermore, a research can be considered reliable, if it is internally consistent (Muijs, 2012). Therefore, it is imperative that the measures applied in a research yield consistent results, and that the measurements used are reliable.

Cronbach's alpha (α) is a measurement of internal consistency. Ideally, reliability coefficients should be as close to 1.00 as possible, however; .60 and under is considered an unacceptable reliability, whilst .60 - .69 is a marginal reliability, .70 - .79 is fair reliability, .80 - .89 is a good reliability, and .90 and above is considered highly reliable (Reinard, 2006).

Validity

Validity concerns whether a research is measuring what it is intended to measure (Muijs, 2010). Thus, the validity of the present research is related to the procedures applied in the analysis. Wimmer and Dominick (2013) outline three concepts of validity that are relevant to the present research: *face validity*, *construct validity*, and *concept validity*.

Face validity involves determining how well an instrument measures the key construct on a superficial level (Muijs, 2010). Accordingly, the pretest conducted, as well as the similarity with prior studies, and the theoretical foundation ensure the face validity of the undertaken research.

Construct validity addresses whether the measures are measuring the construct they claim to be measuring (Wimmer and Dominick, 2013). It involves the ability to generalize from the item measures used in a research (Muijs, 2012). Thus, the research must show that such relationships are in fact present (Wimmer and Dominick, 2013).

In the present research, five items measured (pre-and-post-response) *brand attitude*, two items measured *forwarding intentions*, two items measured *negative WOM intentions*, and one item measured *attributed responsibility*. Accordingly, construct validity was then achieved by combining items into one measure for each concept, pending the calculation of satisfactory internal reliability coefficients. This was obtained using the following formula:

$$\frac{(\mu 1 + \mu 2 + \mu 3)}{3}$$

Thus, the scores of the relevant items were combined into one mean score for (pre-and-post response) *brand attitude*, *forwarding intentions*, *negative WOM intentions* and *attributed responsibility*, for each participant.

Last, content validity addresses to the extent to which a measure embodies all components of a construct (Wimmer and Dominick, 2013). Content validity is ussually evaluated by establishing a panel of experts who assess the employed measures, and by reviewing relevant literature (Wimmer and Dominick, 2013).

In the present research, the thesis supervisor evaluated the measures to assess their validity.

Significance level

The researcher must set a probability level, or significance level, against which the null hypothesis is tested (Muijs, 2012). This is a common practice in mass media research studies to set the probability level at .01 or .05, which means that either one or five times out of a 100, significant results of the research occur because of random error or chance (Wimmer and Dominick, 2013). According to the size of the sample, and the size of differences, the .05 level of significance was applied (Muijs, 2012). As such, for a measure to be considered statistically significant, $p \leq .05$.

5. Results

The following sections outline the results of the present research. The results are presented according to the hypotheses that the research aimed to test. Then, a discussion is undertaken to depict the implications of the results for the body of knowledge in the ambit of crisis communication and crisis management. Relevant results and calculations are also presented in the text, and full SPSS 25.0 outputs can be found in the Appendix.

5.1. Sample characterization

A total of 564 (N = 564) participants filled out the questionnaire completely and answered correctly to the existing trap questions. The sample characterization for the research's participants is shown in table 2.

Table 2. Sample characterization.

SAMPLE CHARACTERIZATION N (%)	**TOTAL SAMPLE (564)**
GENDER: Male | Female	329 (58,3%) | 235 (41,7%)
AGE:	
18-24	124 (22,0%)
25-34	125 (22,2%)
35-44	139 (24,6%)
45-54	98 (17,4%)
55-64	58 (10,3%)
+65	20 (3,5%)
EDUCATION:	
Basic education (9th grade)	34 (6,0%)
High school degree (12th grade)	142 (25,2%)
Bachelor's degree	216 (38,3%)
Master's degree	143 (25,4%)
PhD	29 (5,1%)
PROFESSION:	
Unemployed	38 (6,7%)
Worker	335 (59,4%)
Student	120 (21,3%)
Student worker	43 (7,6%)
Retired	28 (5,0%)
FACEBOOK USAGE:	
Less than once per week	33 (5,9%)
Once per week	8 (1,4%)
Two to three times per week	57 (10,1%)
Once per day	141 (25,0%)
Several times per day	325 (57,6%)
AVERAGE DAILY TIME SPENT ON FACEBOOK:	
Less than an hour	147 (31,5%)
1-2 hours	116 (24,9%)
2-3 hours	111 (23,8%)
3-4 hours	58 (12,4%)
More than 4 hours	34 (7,3%)

Source: SPSS 25.0 output.

As table 2 shows, all the age groups were represented in the sample. Most participants were represented in the age groups of 18-24 (22%), 25-34 (22.2%) and 35-44 (24.6 %). This was anticipated since Facebook penetration decreases with age. 58.3% of the population was male, whilst 235 (41.7%) was female.

In terms of education and profession, most participants had a high school degree or more, and were currently employed.

With respect to Facebook usage and average time spent on the social network site, most participants, 57.6%, accessed Facebook several times per day, spending the majority from less than one hour (31.55 %), up to two hours (24.9%) per day on the platform.

Parametric testing

To conduct parametric tests, it is required to fulfil certain assumptions. The assumptions that must be met are: (1) *one independent, categorical variable* that has *two levels/groups*; (2) *one continuous dependent variable*; (3) *unrelated groups,* also called unpaired groups or independent groups, i.e. groups in which the cases (e.g., participants) in each group are different, i.e., when comparing two or more groups, an individual in one group cannot also be a member of the other groups and vice versa; (4) *no significant outliers*, i.e., no single data points within the data that do not follow the usual pattern; (5) *assumption of normality of the dependent variables*, implying that the dependent variables are approximately normally distributed within each group and; (6) *assumption of homogeneity of variance*, implying that that all comparison groups have the same variance (Laerd Statistics, 2018).

The assumption in respect to the independence of groups implies that the behaviour of one participant does not influence the behaviour of another, i.e., that there is no relationship between the observations in each group or between the groups themselves. For instance, there must be different participants in each group with no participant being in more than one group. When the data was being collected, utmost care was taken in this regard.

In respect to the assessment of the normality of data, *Skewness* and *Kurtosis* tests were used. Although, a normal distribution has both skewness and kurtosis values equal to zero (Field, 2009; Malhotra, 2003), for psychometric purposes, skewness and kurtosis values between -2 to +2 are considered acceptable (George and Mallery, 2010). The results are shown in table 3.

Table 3. Skewness and Kurtosis analysis.

SCALE	NUMBER OF RESPONDENTS	SKEWNESS	STD. ERROR	KURTOSIS	STD. ERROR
Pre-response brand attitude		1.344	.103	2.538	.205
Post-response brand attitude		.193	.103	.305	.205
Forwarding intentions	564	-.042	.103	-1.083	.205
Negative WOM intentions		.11	.103	-.938	.205
Attributed responsibility		-.111	.103	.363	.205

Source: SPSS 25.0 output.

It can be noted from table 3 that values of skewness and kurtosis all fall within the acceptable range of -2 to +2, indicating that the data is normal, and the basic assumption of parametric testing is fulfilled, with the exception of the (pre-response) *brand attitude* scale, where the Kurtosis is above the positive limit set. However, this was not considered problematic since it can still be considered acceptable according to researchers from statistical fields.

The assumption in respect to homogeneity of variance implies that all data should have homogenous variances.

Sample Adequacy

Sample adequacy is a measure that uses *Kaiser-Meyer-Olkin* (KMO) test (Kaiser and Rice, 1974; Field, 2009). KMO Measure of Sampling represents the ratio of the squared correlation between variables to the squared partial correlation between variables. It varies between 0 to 1, where a value close to 1 indicates that patterns of correlations are relatively compact and should yield distinct and reliable factors (Field, 2009). According to Hutcheson and Sofroniou (1999), values between 0.5 and 0.7 are mediocre, between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great, and above 0.9 are superb.

Results are shown in table 4, which show that the KMO measure of sampling adequacy falls into the good range, as identified by Hutcheson and Sofrinou (1999), which indicates that the sample size was adequate to yield distinct and reliable factors.

Table 4. KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**,866**
Bartlett's Test of Sphericity	Approx. Chi-Square	10916,850
	df	105
	Sig.	**,000**

Source: SPSS 25.0 output.

Bartlett's test (Bartlett, 1954) determines whether the correlations between questionnaire items are large enough for factor analysis to be appropriate. It is another indicator of the strength of relationship among variables i.e., whether the correlation matrix is sufficiently different from the identity matrix, testing whether the diagonal elements of the variance-covariance matrix are equal indicating the group variances are the same, and that the off-diagonal elements are approximately zero indicating that the dependent variables are not correlated.

In the present research, as seen in table 4, the Bartlett's test results indicated that Chi-square statistic was 10916.850 with a significance less than .05. Therefore, the sample in the present research is a correlation matrix not an identity matrix, hence suitable for further analysis.

Exploratory factor analysis

Exploratory factor analysis (EFA) was conducted to check dimensionality and validate the reliability of the scales.

This analysis operates on the notion that measurable and observable variables can be reduced to fewer variables that share a common variance and are unobservable, which is known as reducing dimensionality (Bartholomew *et al.*, 2011). These unobservable factors are not directly measured, yet they are essentially hypothetical constructs that are used to represent variables (Cattell, 1973). Factor analysis is regarded as the method of choice for interpreting self-reporting questionnaires (Byrant, *et al.*, 1999). It uses mathematical procedures for the simplification of interrelated measures to discover patterns in a set of variables (Child, 2006). EFA is usually the first step in building scales or a new metrics, and it allows the researcher to explore the main dimensions to generate a theory, or model from a relatively large set of constructs, often represented by a set of items (Henson and Roberts, 2006; Pett, *et al.*, 2003). It involves many linear and sequential steps and many options and rules of thumb apply themselves to EFA (Williams, 2010).

First, a factor should be formed by a minimum of three variables, though this depends on the design of the research (Tabachnick and Fidell, 2007). Another important assessment to make regarding how many factors will analyse data is whether a variable might relate to more than one factor. Rotation maximizes high item loadings and minimizes low item loadings, thus producing a more interpretable and simplified solution (Williams, 2010). There are several methods to carry out rotations. SPSS offers five: varimax, quartimax, equamax, direct oblimin and promax. In this research, the varimax rotation was the selected method.

There are many criteria to retain factors, one criterion that can be used to determine the number of factors to retain is *Kaiser's* criterion which is a rule of thumb. This criterion suggests retaining all factors that are above the eigenvalue of one (Kaiser, 1960). A factor loading for a variable is a measure of how much the variable adds to the factor; thus, high factor loading scores demonstrate that the dimensions of the factors are better represented by the variables. Thus, the bigger the sample the smaller the loadings can be significant.

With a sample of 564, a factor loading of 0.50 and above is considered significant at the .05 level (Hair, *et al.*, 2006).

Table 5 presents the results of factor analysis. In the principal component analysis (PCA), results of this research demonstrate that three factors were extracted from the 14 items, explaining approximately 83% of the total variance.

Table 5. Exploratory factor analysis.

CONSTRUCT	FACTOR LOADINGS			TOTAL VARIANCE EXPLAINED BY 3 FACTORS	CRONBACH'S ALPHA	CRONBACH'S ALPHA IF ITEM DELETED
	1	2	3	82.93%		
PRE-RESPONSE BRAND ATTITUDE					.977	
pre_response_brand_attitude_1	**.955**	.138	-.071			.975
pre_response_brand_attitude_2	**.954**	.145	-.077			.970
pre_response_brand_attitude_3	**.946**	.147	-.075			.969
pre_response_brand_attitude_4	**.931**	.125	-.109			.970
pre_response_brand_attitude_5	**.922**	.188	-.087			.975
POST-RESPONSE BRAND ATTITUDE					.974	
post_response_brand_attitude_1	.153	**.943**	-.119			.975
post_response_brand_attitude_2	.197	**.941**	-.072			.966
post_response_brand_attitude_3	.094	**.935**	-.168			.964
post_response_brand_attitude_4	.224	**.925**	-.102			.967
post_response_brand_attitude_5	.089	**.911**	-.117			.964
BEHAVIOURAL INTENTIONS					.857	
forwarding_intentions_1	-.086	-.055	**.892**			.792
forwarding_intentions_2	-.030	-.035	**.881**			.801
negative_WOM_intentions_1	.024	-.168	**.846**			.807
negative_WOM_intentions_2	-.042	-.278	**.760**			.832

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Source: SPSS 25.0 output.

Reliability analysis

According to Peterson (1994), for a scale to be valid and possess practical utility, it must be reliable. Bryman and Cramer (2005) define reliability as the degree to which an instrument measures the same way each time it is used under the same conditions with the same object.

In this research, three factors were used to measure the constructs proposed in the research conceptual framework, namely (pre-response) brand attitude, (post-response) brand attitude and behavioural intentions.

Factor 1, pre-response brand attitude, consists of five items (pre_brand_attitude_1; pre_brand_attitude_2; pre_brand_attitude_3; pre_brand_attitude_4; pre_brand_attitude_5). *Factor 2*, post-response brand attitude, holds five items (post_response_brand_attitude_1; post_response_brand_attitude_2; post_response_brand_attitude_3; post_response_brand_attitude_4; post_response_brand_attitude_5). *Factor 3*, behavioural intentions, includes four items (forwarding_intentions_1; forwarding_intentions_2; negative_WOM_intentions_1; negative_WOM_intentions_2).

The construct behavioural intentions could be analysed and tested altogether, since it encompasses *forwarding intentions* and *negative WOM intentions*. However, it was decided to analyse and test *forwarding* and *negative WOM intentions* separately to gather a more thorough analysis regarding each behavioural intention, even though they behave in a very similar manner.

To ensure that such set of measurement scales consistently and accurately captured the meaning of the constructs, an analysis of scale reliability was performed. *Cronbach's alpha* is the most used measure of reliability (Peterson, 1994; Hogan *et al*., 2000; Iacobucci and Duhachek, 2003). In the present research, it was chosen to use Coefficient alpha to examine reliability. Coefficient alpha considers the effect of each item in estimating the overall reliability (Fried and Ferris, 1987). Some scholars state that the scale is considered reliable if the Cronbach's alpha is greater than 0.70 (Nunnally, 1978; Hair *et al*., 2010), whilst others have regarded a value greater than 0.50 as acceptable (Erdogan, 2009).

In the present research, the Cronbach's alpha for all the constructs exceeded the level of acceptance as suggested by Nunnally (1978), Hair et al. (2010) and as shown in table 5.

Moreover, the Cronbach's Alpha value if item deleted was also considered and no change was done in that regard.

Comparability of randomised groups

Significance tests (usually t tests and χ^2 tests) are often carried out to compare the groups with respect to variables that represent baseline characteristics. In most cases, no statistically significant results are obtained, and the conclusion is drawn, either explicitly or implicitly, that the groups are comparable and that no further attention needs be paid to these baseline variables (Altman, 1985).

To validate that the groups were comparable for the experiment conducted, non-parametric tests were used upon the ordinal variables and a parametric test was used upon a continuous variable. Accordingly, Kruskal-Wallis tests were used upon the demographic variables *age*, *gender*, *profession* and *education*, whilst independent t tests were used upon (pre-response) *brand attitude* for each *online firestorm trigger*.

In respect to the variables age and gender, there were no statistically significant differences as determined by Kruskal-Wallis tests, as $\chi^2(1) = .396$, $p = .529 > \alpha$ (.05) and $\chi^2(1) = 1.231$, $p = .267 > \alpha$ (.05), respectively. (See appendix C for SPSS 25.0 output)

In respect to the variables education and profession, there were statistically significant differences as determined by Kruskal-Wallis tests, as $\chi^2(1) = 6.559$, $p = .010 < \alpha$ (.05) and $\chi^2(1) = 4.156$, $p = .041 < \alpha$ (.05), respectively. However, none of these variables had any effect on the experiments results obtained. (See appendix C for SPSS 25.0 output)

Then, it was chosen to test the variable (pre-response) *brand attitude*, as this variable was measured before the manipulation of the independent variable *image repair strategy* (*corrective action* vs. *apology*) in each scenario, i.e., for each *online firestorm trigger*. The results are shown in table 6.

Table 6. Pre-response *brand attitude* comparison.

CONSTRUCT	GROUP (OF TRIGGER, IMAGE REPAIR STRATEGY)	N	MEAN	STD. DEVIATION	t	df	SIG. (2-TAILED)	MEAN DIFFERENCE	RESULT
Pre-response brand attitude	1 (Unethical behavior, Corrective action)	92	2.03	1.751	1.511	153.561	.133	.326	Not statistically significant
	2 (Unethical behaviour, Apology)	92	1.71	1.105					
	3 (Core business problem, Corrective action)	94	2.90	1.392	3.999	186	.000	.723	**Statistically significant**
	4 (Core business problem, Apology)	94	2.18	1.067					
	5 (Communication issue, Corrective action)	96	2.04	.893	-1.822	190	.070	-.250	Not statistically significant
	6 (Communication issue, Apology)	96	2.29	1.004					

Source: SPSS 25.0 output.

In groups 1 and 2, *Levene's* test for equality of variances, provided evidence that the variable under analysis came from a population with unequal variance.

Upon the non-statistically significant differences found for the variable under analysis in groups 1 and 2, and 5 and 6, it was possible to infer that these groups were comparable. Although, in group 3 and 4 there was a statistically significant difference, they were still considered comparable as the participants from these two groups were randomly assigned the same way as the others in the comparable groups. Moreover, the statistically significant result might be explained by the fact the participants from these two groups might have viewed and perceived the incident differently, even though the scenario was drawn upon the exact same reasoning.

Therefore, it was possible to conclude that all the referred groups were comparable between each other.

Hypothesis Testing

In the first pair of hypotheses suggested, the objective was to assess whether *apology*, as an *image repair strategy* employed by an organization under attack, had a higher positive (i.e. lowered to a greater extent) effect on Facebook users' *forwarding* and *negative WOM intentions* than *corrective action*.

To test the first two hypotheses suggested, a one-way ANOVA test was conducted followed by independent t-tests. Both tests are inferential statistical tests that determine whether there are statistically significant differences between the means in two or more unrelated groups (Laerd Statistics, 2018).

Initially, the one-way ANOVA test results indicated that the homogeneity of variances assumption failed for the constructs *forwarding* and *negative WOM intentions*. Considering the unequal sample sizes of the six groups and that the homogeneity of variances assumption failed, Welch tests were conducted. In respect to *forwarding* and *negative WOM intentions*, Welch tests indicated that there were statistically significant differences between the means of the groups under analysis for both constructs, as $F(5, 259.944) = 8.529$, $p = .000 < \alpha$ (.05) and $F(5, 259.273) = 12.502$, $p = .000 < \alpha$ (.05), respectively. (See appendixes D and E for SPSS 25.0 outputs) Afterwards, to assess what the most effective *image repair strategy* (*corrective action* vs. *apology*) was for each *online firestorm trigger* (*unethical behaviour*, *core business problem*, *communication issue*), independent t-tests were conducted.

5.2. Hypothesis 1a

Apology has a higher positive effect on *forwarding intentions* than *corrective action*.

In groups 3 and 4, 5 and 6, for the construct *forwarding intentions*, *Levene's* test for equality of variances, provided evidence that the variable under analysis came from populations with unequal variance.

As seen in table 7, in groups 1 and 2 (*online firestorm trigger*: *unethical behaviour*), none of the strategies (*corrective action* vs. *apology*) employed by the organization under attack and used to repair its image, showed a statistically significant difference between the means for the construct *forwarding intentions*. More precisely, with respect to the Facebook users' *forwarding intentions* in the groups referred, the t-test result led to the acceptance of the null hypothesis, as $t(182) = -.501$, $p = .617 > \alpha$ (.05) for the construct *forwarding intentions*; thus confirming that there was not a statistically significant difference between the means for this construct. (Mean difference = -.141)

In groups 3 and 4 (*online firestorm trigger*: *core business problem*), the strategies (*corrective action* vs. *apology*) employed by the organization under attack and used to repair its image, showed a statistically significant difference between the means for the construct *forwarding intentions*. The t-test result led to the rejection of the null hypothesis, as $t(183.698) = -3.425$, $p = .001 < \alpha$ (.05) for the construct *forwarding intentions*; thus indicating that there was a statistically significant difference between the means for this construct. (Mean difference = -.830)

In groups 5 and 6 (*online firestorm trigger*: *communication issue*), the strategies (*corrective action* vs. *apology*) employed by the organization under attack and used to repair its image, showed a statistically significant difference between the means for the construct *forwarding intentions*. The t-test result led to the rejection of the null hypothesis, as $t(187.698) = -2.110$, $p = .036 < \alpha$ (.05); thus indicating that there was a statistical significant difference between the means for this construct. (Mean difference = -.563)

Therefore, **hypothesis 1a is not supported**, **for the specific conditions/groups verified above**, as **no statistically significant differences were found** in Facebook users' ***forwarding intentions*** when the organization under attack employed one of the strategies under testing (*corrective action* vs. *apology*) following ***unethical behaviour***-related incidents, whilst upon the **statistically significant differences verified**, i.e., following ***core- business*** and ***communication issue***-related incidents, the employment of ***corrective action*** showed to have a **higher positive effect** (i.e. lowered to a greater extent) on Facebook users' ***forwarding intentions*** than ***apology***, which contradicts Benoit and Drew (1997) and corroborates Coombs and Holladay (2008) results. The results obtained are shown in table 7.

Table 7. Hypothesis 1a results.

CONSTRUCT	GROUP (OF TRIGGER, IMAGE REPAIR STRATEGY)	N	MEAN	STD. DEVIATION	t	df	SIG. (2-TAILED)	MEAN DIFFERENCE	RESULT
Forwarding intentions	1 (Unethical behaviour, Corrective action)	92	4.26	1.839	-.501	182	.617	-.141	Not statistically significant
	2 (Unethical behaviour, Apology)	92	4.40	1.984					
	3 (Core business problem, Corrective action)	94	2.91	1.752	-3.425	183.698	.001	-.830	**Statistically significant**
	4 (Core business problem, Apology)	94	3.74	1.565					
	5 (Communication issue, Corrective action)	96	3.38	1.948	-2.110	187.698	.036	-.563	**Statistically significant**
	6 (Communication issue, Apology)	96	3.94	1.740					

Source: SPSS 25.0 output.

5.3. Hypothesis 1b

Apology has a higher positive effect on *negative WOM intentions* than *corrective action*.

In this hypothesis testing, the exact same reasoning was applied.

In groups 1 and 2, 3 and 4, for the construct *negative WOM intentions*, *Levene's* test for equality of variances, provided evidence that the variable under analysis came from populations with unequal variance.

As seen in table 8, in groups 1 and 2 (*online firestorm trigger*: *unethical behaviour*), none of the strategies (*corrective action* vs. *apology*) employed by the organization under attack and used to repair its image, showed a statistically significant difference between the means for the construct *negative WOM intentions*. More precisely, with respect to the Facebook users' *negative WOM intentions* in the groups referred, the t-test result led to the acceptance of the null hypothesis, as $t(169.367) = 1.147$, $p = .253 > \alpha$ (.05) for the construct *negative WOM intentions*; thus confirming that there was not a statistically significant difference between the means for this construct. (Mean difference = .293)

In groups 3 and 4 (*online firestorm trigger*: *core business problem*), the strategies (*corrective action* vs. *apology*) employed by the organization under attack and used to repair its image, showed a statistically significant difference between the means for the construct *negative WOM intentions*. The t-test result led to the rejection of the null hypothesis, as $t(175.262) = -3.366$, $p = .001 < \alpha$ (.05) for the construct *negative WOM intentions*; thus indicating that there was a statistically significant difference between the means for this construct. (Mean difference = -.819)

In groups 5 and 6 (*online firestorm trigger*: *communication issue*), for the construct *negative WOM intentions*, none of the strategies (*corrective action* vs. *apology*) employed by

the organization under attack and used to repair its image, showed a statistically significant difference between the means for the construct *negative WOM intentions*. The t-test result led to the acceptance of the null *hypothesis*, as $t(190) = -1.955$, $p = .052 > \alpha\ (.05)$; thus confirming that there was not a statistically significant difference between the means for this construct. (Mean difference = -.406)

Therefore, **hypothesis 1b** is not supported, **for the specific conditions/groups verified above,** as **no statistically significant differences were found** in Facebook users' ***negative WOM intentions*** when the organization under attack employed one of the strategies under testing (*corrective action* vs. *apology*) following **unethical behaviour**-related incidents and **communication issue**-related incidents, whilst upon the **statistically significant differences verified**, i.e., following ***core- business*** and ***communication issue***-related incidents, the employment of ***corrective action*** showed to have a **higher positive effect** (i.e. lowered to a greater extent) on Facebook users' ***negative WOM intentions*** than ***apology***, which contradicts Benoit and Drew (1997) and corroborates Coombs and Holladay (2008) results. The results obtained are presented in table 8.

Table 8. Hypothesis 1b results.

CONSTRUCT	GROUP (OF TRIGGER, IMAGE REPAIR STRATEGY)	N	MEAN	STD. DEVIATION	t	df	SIG. (2-TAILED)	MEAN DIFFERENCE	RESULT
Negative WOM intentions	1 (Unethical behaviour, Corrective action)	92	4.09	1.480	1.147	169.367	.253	.293	Not statistically significant
	2 (Unethical behaviour, Apology)	92	3.79	1.959					
	3 (Core business problem, Corrective action)	94	2.95	1.447	-3.366	175.262	.001	-.819	**Statistically significant**
	4 (Core business problem, Apology)	94	3.77	1.863					
	5 (Communication issue, Corrective action)	96	2.72	1.32	-1.955	190	.052	-.406	Not statistically significant
	6 (Communication issue, Apology)	96	3.13	1.551					

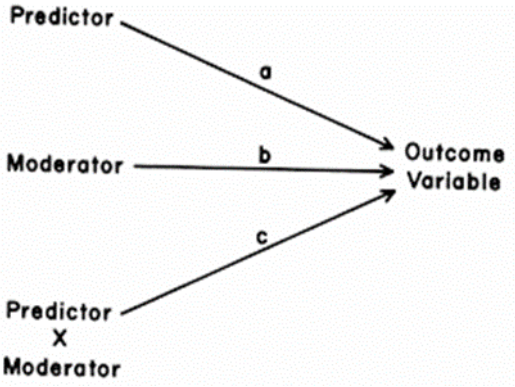
Source: SPSS 25.0 output.

5.4. Hypothesis 2a

Attributed responsibility moderates the effect of *image repair strategy* on *forwarding intentions*.

For the second pair of hypotheses suggested, the moderation analysis of Baron and Kenny (1986) was conducted to look for moderation effects. When the direction or the strength of the relationship between the independent or predictor variable and the dependent or outcome variable changes because of a third variable, this third variable is called a moderator (Baron and Kenny, 1986).

Figure 17. Moderation conceptual diagram.



Source: Baron and Kenny (1986)

In the proposed conceptual model, *attributed responsibility* moderates the effect of *image repair strategy* on *forwarding* and *negative WOM intentions*. Thus, regression analysis with bootstrapping (Efron, 1979) was conducted to look for the moderator effect between these variables.

First, a regression analysis was used to investigate the hypothesis 2a, suggesting that *attributed responsibility* moderates the effect of *image repair strategy* on *forwarding intentions*.

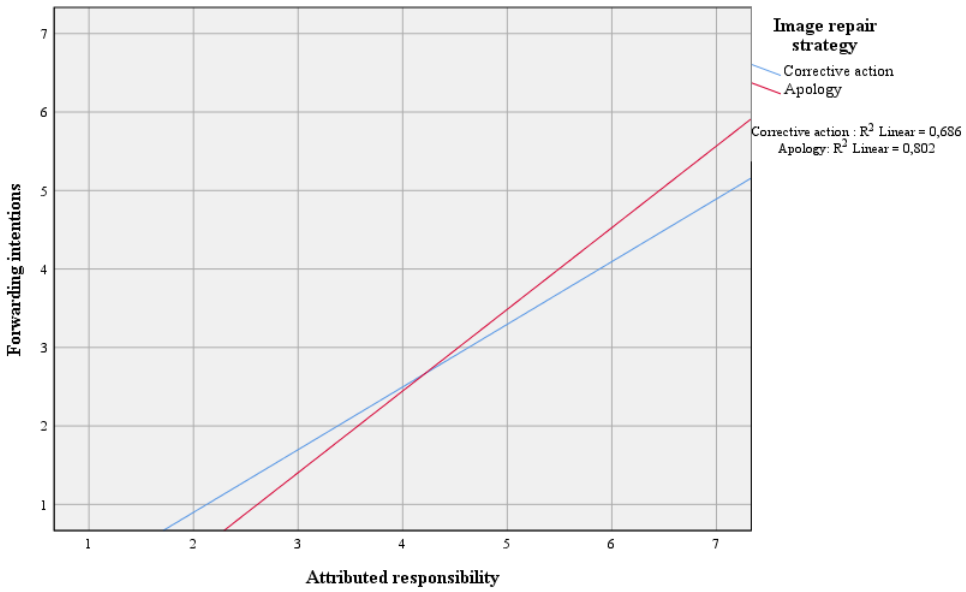
The model obtained and under analysis was highly significant, as $p = .000$, $< \alpha$ (.05), presenting a high $R^2 = .7447$, implying that 74.47% of the variation of *forwarding intentions* was explained by the *image repair strategy* whereas 25.53% was left unexplained.

Results indicated that *image repair strategy* was a highly significant predictor of *forwarding intentions*, as $B = .286$, SE = .080, $p = .000 < \alpha$ (.05), and that *attributed responsibility* was a highly significant predictor of *forwarding intentions*, as $B = .920$, $SE = .023$, $p = .000 < \alpha$ (.05). More importantly, the interaction term (*image repair strategy* * *attributed responsibility*) was highly significant, as $B = .242$, $SE = .047$, $p = .000 < \alpha$ (.05).

These results support the moderation effect.

The following scatter plot, graph 1, was created to better acknowledge, through visualization, the effect of *image repair strategy* on *forwarding intentions* under the moderation of *attributed responsibility*.

Graph 1. *Image repair strategy* effect on *forwarding intentions* under the moderation of *attributed responsibility.*



Source: Developed by the researcher.

At low levels of *attributed responsibility*, the effect of *image repair strategy* on *forwarding intentions*, is not significant, i.e., at low levels of *attributed responsibility*, the negative relationship between *image repair strategy* and *forwarding intentions* is not significant (no relationship), as B = -.146, SE = .116, p = .211 > α (.05). At medium and high levels of *attributed responsibility*, there is a highly significant positive relationship between *image repair strategy* and *forwarding intentions*, as B = .286, SE = .080, p = .000 < α (.05), and B = .675, SE = .109, p = .000 < α (.05), respectively.

Therefore, as we move through the continuum of *attributed responsibility*, the relationship between *image repair strategy* and *forwarding intentions* goes from a non-significant negative relationship, to a significant positive relationship, and then to a highly significant positive relationship. At low and medium *attributed responsibility* levels, from approximately 2.3 up to 4.1, *apology*, as *image repair strategy*, is more effective than *corrective action* in lowering Facebook users' *forwarding intentions*. At a medium *attributed responsibility* level of approximately 4.2, none of the strategies shows to be more effective than the other one in lowering Facebook users' *forwarding intentions*. However, at high levels of *attributed responsibility*, 5, 6 and 7, *corrective action*, as *image repair strategy*, shows to be more effective in lowering Facebook users' *forwarding intentions* than *apology*.

Moreover, the interaction plot also shows an enhancing effect that as the *attributed responsibility* to the organization increases, Facebook users' *forwarding intentions* also increase.

Therefore, as the **moderation effect** is **supported**, the **hypothesis 2a** is also **supported**, implying that ***attributed responsibility*** **moderates** the effect of the ***image repair strategy*** employed by the organization under attack on Facebook users' ***forwarding intentions***. (See appendix F for SPSS 25.0 output)

5.5. Hypothesis 2b

Attributed responsibility moderates the effect of *image repair strategy* on *negative WOM intentions*.

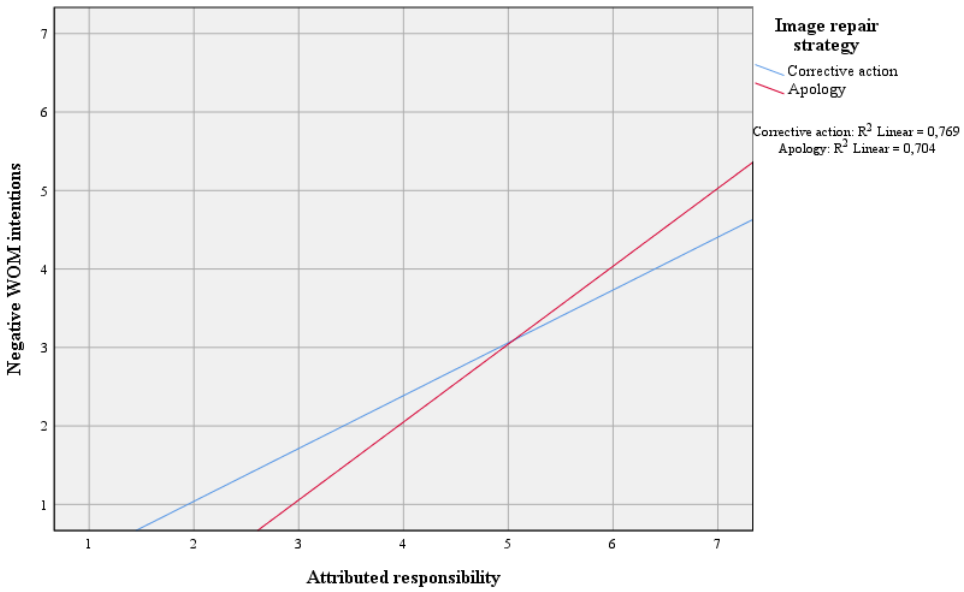
The same test was conducted to investigate the hypothesis 2b, suggesting that *attributed responsibility* moderates the effect of *image repair strategy* on *negative WOM intentions*.

The model under analysis was highly significant, as $p = .000 < \alpha$ (.05), presenting a high $R^2 = .7335$, implying that 73.35% of the variation of *negative WOM intentions* was explained by *image repair strategy* whereas 26.65% was left unexplained.

Results indicated that *image repair strategy* was not a significant predictor of *negative WOM intentions*, as $B = .109$, $SE = .074$, $p = .140 > \alpha$ (.05), and that *attributed responsibility* was a highly significant predictor of *negative WOM intentions*, as $B = .833$, $SE = .021$, $p = .000 < \alpha$ (.05). More importantly, the interaction term (*image repair strategy * attributed responsibility*) was highly significant, as $B = .320$, $SE = .043$, $p = .000 < \alpha$ (.05). Once again, these results support the moderation effect.

Another scatter plot, graph 2, was created to better understand, through visualization, the effect of *image repair strategy* on *negative WOM intentions* under the moderation of *attributed responsibility*.

Graph 2. *Image repair strategy* effect on *negative WOM intentions* under the moderation of *attributed responsibility*.



Source: Developed by the researcher.

The effect of *image repair strategy* on *negative WOM intentions*, at low levels of *attributed responsibility*, is highly significant, i.e., at low levels of *attributed responsibility*, there is a highly significant negative relationship between *image repair strategy* and *negative WOM intentions*, as B = -.461, SE = .107, p = .000 < α (.05). At medium levels of *attributed responsibility*, the effect of *image repair strategy* on *negative WOM intentions* is not significant, i.e., at medium levels of *attributed responsibility*, the positive relationship between *image repair strategy* and *negative WOM intentions* is not significant (no relationship), as B = .109, SE = .074, p = .140 > α (.05). At high levels of *attributed responsibility*, the effect of *image repair strategy* on *negative WOM intentions* is highly significant, i.e., at high levels of *attributed responsibility*, there is a highly positive relationship between *image repair strategy* and *negative WOM intentions*, as B = .622, SE = .100, p = .000 < α (.05).

Therefore, as we move through the continuum of the *attributed responsibility*, the relationship between *image repair strategy* and *negative WOM intentions* goes from a highly significant negative relationship, to a non-significant positive relationship, and then to a highly significant positive relationship again.

Analysing the scatter plot, it is possible to infer that at low, 3, and medium levels of *attributed responsibility*, such as 4 and 5, *apology*, as *image repair strategy*, is more effective in lowering Facebook users' *negative WOM intentions* than *corrective action*. However, at high levels of *attributed responsibility*, 5+, as it was verified before in respect to *forwarding*

intentions, *corrective action* shows to be more effective than *apology* in lowering Facebook users' *negative WOM intentions*; thus suggesting, once again, similar results.

Moreover, examination of the interaction plot also shows an enhancing effect that as the *attributed responsibility* to the organization increases, Facebook users' *negative WOM intentions* also increase.

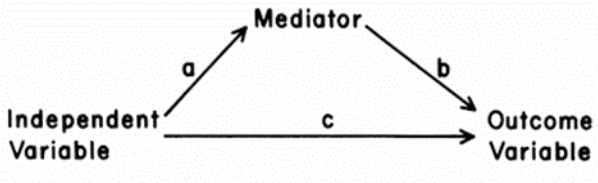
Therefore, as the **moderation effect** is **supported**, the **hypothesis 2b** is also **supported**, implying that ***attributed responsibility*** **moderates** the effect of the ***image repair strategy*** employed by the organization under attack on Facebook users' ***negative WOM intentions***. (See appendix G for SPSS 25.0 output)

5.6. Hypothesis 3a

Brand attitude mediates the effect of *image repair strategy* on *forwarding intentions*.

For the third pair of hypotheses suggested, the mediation analysis of Baron and Kenny (1986) was conducted to look for mediation effects. If a third variable has a direct relationship with both the independent variable and the dependent variable, then this variable is known as a mediator. Mediators are variables through which the IV acts to influence the DV (Baron and Kenny, 1986). In mediation, all three pathways must be significant. The IV and the mediator and the DV and the mediator must be significantly related. There must also be a relationship between the IV and the DV. When the IV and the mediator are combined, path c will become weaker and there is complete mediation when the independent variable no longer affects the dependent variable when the mediator has been controlled for (Howell, 2006).

Figure 18. Mediation conceptual diagram.



Source: Baron and Kenny (1986)

Regression analysis was used to investigate the hypothesis 3a, suggesting that (post-response) *brand attitude* mediates the effect of *image repair strategy* on *forwarding intentions*.

In the proposed conceptual model, the mediator (post-response) *brand attitude* mediates the relationship between the independent or predictor variable, *image repair strategy*, and the dependent or outcome variables, *forwarding intentions* and *negative WOM intentions*. This implies that (post-response) *brand attitude* mediates the effect of *image repair strategy* on *forwarding* and *negative WOM intentions*. Regression analysis with bootstrapping (Efron, 1979) was conducted to further look for mediation effects.

The model under analysis was highly significant, as $p = .002, < \alpha$ (.05).

Results indicated that *image repair strategy* was a highly significant predictor of (post-response) *brand attitude*, as $B = -.340$, $SE = .110$, $p = .002 < \alpha$ (.05), and that (post-response) *brand attitude* was a highly significant predictor of *forwarding intentions*, as $B = 1.171$, $SE = .034$, $p = .000 < \alpha$ (.05). These results support the mediational effect.

Moreover, *image repair strategy* was still a highly significant predictor of *forwarding intentions* after controlling for the mediator, (post-response) *brand attitude*, as $B = .913$, $SE = .090$, $p = .000 < \alpha$ (.05), suggesting the existence of partial mediation. Approximately 68% of the variance in *forwarding intentions* was accounted for by the predictors ($R^2 = .681$).

The indirect effect was tested using a percentile bootstrap estimation approach with 1000 samples (Shrout and Bolger, 2002), implemented with the PROCESS macro Version 3 (Hayes, 2017).

The results indicated that the indirect coefficient was significant, as $B = -.399$, $SE = .126$, 95% $CI = -.6377, -.1385$. The use of *image repair strategy* was associated with approximately .40 points lower *forwarding intentions* scores as mediated by (post-response) *brand attitude*.

Therefore, as the **mediation effect** is **supported**, the ***hypothesis 3a*** is also **supported**, implying that (post-response) ***brand attitude*** **mediates** the effect of the ***image repair strategy*** employed by the organization under attack on Facebook users' ***forwarding intentions***. (See appendix H for SPSS 25.0 output)

5.7. Hypothesis 3b

Brand attitude mediates the effect of *image repair strategy* on *negative WOM intentions*

The same test was conducted to investigate the hypothesis 3b, suggesting that (post-response) *brand attitude* mediates the effect of *image repair strategy* on *negative WOM intentions*.

The model under analysis was highly significant, as $p = .002, < \alpha$ (.05).

The results indicated that *image repair strategy* was a highly significant predictor of (post-response) *brand attitude*, as B = -.340, SE = .110, p = .002 < α (.05), and that (post-response) *brand attitude* was a highly significant predictor of *negative WOM intentions*, as B = 1.091, SE = .029, p = .000 < α (.05). These results support the mediational effect.

Moreover, *image repair strategy* was still a highly significant predictor of *negative WOM intentions* after controlling for the mediator, (post-response) *brand attitude*, as B = .687, SE = .076, p = .000 < α (.05), suggesting the existence of partial mediation. Approximately 72% of the variance in *negative WOM intentions* was accounted for by the predictors (R^2 = .716).

Once again, the indirect effect was tested using a percentile bootstrap estimation approach with 1000 samples (Shrout and Bolger, 2002), implemented with the PROCESS macro Version 3 (Hayes, 2017).

The results indicated that the indirect coefficient was significant, as B = -.371, SE = .121, 95% CI = -.6112, -.1227. The use of *image repair strategy* was associated with approximately .37 points lower *negative WOM intentions* scores as mediated by (post-response) *brand attitude*.

Therefore, as the **mediation effect** is **supported**, the **hypothesis 3b** is also **supported**, implying that (post-response) ***brand attitude*** **mediates** the effect of the ***image repair strategy*** employed by the organization under attack on Facebook users' ***negative WOM intentions***. (See appendix I for SPSS 25.0 output)

5.8. Hypothesis 4

The absence of *image repair strategy* has a negative effect on *brand attitude*.

To test the fourth hypothesis, one-way ANOVA tests were conducted followed by a paired t-test and independent t-tests. Initially, the one-way ANOVA tests results indicated that the homogeneity of variances assumption failed for the constructs (pre-response) *brand attitude* and (post-response) *brand attitude*. Considering the unequal sample sizes of the six groups and that the homogeneity of variances assumption failed, Welch tests were conducted.

In respect to (pre-response) *brand attitude* and (post-response) *brand attitude*, Welch tests indicated that there were statistically significant differences between the means for both constructs under analysis, as F(5, 258.194) = 9.151, p = .000 < α (.05) and F(5, 257.402) = 3.851, p = .002 < α (.05), respectively. (See appendixes J and K for SPSS 25.0 outputs)

Afterwards, a paired sample t-test was used to evaluate whether, for all *online firestorm triggers*, the *image repair strategy* employed by the organization under attack had any effect

on Facebook users' brand attitude. The results clearly indicated that Facebook users' *brand attitude* before the organization's response (M = 2.20, SD = 1.280) differed from Facebook users' *brand attitude* after the organization's response (M = 3.54, SD = 1.311), as $t(563) = -39.774$, $p = .000 < \alpha$ (.05). (See appendix L for SPSS 25.0 output)

Then, to have a more detailed comparison between pre-response *brand attitude* and post-response *brand attitude*, for each group/scenario, independent t-tests were conducted.

The objective was to investigate whether following a complaint/incident, the existence or the absence of an *image repair strategy* employed by the organization under attack, had a different effect on Facebook users' *brand attitude*. The results are shown in table 9.

Table 9. Hypothesis 4 results.

GROUP (OF TRIGGER, IMAGE REPAIR STRATEGY)	CONSTRUCT	N	MEAN	STD. DEVIATION	t	df	SIG. (2-TAILED)	MEAN DIFFERENCE	RESULT
1 (Unethical behaviour, Corrective action)	Pre-response brand attitude	92	2.03	1.751	-6.881	166.445	.000	-1.554	**Statistically significant**
	Post-response brand attitude	92	3.59	1.277					
2 (Unethical behaviour, Apology)	Pre-response brand attitude	92	1.71	1.105	-6.755	151.813	.000	-1.478	**Statistically significant**
	Post-response brand attitude	92	3.18	1.785					
3 (Core business problem, Corrective action)	Pre-response brand attitude	94	2.90	1.392	-5.984	186	.000	-1.021	**Statistically significant**
	Post-response brand attitude	94	3.93	.895					
4 (Core business problem, Apology)	Pre-response brand attitude	94	2.18	1.067	-7.019	176.704	.000	-1.245	**Statistically significant**
	Post-response brand attitude	94	3.43	1.348					
5 (Communication issue, Corrective action)	Pre-response brand attitude	96	2.04	.893	-12.072	190	.000	-1.563	**Statistically significant**
	Post-response brand attitude	96	3.60	.900					
6 (Communication issue, Apology)	Pre-response brand attitude	96	2.29	1.004	-6.804	173.338	.000	-1.188	**Statistically significant**
	Post-response brand attitude	96	3.48	1.384					

Source: SPSS 25.0 output.

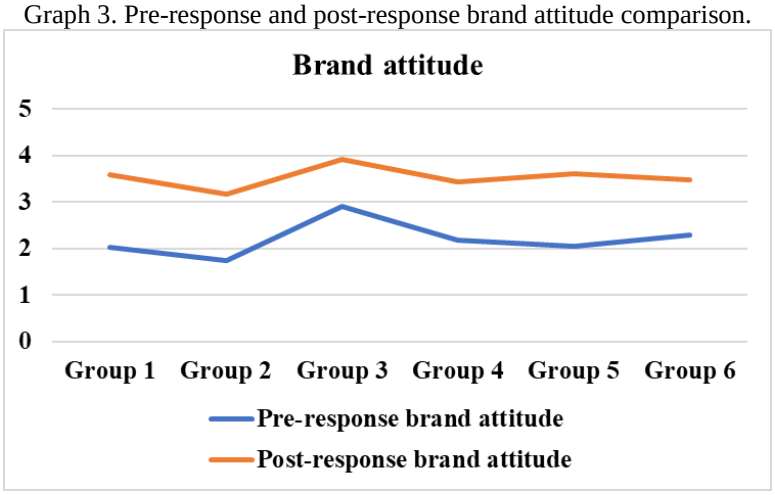
In groups 1, 2, 4 and 6, *Levene's* test for equality of variances, provided evidence that the variable under analysis came from populations with unequal variance.

Based upon the results shown in table 9, it is possible to conclude that the absence of an *image repair strategy* employed by an organization under attack has a negative effect on Facebook users' *brand attitude* in all groups. This is demonstrated by the lower *brand attitude* scores obtained before the organization's response, as opposed to the *brand attitude* scores obtained following the organization's response.

The differences between the means scores obtained for the construct (pre-response) *brand attitude* in comparison to the mean scores obtained for the construct (post-response) *brand attitude* are, in all groups, statistically significant (Mean difference = -1.554 (G1); Mean difference = -1.478 (G2); Mean difference = -1.021 (G3); Mean difference = -1.245 (G4); Mean difference = -1.563 (G5); Mean difference = -1.188 (G6), i.e., the absence of an *image repair strategy* employed by the organization under attack, led to considerably lower Facebook users' (pre-response) *brand attitude* scores, as (*M* = 2.03, *SD* = 1.751, G1); (*M* = 1.74, *SD* = 1.105, G2); (*M* = 2.90, *SD* = 1.392, G3); (*M* = 2.18, *SD* = 1.067, G4) ; (*M* = 2.04, *SD* = .893, G5); (*M* = 2.29, *SD* = 1.004, G6), than in the presence of an *image repair strategy*, as (*M* = 3.59, *SD* = 1.277, G1); (*M* = 3.18, *SD* = 1.785, G2); (*M* = 3.93, *SD* = .895, G3); (*M* = 3.43, *SD* = 1.348, G4); (*M* = 3.60, *SD* = .900, G5); (*M* = 3.48, *SD* = 1.384, G6).

A line chart was plotted, graph 3, to better acknowledge these differences.

Graph 3. Pre-response and post-response brand attitude comparison.



Source: Developed by the researcher.

Therefore, the **hypothesis *4* is supported**, since **the absence of an *image repair strategy*** employed by an organization under attack, has a **negative effect** on Facebook users' ***brand attitude***.

6. Conclusion

The conclusion section is divided into four distinct parts. First, the results of the research are summarized and discussed. Second, implications for both theory and practice are considered. Third, limitations and directions for future research are reckoned. Last, the main conclusions are drawn.

6.1. Summary of results

The research conducted aimed at investigating the effects of *online firestorm triggers*, and *image repair strategies* employed by organizations under attack, on Facebook users' *forwarding* and *negative WOM intentions*. The research used a 2 x 3 experimental design, which focused on the effects of the specific conditions (vignettes) on the measures. The results are summarized and discussed further along, considering the results obtained in the statistical hypothesis testing.

***Corrective action* is more effective than *apology* for *core business*- and *communication*-related incidents. No significant differences found between the employment of any of the strategies for *unethical behaviour*-related incidents.**

First, the results obtained in the first hypothesis testing, suggest that following an incident where an organization's behaviour has been perceived as wrong regarding social, legal, ecological or political issues (Rauschnabel, 2016), none of the strategies (*corrective action* vs. *apology*) employed, is more effective than the other one in lowering Facebook users' *forwarding* and *negative WOM intentions*. This implies that if Facebook users are inclined to forward/share negative user-generated content and convey negative opinions about an organization following its *unethical behaviour*, none of the strategies examined proved stronger than the other one up to the point of restraining significantly their intentions.

Considering the increased importance given to ethics and morality by today's standards, it was somewhat expected that none of the *image repair strategies* (*corrective action* vs. *apology*) employed by the organization under attack proved to be more effective than the other one in lowering Facebook users' *forwarding* and *negative WOM intentions*.

In 2018, the *unethical behaviour* of an organization is intolerable, particularly in the eyes of the stakeholders. Therefore, if an organization has a questionable conduct from an ethical or moral point of view, the employment of a strategy that incorporates a *corrective action* or an *apology* is not particularly relevant given the importance of such topics.

Second, with respect to perceived quality problems in the core business of an organization, such as problems found in products or related to customer service (Rauschnabel, 2016), results suggest that it is not irrelevant to employ a strategy that incorporates a *corrective action* or an *apology*. More precisely, *corrective action* proves to be more effective in lowering Facebook users' *forwarding* and *negative WOM intentions* following a problem related to the core business. This suggests that if Facebook users perceive a problem in the core business of an organization, the use of *corrective action*, as an *image repair strategy*, mitigates to a greater extent some of the damage it may arise since it restrains more Facebook users' intentions concerning the *forwarding*/sharing of negative user-generated content and the conveyance of negative opinions. This was also highly anticipated since consumers always seek solutions to their problems, not apologies. Even though an *apology* is often well accepted at some point, and seen as necessary, it does not provide solutions, i.e., it does not solve problems in products or customer service that stakeholders may encounter.

Third, concerning communication that has been perceived as inadequate by Facebook users, which is idiosyncratic to *online firestorms* (Rauschnabel, 2016), the results obtained are significantly different for Facebook users' *forwarding* and *negative WOM intentions*. According to Facebook users, the use of *corrective action*, as an *image repair strategy* following an incident related to an organization's communication, proves to be more effective than *apology* in lowering their *forwarding intentions*, i.e., their desire for *forwarding*/sharing negative user-generated content about the organization. This implies that if an organization communicates inadequately in the eyes of the Facebook users, the use of *corrective action*, is perceived as being more appropriate than an *apology* issued to lower their *forwarding intentions*. However, in the case of Facebook users' *negative WOM intentions*, results show that there is not a significant difference in employing any of the strategies under analysis (*corrective action* or *apology*) following an incident related to a problem of the same nature.

Attributed responsibility **as a moderator of the effect of** ***image repair strategy*** **on** ***forwarding*** **and** ***negative WOM intentions***

Following the second hypothesis testing, the results obtained suggest that *attributed responsibility* functions as a moderator variable of the relationship between the independent variable, *image repair strategy*, and the dependent variables, *forwarding* and *negative WOM intentions*.

First, it is suggested that *attributed responsibility* moderates the effect of *image repair strategy* on *forwarding intentions*. Moreover, as the responsibility attributed to an organization by Facebook users increases, their *forwarding intentions* also increase. The scatter plot also suggests that at low levels of *attributed responsibility*, an *apology*, as an *image repair strategy*, is surprisingly more effective than *corrective action* in lowering Facebook users' *forwarding intentions*. However, at high levels of *attributed responsibility*, *corrective action* overcomes *apology* as the most effective strategy. It is then possible to conclude that, at low levels of *attributed responsibility*, an *apology* appears to be enough to refrain Facebook users from *forwarding*/sharing negative user-generated content and conveying *negative WOM*. However, at higher levels of *attributed responsibility*, a more robust and enlightening response provides better results, reason why *corrective action* surpasses *apology* as the best strategy at these levels.

Second, it is also suggested that *attributed responsibility* moderates the effect of *image repair strategy* on *negative WOM intentions*. Furthermore, as the responsibility attributed to an organization by Facebook users increases, their *negative WOM intentions* also increase. Similarly to what was verified regarding *forwarding intentions*, the scatter plot suggests that at low levels of *attributed responsibility*, an *apology*, as an *image repair strategy*, is once again more effective than *corrective action* in lowering Facebook users' *negative WOM intentions*. However, at higher levels of *attributed responsibility*, *corrective action* becomes the most effective strategy to be employed by an organization under attack overcoming *apology* one more time. Considering that some authors have linked *attributed responsibility* to the level of severity, i.e., the notion that as the severity of the outcome of an action increases, the *attributed responsibility* to the actor increases, it is possible to infer that for less severe incidents, an *apology* is a more effective strategy than *corrective action*. Yet, for incidents that hold a higher level of severity, *apology* is no longer the best strategy as *corrective action* has a higher positive (i.e. lowers to a greater extent) effect on Facebook users' *forwarding* and *negative WOM intentions*.

Brand attitude* as a mediator of the effect of *image repair strategy* on *forwarding* and *negative WOM intentions

Following the third hypothesis testing, results indicate that (post-response) *brand attitude* mediates the effect of *image repair strategy* on *forwarding intentions*. More precisely, the use of an *image repair strategy* by an organization under attack is associated with approximately .40 points lower Facebook users' *forwarding intentions* scores as mediated by (post-response) *brand attitude*. Since *image repair strategy* is still a highly significant predictor of *forwarding intentions* after controlling for the mediator (post-response) *brand attitude*, the existence of partial mediation is implied.

Moreover, results indicate that (post-response) *brand attitude* mediates the effect of *image repair strategy* on *negative WOM intentions*. More precisely, the use of an *image repair strategy* by an organization under attack is associated with approximately .37 points lower Facebook users' *negative WOM intentions* scores as mediated by (post-response) *brand attitude*. Since *image repair strategy* is still a highly significant predictor of *negative WOM intentions* after controlling for the mediator (post-response) *brand attitude*, the existence of partial mediation is once again implied.

Lower (pre-response) *brand attitude* scores in the absence of an organizational response

Following the fourth and last hypothesis testing, results indicate that the absence of a response provided by an organization under attack has a negative effect on Facebook users' *brand attitude*. Comparing *brand attitude* scores, measured at two different points in time, before and after the organization's response, it is demonstrated that when the organization under attack responds (regardless of the *image repair strategy* chosen), Facebook users' *attitude towards the brand* is significantly higher than when no response is given at all; thus, corroborating previous studies and contradicting Lee's results (2004).

Therefore, considering that (post-response) *brand attitude* mediates the effect of *image repair strategy* on *forwarding* and *negative WOM intentions*, it is highly expected that Facebook users' *forwarding* and *negative WOM intentions* might be affected in the absence of an organizational response.

6.2. Implications for theory and practice

The world keeps changing at a staggering pace, everywhere, at the same time, due to the vital contributions of technology, globalization and social progress (Liozu, 2017).

Today, there are more social media crises than ever before, and there is a lack of scientific data. Businesses expect to be dealing with crises sooner than later and the existent research done becomes outdated rather quickly (Faller and Schmit, 2013). Thus, the "*sudden discharge of large quantities of messages containing negative WOM in social media*", as described by Pfeffer *et al.* (2014:118), is becoming more and more frequent and this form of public online communication impacts brands, institutions, celebrities, politicians and other individuals.

As previously mentioned, these online outrages may occur because of perceived moral misconducts, transgressions or failures, and even though they only last for a limited period, they may lead to severe consequences (Johnen *et al.*, 2017; Einwiller *et al.*, 2017).

In the past, WOMM used to be neglected or undervalued by marketers as a legitimate strategy, but now, organizations are incentivizing consumers to engage in online conversations with the objective of generating positive and influential feedback to be heard across the Internet (Gombeski JR. *et al.*, 2011). Moreover, the investments made on social network sites over the last few years, have increased significantly and more than any other marketing investment. This is mostly due to companies that make use of social media for brand building (Pfeffer *et al.* 2014). However, all these efforts can be seriously compromised once a social media crisis appears.

Some leaders still seem to underestimate the appalling effects that may arise in case a social media crisis goes out of control and that may lead to the formation of a negative spiral, capable of compromising the sustainability and even the subsistence of an organization. It is important to note that changes that occur at the micro level might have far-reaching consequences at the macro level. This principle known as the butterfly effect has made business leaders think thoroughly about the small and remote events that they may overlook in the first instance, but that can cause a hurricane in their businesses afterwards, triggering a deadly domino effect (Liozu, 2017). Once occurred, it might spread out in such a chaotic way, carrying unknown and unpredictable effects that, if not handled properly, may endanger an organization and its future.

It has already been recognized that uncontrolled negative WOM is capable of seriously harming an organization in many different areas, reason why some studies have proven that organizations devote far more resources to the management of it in comparison to what they do to the promotion of positive WOM (Williams and Buttle, 2014). It is also regarded that companies targeted by negative WOM tend to become more exposed to potential vulnerabilities coming from the outside, and then, in the eye of the (fire)storm, can easily be taken advantage

of by its competitors (Balaji *et al.*, 2016). Negative WOM can even be used as a tool to improve brand evaluation and customer relationship.

Although negative WOM has a highly negative impact on brands, it can be positive for consumers highly connected to an organization since it can increase their behavioural intentions towards it (Wilson *et al.*, 2017). Thus, negative WOM play at times a crucial role capable of shaping an organization's future. Analysing the negative WOM received might be revealing, in the way it permits organizations to better understand the "preincident" structure of users involved in the early stages of the phenomenon (Pfeffer *et al.* 2014) and their respective levels of loyalty, trust, commitment and satisfaction.

Therefore, it is of utmost importance to address these negative viral trends that can be triggered at any time and without any warning, as well as following strategies that organizations can rely on to counter them in the most efficient and effective way possible.

It is useful for any organization to know how communicate correctly in the presence of an *online firestorm* that SNS users are so now accustomed to engaging, and that may originate a dangerous snowball effect of catastrophic magnitude. When an organization uses adequate strategies following an incident, a crisis of unparalleled proportions can be mitigated or even avoided.

Considering the characteristics and dynamics of social network sites, i.e., their capacity of conveying information faster than ever, organizations who have the *know-how* in respect to crisis communication and crisis management, can successfully mitigate the damage caused by a potential *online firestorm*.

Since this is a relatively recent phenomenon, the body of knowledge on this topic is still scarce to some extent, and more contributions are needed to fully understand the underlying mechanisms of OFs and strategies that organizations must have at their disposal to respond to them.

Even though OFs are amongst the most discussed issues related to social media crises, questions about when and how such online attacks occur, and under which conditions they are amplified or mitigated, remain unanswered (Faller and Schmit 2013, as cited by Rauschnabel *et al.*, 2016). Being able to fully acknowledge and understand how they arise and, more importantly, how to counter them, is a skill that any organization should have, as being part of its competitive advantage.

In respect to crisis communication and crisis management, there are managers who lack profound knowledge on how to cope with social media crises (Hennig- Thurau *et al.* 2010; Labrecque *et al.* 2013, as cited by Rauschnabel *et al.*, 2016).

Therefore, the results presented in this research may be useful as they deepen the knowledge and the understanding on two crisis response strategies that are perceived as the most effective and appropriate to repair an organization's image (*corrective action* vs. *apology*), and that can be used in online environments. The strategies analysed are drawn upon the Image Restoration (IRT) and Situational Crisis Communication (SCCT) theories posited by Benoit (1995) and Coombs (2007), respectively. Both theories are the most influential and widespread conceptualizations that aim to understand crises and crisis response strategies and are usually used by practitioners to help design messages during crises and by critics or educators to critically evaluate messages produced during crises.

Some of the insights here presented may also aid organizations to get prepared to potential new phenomena that may emerge and compromise their success in the highly volatile competitive environments of today, and even allow them to buy some time to implement other crisis response strategies more tailored to the situations they face. In the long run, this might be decisive to outperform the competition. Addressing and contributing to this topic allows organizations and its leaders to ensure that they have what is necessary in respect to their capacity to ably control social media crises or even avoid them.

Considering Michael Porter's three forms of generic competitive strategy (1985), particularly cost leadership, these insights might be valuable as they might allow organizations to save costs that they would necessarily have to incur after experimenting ineffective strategies of online damage control. Savings that can later be catered towards different investments or to make an incursion into uncontested markets that can be highly profitable, following the Blue Ocean Strategy marketing theory posited by Kim and Mauborgne (2004), for instance. On the importance of having a competitive advantage over competitors, the renowned American business executive Jack Welch, once stated: "*If you don't have a competitive advantage, don't compete*".

In this research it is assessed how stakeholder's behavioural intentions, namely *forwarding* and *negative WOM intentions*, are influenced by the *online firestorm trigger* and the respective *image repair strategy* employed by an organization under attack.

Given the prominence of the phenomenon, understanding the root causes, development, implications and, more importantly, testing potential crisis response strategies, is of paramount importance for both theory and practice, in relation to hindering a further escalation of a crisis.

Therefore, the present results hold instrumental value for the management of social media crises, particularly OFs, and provide a valuable addition to body of knowledge of crisis communication and crisis management fields.

6.3. Limitations and directions for future research

The results of this research were drawn upon a fictitious case. Coombs (2014a) argues that crisis type, crisis history, and prior reputation determine the size of the reputational threat. Considering that this research did not consider crisis history and prior reputation by using a fictitious case brand, it is plausible to presume that the omission of these factors might have influenced Facebook users' perceptions and behavioural intentions. Therefore, more research is needed to fully understand how crisis history and prior reputation affects organizational crisis communication and crisis management in social media environments. Future research should then extend the results of this research, but using a real and well-known organization, even though the decision of not choosing such organization was deliberate and thoroughly considered, as the intention was to remove any bias that could have skewed the experiments done.

Although this research incorporated three different types of incidents capable of triggering an *online firestorm*, more research needs to be done in this regard, using different situations, since another mean of facilitating generalization is increasing the number of cases analysed.

The present research used a 2 x 3 design that encompassed two levels of strategy and three levels of triggers. It was chosen to limit the design to these levels, to guarantee a more careful and thorough data analysis within the scope of the research. However, considering the Image Restoration (IRT) and Situational Crisis Communication (SCCT) theories posited by Benoit (1995) and Coombs (2007), respectively, more crisis response strategies could have been tested as well as their inherent effects on SNS users' perceptions and behavioural intentions. Therefore, future research should consider extend the scope of this research in experimenting other strategies capable of repairing a tarnished image or reputation and affecting SNS users' perceptions and behavioural intentions.

In this research, Facebook was the social network site chosen to be used in the experiments conducted. Despite Facebook's versatility as a social network site, more research should be done in the future using other platforms such as Twitter, which is particularly known for being a social network site very prone to controversies, and thus *online firestorms*.

Besides prior reputation and prior crisis history, factors such as crisis response timing (Hosseinali-Mirza *et al.*, 2015; Pfeffer and Zorbach, 2014), crisis origin (Austin *et al.*, 2012; Veil *et al.*, 2012), communication in other sub arenas (Coombs and Holladay, 2014), and media coverage (Pang *et al.*, 2014) may also impact how Facebook users perceive an organization and

consequently their behavioural intentions. Thus, future research should introduce more factors to the research design to enrich the results here disclosed.

The research used a snowball sampling to recruit participants. This is an approach that has been heavily criticized for not producing a truly random population sample (Wimmer and Dominick, 2013). Future research should then seek to determine if a more generalizable sample could have impacted the results outlined in this research.

The strategies (*corrective action* vs. *apology*) were evaluated in respect to their effectiveness in three different situations. However, their effectiveness and appropriateness of can vary by situation, so this research cannot be generalized. It could also produce interesting results to analyse their effectiveness when they both strategies are employed together, which has already been addressed by many scholars in offline contexts, but now extending it to online environments.

Last, in the corrective action responses, the organization under attack did not specify what actions would be implemented in each situation. For future research, a more detailed and tailored response should be tested, as this may have some impact in Facebook users' perceptions and behavioural intentions.

6.4. Main conclusions

As this research approaches the end, there are results to elaborate on and some final considerations worth sharing.

First and foremost, *online firestorms* pose serious threats to people, companies, or groups in social media networks. They can compromise the sustainability and even the subsistence of their targets. Therefore, they must be addressed carefully and thoroughly.

Given the technology progress, particularly in online environments, new phenomena are expected to emerge in the upcoming years.

The present research aimed to contribute with valuable insights to the management of *online firestorms* and used a 2 (*image repair strategy*: *corrective action*, *apology*) x 3 (*online firestorm trigger*: *unethical behaviour*, *core business problem*, *communication issue*) design.

It was found that the organizational approach to crisis communication on social media has effects in relation to Facebook users' perceptions and intentions, which will have inevitably repercussions on how *online firestorms* may escalate.

More precisely, it was acknowledged that following an incident where an organization's behaviour has been perceived as wrong regarding social, legal, ecological or political issues (Rauschnabel, 2016), none of the strategies addressed (*corrective action* vs. *apology*), showed

to be more effective than the other one in lowering Facebook users' *forwarding* and *negative WOM intentions*. This implies that if Facebook users are inclined to forward/share negative user-generated content and convey negative opinions about an organization following its *unethical behaviour*, none of the strategies examined proves to be stronger than the other one up to the point of restraining significantly their intentions. This may be explained by the extreme importance and regard with which morality and ethics subjects are treated in the twenty-first century.

When significant differences were found in respect to the response used by the organization following a problem found in their core business, *corrective action* showed to be more effective than *apology* in lowering Facebook users' *forwarding* and *negative WOM intentions*, which contradicts Benoit and Drew (1997) and corroborates Coombs and Holladay (2008) results. This was highly anticipated, simply because following an incident related to the core business of an organization (Rauschnabel, 2016), consumers always seek solutions to their problems, not apologies. Even though an *apology* is often well accepted at some point, and seen as necessary, it does not provide solutions, i.e., it does not solve problems in products or customer service that stakeholders may encounter.

Moreover, according to Facebook users, the use of *corrective action*, as an *image repair strategy*, following an incident related to communication, proved to be more effective than *apology* in lowering their *forwarding intentions*. However, in the case of Facebook users' *negative WOM intentions*, results showed that there is not a significant difference in employing any of the strategies under analysis (*corrective action* or *apology*) following an incident related to a problem of the same nature.

Furthermore, it was also found that *attributed responsibility* functions as a moderator of the effect of *image repair strategy* on *forwarding* and *negative WOM intentions*. As the responsibility attributed to the organization under attack by Facebook users increased, their *forwarding* and *negative WOM intentions* also increased.

Moreover, at low levels of *attributed responsibility*, an *apology*, as *image repair strategy*, was surprisingly more effective than *corrective action* in lowering Facebook users' *forwarding* and *negative WOM intentions*. However, at high levels of *attributed responsibility, corrective action* overcame *apology* as the most effective strategy.

Based upon these results, it is possible to conclude that, at low levels of *attributed responsibility*, an *apology* appears to be enough to refrain Facebook users from forwarding/sharing negative user-generated content and conveying negative WOM. Yet, at higher levels of *attributed responsibility*, a more robust and enlightening response produces

better results, reason why *corrective action* surpasses *apology* as the best strategy at these levels. Considering that some authors have linked *attributed responsibility* to the level of severity, i.e., the notion that as the severity of the outcome of an action increases, the *attributed responsibility* to the actor increases, it is possible to infer that for less severe incidents, an *apology* is a more effective strategy than *corrective action*. Nevertheless, if the incident holds a higher level of severity, *apology* is no longer the best strategy as *corrective action* has a higher positive (i.e. lowers to a greater extent) effect on Facebook users' *forwarding* and *negative WOM intentions*.

In respect to the perception of an organization in the eyes of the Facebook users, it was also found that *brand attitude* mediates the effect of *image repair strategy* on *forwarding* and *negative WOM intentions*. More precisely, the use of an *image repair strategy* by an organization under attack is associated with approximately .40 points lower Facebook users' *forwarding intentions* scores as mediated by *brand attitude*, whilst the use of an *image repair strategy* by an organization under attack is associated with approximately .37 points lower Facebook users' *negative WOM intentions* scores as mediated by *brand attitude*. Since *image repair strategy* was still a highly significant predictor of *forwarding* and *negative WOM intentions* after controlling for the mediator *brand attitude*, the existence of partial mediation is implied.

It was also confirmed that the absence of a response provided by an organization under attack has a negative effect on Facebook users' (pre-response) *brand attitude*. Comparing *brand attitude* scores, measured at two different points in time, before and after the organization's response, it was demonstrated that when the organization under attack responds (regardless of the *image repair strategy* chosen), Facebook users' *attitude towards the brand* is significantly higher than when no response is given at all; thus, corroborating previous studies done on this subject. Therefore, considering that *brand attitude* mediates the effect of *image repair strategy* on *forwarding* and *negative WOM intentions*, it is highly expected that Facebook users' *forwarding* and *negative WOM intentions* might be affected in the absence of an organizational response.

Nowadays, leaders know they must pay attention to a world changing fast, everywhere, at the same time (Liozu, 2017), and thus expose themselves to the winds of change, but having a careful and thorough approach. In the words of Andrew Grove (1996), "*only the paranoid survive*". Considering the scarcity of resources, particularly money, as well as the high levels of competition, it is not viable and feasible for most organizations to have several crisis response strategies at their disposal to protect themselves in case a social media crisis arises, simply due

to the immeasurable amount of costs they would have to incur. For this reason, some fear the online world and avoid it at all costs. Even though this could be an afforded reality in the past, it is not recommended for organization's own good considering today's world. In respect to this, leaders seem to have finally realized that to thrive, they must be online, i.e., they must communicate online. However, it is important to remember that, as someone once said: "*By the time you hear the thunder, it is too late to build the ark*."

Therefore, in contemporary organizations, there is no longer the paradigm of "*better safe than sorry*" anymore, but instead, more the dichotomy of better safe or sorry.

7. References

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Appendixes

Appendix A - Online questionnaire in English

Hello!

Thank you for participating in this research.

The questionnaire will take 5 minutes to complete. The information in this research will be used exclusively for research purposes.

For additional information, please, contact: hapan@iscte-iul.pt

Thank you.

Helder António Neves.

Q1 – Do you have a Facebook account?

- Yes
- No

Q2 – How often do you go to Facebook?

- Less than once per week
- Once per week
- Two to three times per week
- Once per day
- Several times per day

Q3 – On average, how much time do you spend on Facebook per day?

- Less than 1 hour
- 1-2 hours
- 2-3 hours
- 3-4 hours
- More than 4 hours

Q4 – Do you follow any Facebook pages?

- Yes
- No

Q5 – Have you ever used Facebook to directly contact a brand?

- Yes
- No

Q6 – Have you ever used Facebook to complain on a brand's Facebook page?

- Yes
- No

Q7 – How often do you use Facebook to complain on brands' Facebook pages?

- Never
- 2
- 3
- Sometimes
- 5
- 6
- Always

Read the following post in which Joao directly contacts Lusoretail's Facebook page – a Portuguese shoe brand.

Translation – Joao: How were you capable of throwing waste – that you created – in the river that flows through the city? You are polluting the environment and affecting public health! DEPLORABLE and SHAMEFUL!!!

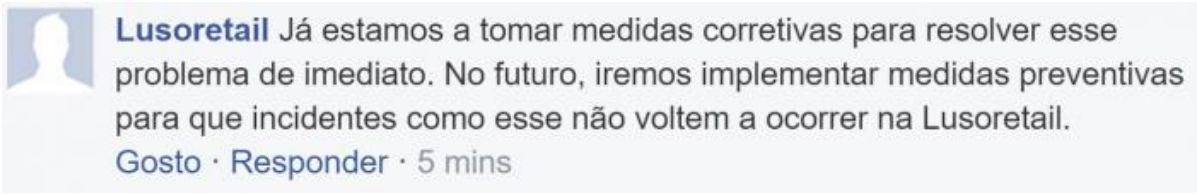
Q8 – You consider Joao's post:

- Negative
- 2
- Neutral
- 4
- Positive

Q9 – Given the incident, how would you rate Lusoretail according to the following criteria?

	1	2	3	4	5	6	7	
Unappealing	○	○	○	○	○	○	○	Appealing
Bad	○	○	○	○	○	○	○	Good
Unpleasant	○	○	○	○	○	○	○	Pleasant
Unfavourable	○	○	○	○	○	○	○	Favourable
Unlikable	○	○	○	○	○	○	○	Likable

Read the Lusoretail's response.



Translation – Lusoretail: We are already taking corrective actions to solve the problem immediately. In the future, preventive actions will be taken to prevent an incident like this from happening again at Lusoretail.

Q10 – You consider Lusoretail's response:

- Negative
- 2
- Neutral
- 4
- Positive

Q11 – Given Lusoretail's response, how would you rate Lusoretail according to the following criteria?

	1	2	3	4	5	6	7	
Unappealing	○	○	○	○	○	○	○	Appealing
Bad	○	○	○	○	○	○	○	Good
Unpleasant	○	○	○	○	○	○	○	Pleasant
Unfavourable	○	○	○	○	○	○	○	Favourable
Unlikable	○	○	○	○	○	○	○	Likable

Q12 – Choose the correct option. In the response given to Joao:

- ○ Lusoretail informs it will take corrective and preventive actions to solve the problem.
- ○ Lusoretail assumes responsibility and apologises.
- ○ Both options above are correct.

Q13 - Consider Joao's post and and Lusoretail's response. On a scale from 1 to 7, rate your level of agreement with the following statements:

	Strongly disagree	2	3	Neither agree nor disagree	5	6	Strongly agree
This Facebook post is worth sharing with others.	○	○	○	○	○	○	○
I will recommend this Facebook post to others.	○	○	○	○	○	○	○

Q14 - Consider Joao's post and Lusoretail's response. On a scale from 1 to 7, rate your level of agreement with the following statements:

	Strongly disagree	2	3	Neither agree nor disagree	5	6	Strongly agree
I would make negative comments about Lusoretail.	○	○	○	○	○	○	○
I would use Facebook to discourage friends and relatives to buy products from Lusoretail.	○	○	○	○	○	○	○

Q15 – Consider Joao's post and Lusoretail's response**.** On a scale from 1 to 7, which level of responsibility would you attribute to Lusoretail?

- Low responsibility
- 2
- 3
- Moderate responsibility
- 5
- 6
- High responsibility

Q16 - Age:

- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- + 65

Q17 - Gender:

- Male
- Female

Q18 - Education:

- Basic education (9th grade)
- High school degree (12th grade)
- Bachelor's degree
- Master's degree
- PhD

Q19 - Profession:

- Unemployed
- Worker
- Student
- Student worker
- Retired

Thank you for your participation!

Appendix B - Online questionnaire in Portuguese

Olá!

Agradeço a sua disponibilidade e colaboração neste estudo.

O presente questionário leva 5 minutos a responder. É anónimo e confidencial.

Todas as respostas serão utilizadas exclusivamente para fins científicos, no âmbito de uma tese de Mestrado em Marketing, realizada na ISCTE Business School – Lisboa.

Para mais informações ou esclarecimentos adicionais, por favor, contacte hapan@iscte-iul.pt.

Obrigado.

Helder António Neves.

Q1 - Tem conta na rede social Facebook?

- Sim
- Não

Q2 - Com que frequência acede ao Facebook?

- Menos de uma vez por semana
- Uma vez por semana
- Duas a três vezes por semana
- Uma vez por dia
- Várias vezes por dia

Q3 - Em média, quanto tempo passa no Facebook por dia?

- Menos de 1 hora
- 1-2 horas
- 2-3 horas
- 3-4 horas
- Mais de 4 horas

Q4 - Segue páginas de marcas no Facebook?

- Sim
- Não

Q5 - Alguma vez utilizou o Facebook para contactar diretamente uma marca?

- Sim
- Não

Q6 - Alguma vez utilizou o Facebook para fazer uma reclamação na página de uma marca?

- Sim
- Não

Q7 - Com que frequência utiliza o Facebook para fazer reclamações em páginas de marcas?

- Nunca
- 2
- 3
- De vez em quando
- 5
- 6
- Sempre

Observe a seguinte publicação, em que o João contacta diretamente a página de Facebook da Lusoretail – marca portuguesa que atua no setor do calçado.

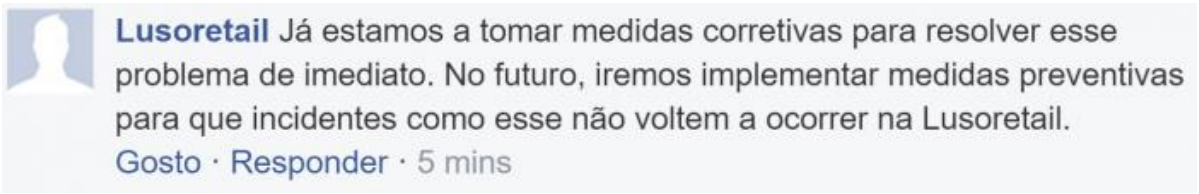
Q8 - Considera a publicação do João:

- Negativa
- 2
- Nem positiva nem negativa
- 4
- Positiva

Q9 - Face ao incidente ocorrido, como avaliaria a marca Lusoretail para cada um dos seguintes critérios?

	1	2	3	4	5	6	7	
Não apelativa	○	○	○	○	○	○	○	Apelativa
Má	○	○	○	○	○	○	○	Boa
Desagradável	○	○	○	○	○	○	○	Agradável
Desfavorável	○	○	○	○	○	○	○	Favorável
Não gosto	○	○	○	○	○	○	○	Gosto

Leia a resposta apresentada ao João pela marca Lusoretail.



Q10 - Considera a resposta apresentada ao João pela marca Lusoretail:

- Negativa
- 2
- Nem positiva nem negativa
- 4
- Positiva

Q11 - Considerando a resposta apresentada ao João, como avaliaria a marca Lusoretail para cada um dos seguintes critérios?

	1	2	3	4	5	6	7	
Não apelativa	○	○	○	○	○	○	○	Apelativa
Má	○	○	○	○	○	○	○	Boa
Desagradável	○	○	○	○	○	○	○	Agradável
Desfavorável	○	○	○	○	○	○	○	Favorável
Não gosto	○	○	○	○	○	○	○	Gosto

Q12 - Selecione a afirmação correta. Na resposta apresentada ao João:

- A marca Lusoretail informa que toma medidas corretivas e preventivas para solucionar o problema.
- A marca Lusoretail assume a responsabilidade pelo incidente ocorrido e pede desculpa.
- Ambas as afirmações anteriores estão corretas.

Q13 - Considere a publicação do João e a resposta apresentada pela marca Lusoretail. Indique, por favor, numa escala de 1 a 7, o seu grau de concordância com as seguintes afirmações:

	Discordo totalmente	2	3	Nem concord nem discordo	5	6	Concordo totalmente
Partilharia a publicação do João com outros.	○	○	○	○	○	○	○
Recomendaria a publicação do João a outros.	○	○	○	○	○	○	○

Q14 - Considere a publicação do João e a resposta apresentada pela marca Lusoretail. Indique, por favor, numa escala de 1 a 7, o seu grau de concordância com as seguintes afirmações:

	Discordo totalmente	2	3	Não concordo nem discordo	5	6	Concordo totalmente
Faria comentários negativos sobre a marca Lusoretail no Facebook.	○	○	○	○	○	○	○
Usaria o Facebook para desencorajar amigos e conhecidos a comprar produtos da marca Lusoretail.	○	○	○	○	○	○	○

Q15 - Indique, por favor, numa escala de 1 a 7, o nível de responsabilidade que atribuiria à marca Lusoretail pelo incidente ocorrido:

- Responsabilidade baixa
- 2
- 3
- Responsabilidade moderada
- 5
- 6
- Responsabilidade alta

Q16 - Idade:

- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- + 65

Q17 - Género:

- Masculino
- Feminino

Q18 - Habilitações Académicas:

- Ensino Básico (até ao 9º ano)
- Ensino Secundário (até ao 12º ano)
- Licenciatura
- Mestrado
- Doutoramento

Q19 - Situação Atual:

- Desempregado
- Trabalhador
- Estudante
- Trabalhador-Estudante
- Reformado

Obrigado pela sua participação!

Appendix C - Comparability of randomised groups SPSS 25.0 output

Age comparison

Table 10. Descriptive statistics, age comparison.

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
age_comparison	564	2,82	1,406	1	6
group	564	1,50	,500	1	2

Source: SPSS 25.0 output.

Table 11. Ranks, age comparison.

Ranks

	group	N	Mean Rank
age_comparison	Corrective action groups	282	278,28
	Apology groups	282	286,72
	Total	564	

Source: SPSS 25.0 output.

Table 12. Kruskal-Wallis test, age comparison.

Test Statistics[a,b]

	age_comparison
Kruskal-Wallis H	,396
df	1
Asymp. Sig.	,529

a. Kruskal Wallis Test

b. Grouping Variable: group

Source: SPSS 25.0 output.

Gender comparison

Table 13. Descriptive statistics, gender comparison.

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
gender_comparison	564	1,42	,493	1	2
group	564	1,50	,500	1	2

Source: SPSS 25.0 output.

Table 14. Ranks, gender comparison.

Ranks

	group	N	Mean Rank
gender_comparison	Corrective action groups	282	276,00
	Apology groups	282	289,00
	Total	564	

Source: SPSS 25.0 output.

Table 15. Kruskal-Wallis test, gender comparison.

Test Statistics[a,b]

	gender_comparison
Kruskal-Wallis H	1,231
df	1
Asymp. Sig.	,267

a. Kruskal Wallis Test

b. Grouping Variable: group

Source: SPSS 25.0 output.

Education comparison

Table 16. Descriptive statistics, education comparison.

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
education_comparison	564	2,98	,977	1	5
group	564	1,50	,500	1	2

Source: SPSS 25.0 output.

Table 17. Ranks, education comparison.

Ranks

	group	N	Mean Rank
education_comparison	Corrective action groups	282	299,27
	Apology groups	282	265,73
	Total	564	

Source: SPSS 25.0 output.

Table 18. Kruskal-Wallis test, education comparison.

Test Statistics[a,b]

	education_comparison
Kruskal-Wallis H	6,559
df	1
Asymp. Sig.	,010

a. Kruskal Wallis Test

b. Grouping Variable: group

Source: SPSS 25.0 output.

Profession comparison

Table 19. Descriptive statistics, profession comparison.

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
profession_comparison	564	2,45	,913	1	5
group	564	1,50	,500	1	2

Source: SPSS 25.0 output.

Table 20. Ranks, profession comparison.

Ranks

	group	N	Mean Rank
profession_comparison	Corrective action groups	282	294,85
	Apology groups	282	270,15
	Total	564	

Source: SPSS 25.0 output.

Table 21. Kruskal-Wallis test, profession comparison.

Test Statistics[a,b]

	profession_comparison
Kruskal-Wallis H	4,156
df	1
Asymp. Sig.	,041

a. Kruskal Wallis Test

b. Grouping Variable: group

Source: SPSS 25.0 output.

Appendix D - Hypothesis 1a SPSS 25.0 output

One-way ANOVA and Welch tests

Independent variable: Group (condition)

Dependent variable: *forwarding intentions*

Table 22. Descriptives, *forwarding intentions* comparison.

Descriptives

fw_intentions_comparison

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
g1 (corrective, unethical)	92	4,26	1,839	,192	3,88	4,64	1	7
g2 (apology, unethical)	92	4,40	1,984	,207	3,99	4,81	1	7
g3 (corrective, business)	94	2,91	1,752	,181	2,56	3,27	1	7
g4 (apology, business)	94	3,74	1,565	,161	3,42	4,07	1	7
g5 (corrective, communication)	96	3,38	1,948	,199	2,98	3,77	1	7
g6 (apology, communication)	96	3,94	1,740	,178	3,58	4,29	1	7
Total	564	3,77	1,872	,079	3,61	3,92	1	7

Source: SPSS 25.0 output.

Table 23. Homogeneity of variances test, *forwarding intentions* comparison.

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
fw_intentions_comparison	Based on Mean	3,254	5	558	,007
	Based on Median	3,058	5	558	,010
	Based on Median and with adjusted df	3,058	5	512,705	,010
	Based on trimmed mean	3,082	5	558	,009

Source: SPSS 25.0 output.

Table 24. One-way ANOVA test, *forwarding intentions* comparison.

ANOVA

fw_intentions_comparison

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	145,398	5	29,080	8,881	,000
Within Groups	1827,175	558	3,275		
Total	1972,573	563			

Source: SPSS 25.0 output.

Table 25. Welch test, *forwarding intentions* comparison.

Robust Tests of Equality of Means

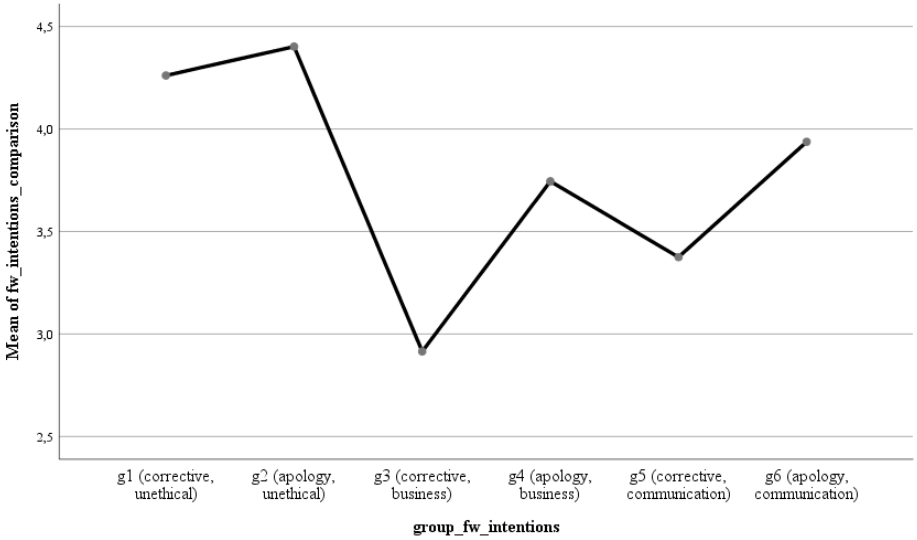
fw_intentions_comparison

	Statistic[a]	df1	df2	Sig.
Welch	8,529	5	259,944	,000

a. Asymptotically F distributed.

Source: SPSS 25.0 output.

Graph 4. Mean, *forwarding intentions* comparison.



Source: SPSS 25.0 output.

Appendix E - Hypothesis 1b SPSS 25.0 output

One-way ANOVA and Welch tests

Independent variable: Group (condition)

Dependent variable: *negative WOM intentions*

Table 26. Descriptives *negative WOM intentions* comparison.

Descriptives

nwom_intentions_comparison

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
g1 (corrective, unethical)	92	4,09	1,480	,154	3,78	4,39	1	6
g2 (apology, unethical)	92	3,79	1,959	,204	3,39	4,20	1	7
g3 (corrective, business)	94	2,95	1,447	,149	2,65	3,24	1	6
g4 (apology, business)	94	3,77	1,863	,192	3,38	4,15	1	7
g5 (corrective, communication)	96	2,72	1,320	,135	2,45	2,99	1	6
g6 (apology, communication)	96	3,13	1,551	,158	2,81	3,44	1	7
Total	564	3,40	1,686	,071	3,26	3,54	1	7

Source: SPSS 25.0 output.

Table 27. Homogeneity of variances test, *negative WOM intentions* comparison.

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
nwom_intentions_comparison	Based on Mean	6,506	5	558	,000
	Based on Median	5,451	5	558	,000
	Based on Median and with adjusted df	5,451	5	485,749	,000
	Based on trimmed mean	6,486	5	558	,000

Source: SPSS 25.0 output.

Table 28. One-way ANOVA test, *negative WOM intentions* comparison.

ANOVA

nwom_intentions_comparison

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	141,368	5	28,274	10,807	,000
Within Groups	1459,872	558	2,616		
Total	1601,239	563			

Source: SPSS 25.0 output.

Table 29. Welch test, *negative WOM intentions* comparison.

Robust Tests of Equality of Means

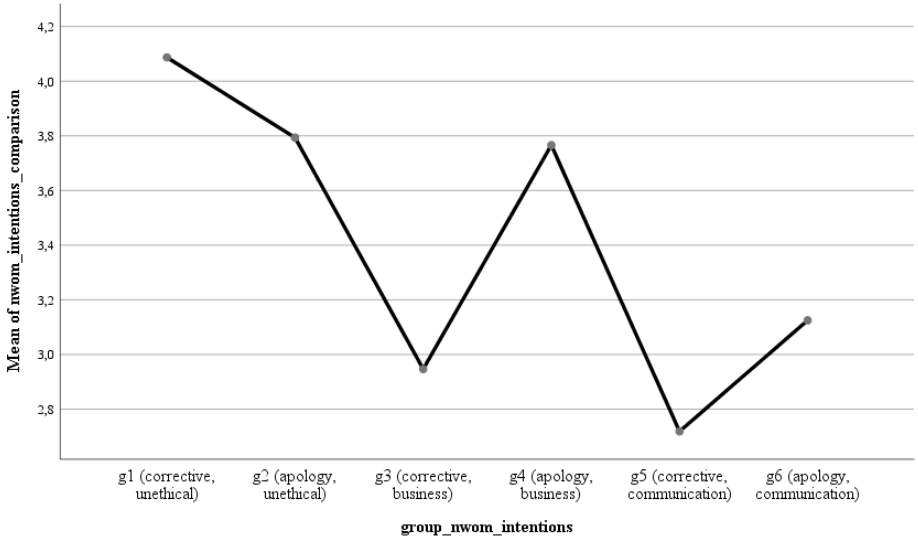
nwom_intentions_comparison

	Statistic[a]	df1	df2	Sig.
Welch	12,502	5	259,273	,000

a. Asymptotically F distributed.

Source: SPSS 25.0 output.

Graph 5. Mean, *negative WOM intentions* comparison.



Source: SPSS 25.0 output.

Appendix F - Hypothesis 2a SPSS 25.0 output (moderation 1)

```
**************************************************************************
Model: 1
    Y: dv_fw_in
    X: iv_imgre
    W: mod_cris

Sample
Size:  564

**************************************************************************
OUTCOME VARIABLE:
 dv_fw_in

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,8629      ,7447      ,8994   544,4389     3,0000   560,0000     ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,7527      ,0400    93,7322      ,0000     3,6741     3,8314
iv_imgre      ,2859      ,0801     3,5703      ,0004      ,1286      ,4432
mod_cris      ,9197      ,0232    39,5688      ,0000      ,8741      ,9654
Int_1         ,2420      ,0465     5,2053      ,0000      ,1507      ,3333

Product terms key:
 Int_1:        iv_imgre x        mod_cris

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0124    27,0948     1,0000   560,0000      ,0000
----------
    Focal predict: iv_imgre (X)
          Mod var: mod_cris (W)

Conditional effects of the focal predictor at values of the moderator(s):

   mod_cris     Effect         se          t          p       LLCI     ULCI
    -1,7834     -,1457      ,1163    -1,2522      ,2110     -,3741    ,0828
      ,0000      ,2859      ,0801     3,5703      ,0004      ,1286    ,4432
     1,6064      ,6746      ,1085     6,2188      ,0000      ,4615    ,8877

Moderator value(s) defining Johnson-Neyman significance region(s):
      Value    % below    % above
    -2,2646    13,2979    86,7021
     -,5012    23,5816    76,4184

Conditional effect of focal predictor at values of the moderator:
   mod_cris     Effect         se          t          p       LLCI     ULCI
    -4,3936     -,7773      ,2208    -3,5210      ,0005    -1,2109    ,3437
    -4,0936     -,7047      ,2078    -3,3908      ,0007    -1,1129    ,2965
    -3,7936     -,6321      ,1950    -3,2411      ,0013    -1,0152    ,2490
    -3,4936     -,5595      ,1824    -3,0674      ,0023     -,9178    ,2012
    -3,1936     -,4869      ,1700    -2,8645      ,0043     -,8208    ,1530
    -2,8936     -,4143      ,1578    -2,6253      ,0089     -,7243    ,1043
    -2,5936     -,3417      ,1460    -2,3411      ,0196     -,6284    ,0550
    -2,2936     -,2691      ,1345    -2,0006      ,0459     -,5333    ,0049
    -2,2646     -,2621      ,1334    -1,9642      ,0500     -,5242    ,0000
    -1,9936     -,1965      ,1236    -1,5901      ,1124     -,4393    ,0462
    -1,6936     -,1239      ,1133    -1,0936      ,2746     -,3465    ,0987
```

-1,3936	-,0513	,1039	-,4940	,6215	-,2555	,1528
-1,0936	,0213	,0956	,2222	,8242	-,1666	,2091
-,7936	,0938	,0888	1,0571	,2909	-,0805	,2682
-,5012	,1646	,0838	1,9642	,0500	,0000	,3292
-,4936	,1664	,0837	1,9885	,0472	,0020	,3309
-,1936	,2390	,0807	2,9605	,0032	,0804	,3976
,1064	,3116	,0801	3,8888	,0001	,1542	,4690
,4064	,3842	,0819	4,6896	,0000	,2233	,5452
,7064	,4568	,0860	5,3129	,0000	,2879	,6257
1,0064	,5294	,0920	5,7551	,0000	,3487	,7101
1,3064	,6020	,0996	6,0442	,0000	,4064	,7976
1,6064	,6746	,1085	6,2188	,0000	,4615	,8877

```
************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

W values in conditional tables are 1 SD below the mean, the mean, and the
maximum.

NOTE: One SD above the mean is above the maximum observed in the data for
W, so the maximum measurement for W is used for conditioning instead.

NOTE: The following variables were mean centred prior to analysis:
          mod_cris iv_imgre

NOTE: Variables names longer than eight characters can produce incorrect
output.
      Shorter variable names are recommended.

------ END MATRIX -----
```

Appendix G - Hypothesis 2b SPSS 25.0 output (moderation 2)

```
**************************************************************************
Model: 1
    Y: dv_nwom_
    X: iv_imgre
    W: mod_cris

Sample
Size:  564

**************************************************************************
OUTCOME VARIABLE:
 dv_nwom_

Model Summary
          R       R-sq        MSE          F        df1        df2        p
      ,8564      ,7335      ,7621   513,7263     3,0000   560,0000    ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     3,3791      ,0369    91,6881      ,0000     3,3067     3,4515
iv_imgre      ,1088      ,0737     1,4763      ,1404     -,0360      ,2536
mod_cris      ,8331      ,0214    38,9354      ,0000      ,7910      ,8751
Int_1         ,3197      ,0428     7,4710      ,0000      ,2356      ,4038

Product terms key:
 Int_1:        iv_imgre x        mod_cris

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      ,0266    55,8160     1,0000   560,0000      ,0000
----------
    Focal predict: iv_imgre (X)
          Mod var: mod_cris (W)

Conditional effects of the focal predictor at values of the moderator(s):

   mod_cris     Effect         se          t          p       LLCI     ULCI
    -1,7834     -,4613      ,1071    -4,3086      ,0000     -,6717    ,2510
      ,0000      ,1088      ,0737     1,4763      ,1404     -,0360    ,2536
     1,6064      ,6224      ,0999     6,2328      ,0000      ,4262    ,8185

Moderator value(s) defining Johnson-Neyman significance region(s):
      Value    % below    % above
     -,8489    23,5816    76,4184
      ,1129    43,7943    56,2057

Conditional effect of focal predictor at values of the moderator:
   mod_cris     Effect         se          t          p       LLCI     ULCI
    -4,3936    -1,2958      ,2032    -6,3768      ,0000    -1,6950    ,8967
    -4,0936    -1,1999      ,1913    -6,2724      ,0000    -1,5757    ,8242
    -3,7936    -1,1040      ,1795    -6,1497      ,0000    -1,4566    ,7514
    -3,4936    -1,0081      ,1679    -6,0041      ,0000    -1,3379    ,6783
    -3,1936     -,9122      ,1565    -5,8299      ,0000    -1,2195    ,6049
    -2,8936     -,8163      ,1453    -5,6191      ,0000    -1,1016    ,5309
    -2,5936     -,7204      ,1344    -5,3613      ,0000     -,9843    ,4564
    -2,2936     -,6245      ,1238    -5,0429      ,0000     -,8677    ,3812
    -1,9936     -,5285      ,1138    -4,6458      ,0000     -,7520    ,3051
    -1,6936     -,4326      ,1043    -4,1472      ,0000     -,6375    ,2277
    -1,3936     -,3367      ,0957    -3,5198      ,0005     -,5246    ,1488
```

```
    -1,0936     -,2408      ,0880    -2,7354      ,0064     -,4137    ,0679
     -,8489     -,1626      ,0828    -1,9642      ,0500     -,3252    ,0000
     -,7936     -,1449      ,0817    -1,7731      ,0768     -,3054    ,0156
     -,4936     -,0490      ,0770     -,6359      ,5251     -,2003    ,1023
     -,1936      ,0469      ,0743      ,6312      ,5282     -,0991    ,1929
      ,1064      ,1428      ,0738     1,9362      ,0533     -,0021    ,2877
      ,1129      ,1449      ,0738     1,9642      ,0500      ,0000    ,2898
      ,4064      ,2387      ,0754     3,1655      ,0016      ,0906    ,3869
      ,7064      ,3346      ,0791     4,2281      ,0000      ,1792    ,4901
     1,0064      ,4306      ,0847     5,0847      ,0000      ,2642    ,5969
     1,3064      ,5265      ,0917     5,7422      ,0000      ,3464    ,7065
     1,6064      ,6224      ,0999     6,2328      ,0000      ,4262    ,8185

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

W values in conditional tables are 1 SD below the mean, the mean, and the
maximum.

NOTE: One SD above the mean is above the maximum observed in the data for
W, so the maximum measurement for W is used for conditioning instead.

NOTE: The following variables were mean centred prior to analysis:
          mod_cris iv_imgre

NOTE: Variables names longer than eight characters can produce incorrect
output.
      Shorter variable names are recommended.

------ END MATRIX -----
```

Appendix H - Hypothesis 3a SPSS 25.0 output (mediation 1)

```
**************************************************************************
Model: 4
    Y: dv_fw_in
    X: iv_imgre
    M: med_pstb

Sample
Size:  564

**************************************************************************
OUTCOME VARIABLE:
 med_pstb

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1299      ,0169     1,6939     9,6468     1,0000   562,0000     ,0020

Model
              coeff         se          t          p       LLCI       ULCI
constant     4,0461      ,1733    23,3473      ,0000     3,7057     4,3865
iv_imgre     -,3404      ,1096    -3,1059      ,0020     -,5557     -,1251

**************************************************************************
OUTCOME VARIABLE:
 dv_fw_in

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,8251      ,6808     1,1225   598,1486     2,0000   561,0000     ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant    -1,7419      ,1980    -8,7973      ,0000    -2,1308    -1,3530
iv_imgre      ,9129      ,0900    10,1443      ,0000      ,7361     1,0896
med_pstb     1,1711      ,0343    34,1041      ,0000     1,1036     1,2385

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 dv_fw_in

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,1375      ,0189     3,4436    10,8255     1,0000   562,0000     ,0011

Model
              coeff         se          t          p       LLCI       ULCI
constant     2,9965      ,2471    12,1267      ,0000     2,5111     3,4818
iv_imgre      ,5142      ,1563     3,2902      ,0011      ,2072      ,8211

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c_ps
      ,5142      ,1563     3,2902      ,0011      ,2072      ,8211     ,2747

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI    c'_ps
      ,9129      ,0900    10,1443      ,0000      ,7361     1,0896     ,4877
```

```
Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
med_pstb     -,3987      ,1261     -,6377     -,1385

Partially standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
med_pstb     -,2130      ,0676     -,3375     -,0742

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  1000

NOTE: Variables names longer than eight characters can produce incorrect
output.
      Shorter variable names are recommended.

------ END MATRIX -----
```

Appendix I - Hypothesis 3b SPSS 25.0 output (mediation 2)

```
**************************************************************************
Model: 4
    Y: dv_nwom_
    X: iv_imgre
    M: med_pstb

Sample
Size:  564

**************************************************************************
OUTCOME VARIABLE:
 med_pstb

Model Summary
          R       R-sq        MSE          F        df1        df2        p
      ,1299      ,0169     1,6939     9,6468     1,0000   562,0000    ,0020

Model
             coeff         se          t          p       LLCI       ULCI
constant     4,0461      ,1733    23,3473      ,0000     3,7057     4,3865
iv_imgre     -,3404      ,1096    -3,1059      ,0020     -,5557     -,1251

**************************************************************************
OUTCOME VARIABLE:
 dv_nwom_

Model Summary
          R       R-sq        MSE          F        df1        df2        p
      ,8465      ,7165      ,8091   709,0190     2,0000   561,0000    ,0000

Model
             coeff         se          t          p       LLCI       ULCI
constant    -1,4892      ,1681    -8,8584      ,0000    -1,8194    -1,1590
iv_imgre      ,6870      ,0764     8,9928      ,0000      ,5370      ,8371
med_pstb     1,0911      ,0292    37,4257      ,0000     1,0338     1,1484

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 dv_nwom_

Model Summary
          R       R-sq        MSE          F        df1        df2        p
      ,0937      ,0088     2,8242     4,9729     1,0000   562,0000    ,0261

Model
             coeff         se          t          p       LLCI       ULCI
constant     2,9255      ,2238    13,0737      ,0000     2,4860     3,3651
iv_imgre      ,3156      ,1415     2,2300      ,0261      ,0376      ,5936

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI     c_ps
      ,3156      ,1415     2,2300      ,0261      ,0376      ,5936    ,1871

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI    c'_ps
      ,6870      ,0764     8,9928      ,0000      ,5370      ,8371    ,4074
```

```
Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
med_pstb    -,3714      ,1216     -,6112     -,1227

Partially standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
med_pstb    -,2202      ,0732     -,3702     -,0717

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  1000

NOTE: Variables names longer than eight characters can produce incorrect
output.
      Shorter variable names are recommended.

------ END MATRIX -----
```

Appendix J - Hypothesis 4 SPSS 25.0 output

One-way ANOVA and Welch tests

Independent variable: Group (condition)

Dependent variable: (pre-response) *brand attitude*

Table 30. Descriptives, pre-response *brand attitude* comparison.

Descriptives

pre_resp_ba

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
g1 (corrective, unethical)	92	2,03	1,751	,183	1,67	2,40	1	7
g2 (apology, unethical)	92	1,71	1,105	,115	1,48	1,94	1	6
g3 (corrective, business)	94	2,90	1,392	,144	2,62	3,19	1	7
g4 (apology, business)	94	2,18	1,067	,110	1,96	2,40	1	6
g5 (corrective, communication)	96	2,04	,893	,091	1,86	2,22	1	4
g6 (apology, communication)	96	2,29	1,004	,103	2,09	2,50	1	5
Total	564	2,20	1,280	,054	2,09	2,30	1	7

Source: SPSS 25.0 output.

Table 31. Homogeneity of variances test, pre-response *brand attitude* comparison.

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
pre_resp_ba	Based on Mean	8,022	5	558	,000
	Based on Median	1,305	5	558	,260
	Based on Median and with adjusted df	1,305	5	329,622	,262
	Based on trimmed mean	5,892	5	558	,000

Source: SPSS 25.0 output.

Table 32. One-way ANOVA test, pre-response *brand attitude* comparison.

ANOVA

pre_resp_ba

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	74,837	5	14,967	9,852	,000
Within Groups	847,709	558	1,519		
Total	922,546	563			

Source: SPSS 25.0 output.

Table 33. Welch test, pre-response *brand attitude* comparison.

Robust Tests of Equality of Means

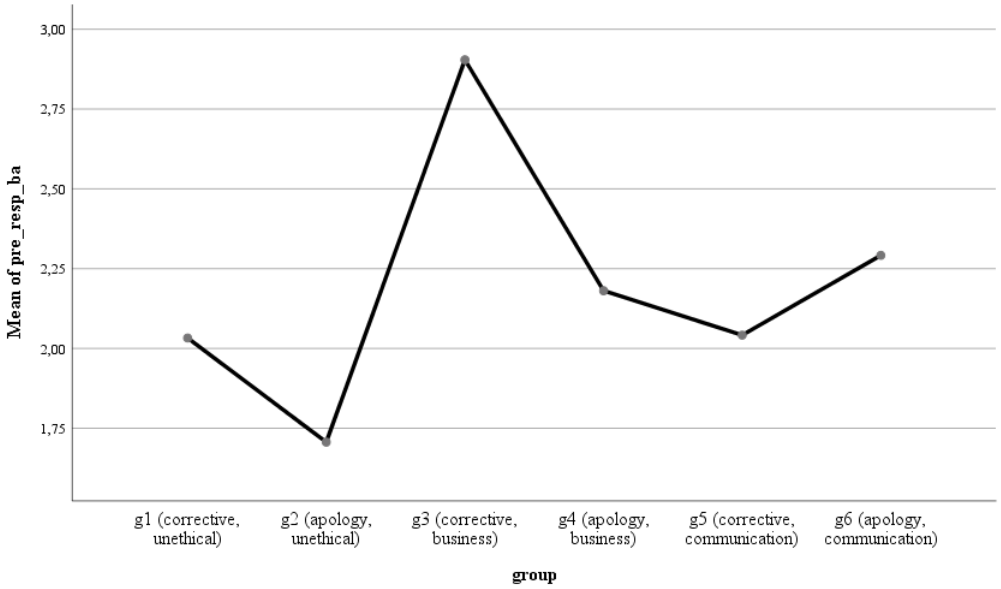
pre_resp_ba

	Statistic[a]	df1	df2	Sig.
Welch	9,151	5	258,194	,000

a. Asymptotically F distributed.

Source: SPSS 25.0 output.

Graph 6. Mean, pre-response *brand attitude* comparison.



Source: SPSS 25.0 output.

Appendix K - Hypothesis 4 SPSS 25.0 output

One-way ANOVA and Welch tests

Independent variable: Group (condition)

Dependent variable: (post-response) *brand attitude*

Table 34. Descriptives, post-response *brand attitude* comparison.

Descriptives

post_resp_ba

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
g1 (corrective, unethical)	92	3,59	1,277	,133	3,32	3,85	1	7
g2 (apology, unethical)	92	3,18	1,785	,186	2,82	3,55	1	7
g3 (corrective, business)	94	3,93	,895	,092	3,74	4,11	1	6
g4 (apology, business)	94	3,43	1,348	,139	3,15	3,70	1	7
g5 (corrective, communication)	96	3,60	,900	,092	3,42	3,79	1	7
g6 (apology, communication)	96	3,48	1,384	,141	3,20	3,76	1	6
Total	564	3,54	1,311	,055	3,43	3,64	1	7

Source: SPSS 25.0 output.

Table 35. Homogeneity of variances test, post-response *brand attitude* comparison.

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
post_resp_ba	Based on Mean	13,803	5	558	,000
	Based on Median	10,313	5	558	,000
	Based on Median and with adjusted df	10,313	5	498,237	,000
	Based on trimmed mean	13,439	5	558	,000

Source: SPSS 25.0 output.

Table 36. One-way ANOVA test, post-response *brand attitude* comparison.

ANOVA

post_resp_ba

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	27,754	5	5,551	3,293	,006
Within Groups	940,537	558	1,686		
Total	968,291	563			

Source: SPSS 25.0 output.

Table 37. Welch test, post-response *brand attitude* comparison.

Robust Tests of Equality of Means

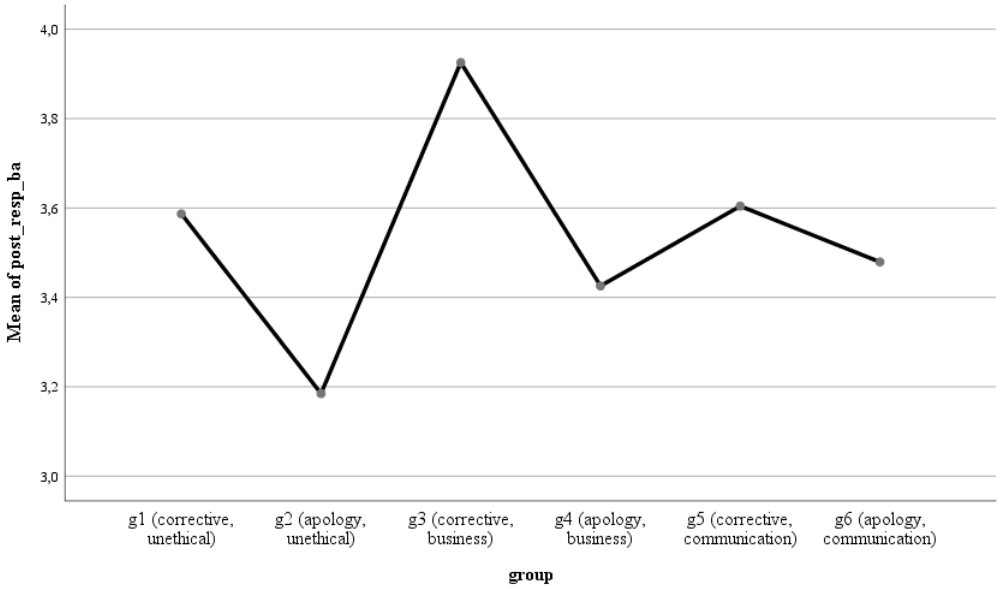
post_resp_ba

	Statistic[a]	df1	df2	Sig.
Welch	3,851	5	257,402	,002

a. Asymptotically F distributed.

Source: SPSS 25.0 output.

Graph 7. Mean, post-response *brand attitude* comparison.



Source: SPSS 25.0 output.

Appendix L - Hypothesis 4 SPSS 25.0 output

Table 38. Paired sample statistics, pre-response and post-response *brand attitude* comparison.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre_resp_ba	2,20	564	1,280	,054
	post_resp_ba	3,54	564	1,311	,055

Source: SPSS 25.0 output.

Table 39. Paired samples correlations, pre-response and post-response *brand attitude* comparison.

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pre_resp_ba & post_resp_ba	564	,810	,000

Source: SPSS 25.0 output.

Table 40. Paired samples test, pre-response and post-response *brand attitude* comparison.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	pre_resp_ba - post_resp_ba	-1,340	,800	,034	-1,407	-1,274	-39,774	563	,000

Source: SPSS 25.0 output.