# UNIVERSITY OF TWENTE

# Master thesis

How Live Stream Videos affect the post-crisis evaluation of the organisation.

The role of channel interactivity, pre-crisis reputation and crisis severity on trust, emotions and purchase intention in a product-related crisis.

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# The role of channel interactivity, pre-crisis reputation and crisis severity on trust, emotions and purchase intention in a product-related crisis.

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#### **ABSTRACT**

<u>Aim:</u> Over the past years scholars stress the importance of using rich channels to enhance the effect of the response message in crisis communication. In 2012 Vodafone and more recently in 2019 Boeing Company, used a video response in their response strategy after a crisis. The response was similar but the crisis severity and prior crisis reputation differed for both organisations. Since the rise of social media features such as live stream videos, communication researchers have yet failed to investigate the role of such channels in crisis communication. The rationale of this study is to research the effects of video and live stream videos in relation to crisis communication. In addition, the prior crisis reputation of the organisation is taken into account and the degree of crisis severity is investigated to see if and under what circumstances the effects of live stream are visible.

Method: a 2 (channel interactivity: live stream v.s. pre-recorded) by 2 (pre-crisis reputation: negative vs. positive) and 2 (crisis severity: low vs. high) experimental model is designed. A total of 220 Dutch participants were assigned to one of the eight scenarios, who were recruited via snowball sampling. The participants were exposed to a video response of the CEO, who explained the situation. The crisis involved a food-related product called Spreadtastic, which caused allergic reactions because of wrong information on the ingredient list. The experiment was conducted and designed in an online environment. The questionnaire and manipulated stimuli were presented in a Qualtrics survey. After being exposed to one of the eight scenarios, attitude and behavioural questions were asked to evaluate the post-crisis outcome.

<u>Results:</u> Results show that responding to a crisis with a more interactive channel is important for people's trust in the organisation after the crisis. The effects are stronger for the high severe crisis, than for the low severe crisis. The live stream video enhances trust in a high severe crisis, meaning that organisations should use rich communication channels when the crisis is severe. Furthermore, the study confirmed that when an organisation is caught in severe crisis, it influences people's emotions and purchase intention.

Lastly, this study emphasizes and confirms the importance of having a positive pre-crisis reputation, as it lessens de post-crisis damage to the organisation.

<u>Research contribution:</u> This study contributes to the understanding what role rich channels have with regard to post-crisis outcomes. The examination of live stream video in crisis communication is new to the field of crisis communication research. Furthermore, it confirmed previous studies on the importance of a favourable pre-crisis reputation and the impact of the crisis severity.

Keywords: Crisis communication; crisis management; pre-crisis reputation; crisis severity; channel interactivity; live stream video; trust, purchase intention, emotion

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# 1. INTRODUCTION

A novel and increased popularity feature of social media is social live streaming services (SLSS), which enables consumers to view or broadcast live video content and makes it possible to interact with the person in the video by using the chat channel (Scheibe et al., 2016). Of all social media, Facebook and online video platforms like YouTube, are most frequently used by consumers (Jin et al., 2011). Facebook makes it possible to broadcast live videos and to reach millions of people at the same time. It is important to get a scientific understanding of this new technology in relation to crisis communication as it may be very useful in reaching the audience during a crisis, and perhaps can influence its post-crisis evaluation of the firm.

Recent years, several organisations have used video as part of their response strategy during a crisis. Telephone company Vodafone dealt with a product crisis in 2012 (Nu.nl, 2012; Rtl nieuws, 2012; Seegers, 2012). Due to a major fire at a network exchange, 5.3 million customers in The Netherlands could not call, text or use the internet service for almost a month. During the crisis, the CEO of Vodafone in the Netherlands, Rob Shuter, posted several videos on Youtube to inform Vodafone customers about the crisis and to keep them updated on the situation. A year later, the reputation of Vodafone had improved and was ranked from a 22<sup>nd</sup> position to position 12 of firms with the highest reputation. Even though other factors could have influenced the higher reputation ranking of Vodafone, it indicates that Vodafone handled the crisis well and that use of a video message during a crisis may have a positive impact on the post reputation of a firm.

In 2019, the Boeing Company was struck by a severe crisis when two of its airplanes crashed in a short period of time. It resulted in hundreds of deaths. The initial crisis response of Boeing's CEO Muilenberg was defensive, passive and showed lack of sympathy and openness (Macheras, 2019). Hence, the company was heavily criticized by the media. Three weeks after the second crash, Boeing uploaded a video response on its website, where the CEO showed regrets, compassion and took responsibility for the crisis. One month after the second crash, The Boeing Company suffered major reputation damage, resulting in a 34 billion dollar market value tumble (Macheras, 2019). Both organisations used a video in their response strategy. However, both crises had different characteristics. When taking into account the SCCT model of Coombs (2007), the crisis of Vodafone is not addressed as severe, since no lives were taken and Vodafone did not set up the fire on purpose. They were seen as a victim themself. The crisis of Boeing on the other hand, took many lives and decision makers were found to have made various mistakes. In other words: the attributions to crisis responsibility and level of crisis severity were different. However, both companies used the same strategy in terms of video use.

Additionally, the prior crisis reputation of Vodafone was positive, whereas Boeing suffered reputational loss due to several incidents in a short period of time. A positive reputation contributes

to high financial performance, attracts customers and employee talent, has an advantage over competitors with lower reputations and can increase return on assets (Carmeli & Tishler, 2005; Davies et al., 2003; Fombrun & Gardberg, 2000; Fombrun & Van Riel, 2004). This might be an explanation for the seemingly discrepancy of effects after the crisis response.

When turning to literature, there is a lack of scientific evidence of what effect an interactive video channel has in crisis communication outcomes. Researchers stress the importance of engaging in a two way dialogue when a crisis occurs (Yang, Kang & Johnson, 2010). A possible explanation can be found in Media Richness Theory (Daft & Lengel, 1986). MRT describes how using the appropriate medium is very important in order to deliver a message accordingly and to make sure it is interpreted in the right way. In crisis communication research, most studies of channel interactivity focussed on blogs and other forms of written communication. Video use is barely taken into account. A gap remains between the rapid evolution of technological possibilities and its possible opportunities in crisis communication. Little is known about the effect of different interactive video channels on an organizations' reputation (Coombs & Holladay, 2008). More specifically, there is little known on the effects of video use in relation to pre-crisis reputation and crisis severity.

Coombs (2007) stresses the importance of reputations as "widely recognized as valuable, intangible assets of a firm" (p. 164.) Knowing which channel to use in times of a crisis is therefore important for decision-makers in the field of communication research in order to increase the impact of the crisis response. The described crisis events of Vodafone and Boeing, responses and traits of the companies were a starting point for this research. There is a need for scientific evidence regarding the use of video to guide managers and decision makers in crisis communication. This research therefore, addresses two types of channel (pre-recorded video vs. live stream video) in relation to pre-crisis reputation (positive vs. negative) and crisis severity (high vs. low). This 2 x 2 x 2 model stresses the following research questions:

**RQ1:** To what extent do channel interactivity (pre-recorded vs. live stream), crisis severity (high vs. low) and pre-crisis reputation (positive vs. negative) influence consumer outcomes such as emotion, trust and purchase intention?

In addition, to get a comprehensive understanding on the use of interactive video channels in crisis communication, it is important to know if the use of an interactive channel depends on other factors. The effect of the chosen channel might differ for prior crisis reputation and crisis severity. A second research question is therefore formulated:

**RQ2**: To what extent does channel interactivity (pre-recorded vs. live stream) interact with pre-crisis reputation (positive vs. negative) and crisis severity (high vs. low) in influencing consumer outcomes such as emotion, trust and purchase intention?

Lastly, literature provides empirical evidence for the mediating role of emotions and trust on behavioural intentions (Gefen, 2000; Jarvanpaa, Tractinsky & Vitale, 2000; Mansour, Kooliand & Utuma, 2014). Therefore it may be very likely this might also be the case for channel interactivity. This study takes a third research question into account, in order to assess if emotions and trust act as a predictor for purchase likelihood when being influenced by channel interactivity.

**RQ3**: To what extent are the effects of channel type (pre-recorded vs. live stream), pre-crisis reputation (positive v.s. negative) and crisis severity (high vs. low) on purchase intention, mediated by emotions and trust?

# 2. THEORETICAL FRAMEWORK

This theoretical framework provides an understanding for how channel type, crisis severity and pre-crisis reputation contribute to consumer outcomes such as emotion, trust and purchase intention. The impact of these factors will be discussed on the basis of conducted studies over the past years. Additionally, the discussed literature will be followed by hypotheses to support the research questions.

# 2.1 Organizational crisis

Before a crisis can be managed properly, one has to recognize a crisis and its characteristics. Early definitions of a crisis go back to the late '70s. According to Turner (1976) and Brecher (1977), the first step of defining a crisis is the perception and change of the environment which can cause a crisis. In other words, finding a possible gap between the perceived reality and the desired state or goal. According to Billings, Milburn and Schaalman's model (1980), once the discrepancy is established, the 'perceived seriousness of the problem is judged' (p. 5). Accordingly, elements of perceived seriousness include the (1) value and (2) probability of possible loss and (3) time pressure. All these elements will determine if a problem is perceived as a crisis. A commonly used definition of a crisis was described by Coombs (1999) as "An event that is unpredictable and which can be a major threat to the reputation of an organization, industry or stakeholders if handled improperly" (p. 2).

According to Coombs (2007) a crisis can establish three associated threats, namely (1) The public safety, such as deaths or injuries, (2) reputation loss and (3) financial loss, for example due to loss market share. Accordingly, these three threats are interrelated, since one can and most likely will affect the other. Moreover, Coombs (2007) describes various crisis types by crisis clusters: The victim cluster, accidental cluster and the preventable cluster. Identifying the crisis type is important for effective crisis communication.

# 2.2 Crisis communication

Crisis communication is necessary in order to minimize reputational damage. Coombs (2012b) defines crisis communication as "the collection, processing, and dissemination of information required to address a crisis situation" (p.20). He developed a framework, known as the SCCT model (2007), to guide practitioners on how to save the organization's reputation as much as possible. The model describes key characteristics of the crisis situation, such as crisis responsibility and crisis history. Furthermore, it provides ten crisis response strategies of how the message could be communicated. The response strategies are divided into primary response strategies (attack the accuser, denial, scapegoat, excuse, justification, compensation, apology) and secondary response strategies (reminder, ingratiation and victimage).

These response strategies influence the audience' emotions. According to Coombs (2007), the higher the attributions of crisis responsibility, the stronger negative feelings such as anger are evoked. Accordingly, negative emotions are more salient during a crisis because they are expressed more than the satisfied stakeholder. A crisis can be seen as a violation of stakeholders expectations, which elicits anger (Coombs, 2007). Negative emotions are especially damaging for a firm, because it can cause "stakeholders to lash out at an organization" (p. 169). According to Jin, Pang and Cameron (2007), negative emotions are dominant in times of crises when facing an issue that can potentially harm them. By expressing their anger, they will try to increase their own benefit in the crisis. Accordingly, negative emotions can disappear when the public's defense against the organisation is effective. Hence, it is important to investigate the level of negative emotions to effectively decrease negative post-crisis outcomes with the appropriate strategy.

Scholars emphasized the importance of various and more rich communication channels as part of their response strategy. For instance, Liu and Jin (2011) examined how the use of social media affected the post-crisis situation as opposed to traditional media. Lin, Spence and Sellnow et al. (2016) elaborate on how more rich channels such as social media could effectively be used in crisis communication. Additionally, scholars stressed the importance of online strategic crisis communication tactics (i.e. Eriksson, 2012; González-Herrero & Smith, 2010; Wendling, Radisch & Jacobzone, 2013). Especially social media strategies in crisis communication are nowadays important to take into consideration because of the increasing use of social media as an information source (Pepitone, 2010) and the interactive characteristics of the channel.

# 2.3 Channel interactivity

In communication research, the concept, definition and measurements of channel interactivity have changed over time. In the last three decades, the focus of studies in crisis communication has shifted from one-way communication channels (such as newspapers and mass media) to more interactive channels (such as social media) in the online world.

At the beginning of the internet-era, interactivity was defined as the "extent to which the communicator and the audience respond to, or are willing to facilitate, each other's communication needs" (Ha & James, 1998, p. 461). Taylor and Kent (2007) emphasized on the importance of a website as an interactive channel to communicate with the audience in times of crisis. Although these definitions highlighted the dialogue between the communicator and audience, channel interactivity was most often measured in a technical way (Yang & Lim, 2009). Accordingly, the concept was defined by the number of features, links, pages, downloads, audio etc. on a website. Researchers failed to take into account the degree of interactivity of each function. Sundar et al.

(2003) argues that not every function serves as a dialogue and should therefore not always be taken into account. Blogs were also often defined as an interactive channel, because they would generate interactivity. However, the degree of interactivity of a blog depends on many factors, such as the blogger's dialogical self, the narrative structure and the bloggers' self style (Yang & Lim, 2009).

Since the rise of social media platforms such as YouTube (2005) and Twitter (2006), a whole new dimension of interactivity and crisis communication has been found. According to Barnett (2011), social media has become an important channel as a source for personal communication but also as an information source about the crisis. Schultz, Utz and Gorritz (2011) found that the channel is even more important than the message in times of crisis. This stresses the importance of adequate usage of interactive channels. Ki and Nekmat (2014), revealed a significant relationship between the two-way dialogue of the organisation and its audience and a positive attitude towards how the crisis was handled. However, ten years after the introduction of social media platforms, Roshan, Warren and Carr (2016) found that crisis managers were still unaware of the potential and value of social media in times of crisis. Organisations did not take social media into account when selecting a crisis response strategy nor did they respond to the audience' social media messages.

This study contributes to the understanding of channel interactivity and crisis communication. The following paragraphs describe the characteristics and effects of one of the most interactive channels, video and social live stream services.

# 2.3.1 Pre-recorded videos

Video messages have the ability to deliver relational, nonverbal, and verbal cues as well as to create a "face" for the message (Coombs & Holladay, 2008). In crisis communication research, text items (newspapers and later on social media messages on Twitter and Facebook) have been largely investigated in relation to different response strategies. The use of video stimuli to date has only been explored by Coombs & Holladay (2008). In a 2 (crisis response: sympathy and compassion) by 2 (media: print and video) study, the authors investigated the influence of medium type in relation to a real unintentional crisis.

According to Media Richness Theory (Daft & Lengel, 1986), face-to-face communication is perceived as the highest form of information processing because one can receive immediate feedback. A medium is considered rich when the channel includes visuals and audio, and thus body language as well as spoken words are captured. Moreover, the source should be personal and feedback has to be received immediately or fast. These characteristics can be seen, heard or captured in videos.

# 2.3.2 Live stream videos

One of the newest features of social media are social live stream services (SLSS). Pre-recorded video content and live stream videos are both high in salience. However, SLSS has additional characteristics as it provides the possibility of immediate feedback and response to the public. Therefore, the social presence of SLSS is considered higher compared to pre-recorded videos. Contrary to pre-recorded videos, the live stream service enables users to view or broadcast content in real-time (Bründl & Hess, 2017; Scheibe et al., 2016). SLSS are synchronous, which allows all user activities to take place at the same time (Scheibe, Fietkiewicz & Stock, 2016). According to Hamilton et al. (2014), SLSS provides additional characteristics to pre-recorded videos. Firstly, the use of SLSS on social media provides the possibility to interact with the audience, as consumers are able to respond and ask questions in the live streams' respective chat channel. Hence, making it possible for consumers to shape the content of the live stream and influence other consumer's viewing experience (Battarbee, 2003b; Lim et al., 2012).

# 2.3.3 Effects

As one can read above, the degree to which videos are considered rich varies. This can be explained by the theory of social presence. Short, Williams and Christie (1976) define social presence as the salience of consequent interaction between individuals. The effects of social presence matter in the case of crisis communication due to its positive effect on consumer outcomes. Lowenthal (2010) argues that social presence describes people's perception of the person being real. Ogowoski, Montandon, Botha et al. (2014) discovered that social presence has a significant effect on trust formation of stakeholders. The study showed that the live chat function made the website more credible. Gefen and Straub (2004) argue that social presence influences trust and purchase intentions in e-commerce, because social presence makes it less likely to hide information or engage in untrustworthy behaviour. According to Yoo and Alavi (2001), social presence generates a psychological connection between the organisation and stakeholder and creates a feeling of real and human contact.

Moreover, the positive effects of pre-recorded videos and live stream videos may be explained by Media Richness Theory (MRT, Daft & Lengel, 1986). The authors argue that organizations can reduce and clarify uncertainty when using the appropriate medium. The appropriate medium has to be rich, meaning it should "provide the best communication tactic for the message" (p. 7). Furthermore, using a rich medium can improve the interpretation of the message. Recent years, the effects of SLSS have been researched especially in digital marketing. Tang, Venolia and Inkpen (2016) found that consumers elicit a positive emotional response to the use of SLSS. Moreover, the researchers found that the use of SLSS provides an authentic and unedited view of the

message. Web service provider Yahoo! conducted a study (N= 2,002) on the opportunities of live streaming videos and found that the use of SLSS results in higher positive emotion and greater emotional reaction compared to pre-recorded videos.

Within crisis communication, the interactivity of the channel has been investigated in a study of Yang, Kang and Johnson (2010). The authors showed that engaging in a dialogue with stakeholders via blog posts, or even suggesting a two way communication strategy in crisis communication, has a significant effect on the perception of the company and positive consumer outcomes. Accordingly, more positive emotions were measured when stakeholders could interact with the company. In addition, it showed that these positive emotions deliver a halo effect and that behavioural intentions such as purchase likelihood are higher. Furthermore, Lewis and Weigert (1985) argue that the degree of social presence contributes to the level of trust. Yang and Lim (2009) underpin this outcome and found that interactivity of the channel, as a mediator, is a significant predictor for relational trust. Mayer, Davis and Schoorman (1995) define trust as 'the willingness of a party to be vulnerable to the actions of another party' (p. 712). Accordingly, The most accepted components of trust are ability, benevolence and integrity. These components were established during the examination of inter-organisational relationships. Shazi, Gillespie and Steen (2015) found that benevolence and integrity were the most prominent predictors of trust. Accordingly, lack of integrity or benevolence would make ability irrelevant.

When studying the effect of channel in crisis communication, only the study of Coombs and Holladay (2008) can be addressed. The authors found no significant effects of video compared to text-based messages. However, this study focussed on pre-recorded videos and did not include the possibilities of live stream videos. The positive consumer outcomes of SLSS and the positive effects of social presence are a good starting point to explore the effects of this novel feature in crisis communication. Considering the interactivity of SLSS and the positive effects of social presence on emotions, trust and purchase intention, the following hypothesis is proposed.

**H1**: Live stream videos as opposed to pre-recorded messages will have a more positive effect on (a) emotion (b) trust and (c) higher purchase intention.

# 2.4 Crisis severity

As the two crisis scenarios of Boeing and Vodafone showed, the crisis severity differed. There is a possibility that this factor influenced the post-crisis evaluation. According to literature, crisis severity can be explained as the direct consequences for the public and the damage caused by the organisation (Lee, 2004). Other types of incidents include factors such as the number of injuries and deaths, financial and environmental damage (Coombs, 1999; Coombs & Holladay, 2002). Severity of

the crisis also refers to "the degree of discrepancy or gap between expectations and perceived organizational behavior/actions" (Fediuk, Coombs & Botero, 2010, p. 643).

# 2.4.1 Effects

The more (perceived) impact the crisis has on consumers, the higher the crisis severity. The effect of crisis severity on consumer outcomes can be explained by Correspondent Inference theory (Jones & Davis, 1965). The theory explains how the actions of an actor affect internal and external attributions of the perceiver. The authors refer to this as hedonic relevance. The term is associated "with higher salience of both positive and negative effects" (Martinko, 2018, p.154), which means that the more severe the crisis is perceived, the higher the dispositional attributions are. For example, when the incident affects the consumer directly and, for example, involves a product they consume, it may cause negative emotions. Claeys, Cauberghe and Vyncke (2010) argue that when people perceive the crisis as severe, it negatively impacts their perception of the organisation. As described in paragraph 2.3.3. it is very likely that negative emotions influence people's trust in the organisation, which could result in lower purchase intentions. Arpan and Roskos-Ewoldson (2005) found that the level crisis severity has a negative relationship with purchase intentions. Vassilikopoulou et al. (2009), showed that purchase intention is shortly affected after the occurrence of a severe crisis. In case of a less severe crisis, purchase intentions are higher. Lee (2004) Investigated the effects of crisis severity on trust, but found no significant effects. However, since crisis severity affects the perception of the organisation, it is very likely that trust is influenced as well. Therefore, this will be tested again.

**H2**: A high severe crisis will cause more (a) negative emotions (b), lower level of trust and (c) lower purchase intentions, than a low severe crisis.

# 2.5 Pre-crisis reputation

The pre-crisis reputation of Boeing was considered negative and Vodafone had a favourable pre-crisis reputation. Considering the discrepancy of the post-crisis evaluation of both firms, It is very likely that the pre-crisis reputation has a considerable impact on post-crisis evaluation of a firm. According to Coombs (2007), reputations are "widely recognized as valuable, intangible assets" (p. 164). According to Alsop (2004) building a strong reputation capital will help in times of crisis because it will have some reputational capital left as opposed to companies who have built little reputation capital. These consequences were researched by Coombs and Holladay (2006) and is known as the 'halo effect' in crisis communication research. However, a favourable pre-crisis reputation does not always provide the best outcomes in times of crisis. The Expectancy Violation Theory provides an understanding of this so-called 'boomerang effect' (Sohn & Lariscy, 2015).

# 2.5.1 Effects

Holding a strong pre-crisis reputation has shown positive effects on consumer outcomes. For example, a positive reputation contributes to high financial performance, attracts customers and employee talent, has an advantage over competitors with lower reputations and can increase return on assets, (Carmeli & Tishler, 2005; Davies et al., 2003; Fombrun and Gardberg, 2000; Fombrun and van Riel, 2004).

According to Claeys & Cauberghe (2015), a favourable pre-crisis reputation helps an organization to minimize the negative results from a crisis. Accordingly, consumers often do not change their initial beliefs towards the company, so when consumers experience positive attributions, it is less likely their attitude will change when a crisis occurs. Coombs and Holladay (2006) underpin this and argue that a favourable pre-crisis reputation can offer a protective shield against reputational crisis damage. According to Perloff (2010), this can be explained by cognitive dissonance theory: Consumers try to reduce negative feelings in a crisis situation about firms they feel positive about, in order to deal with cognitive dissonance. Consequently, organizations that hold a strong pre-crisis reputation would experience less reputation damage than firms who already have a bad pre-crisis reputation (Edwards & Smith, 1996). Later findings in literature, however, found contradicting results of a favourable pre-crisis reputation. Besides the 'buffering' effect described above, a favourable reputation can also backfire (Sohn & Lariscy, 2015). The rationale can be found in Expectancy Violation Theory (Burgoon & LePoire, 1993): stakeholders expectations are higher for firms with a good reputation. No confirmatory performance was made, resulting in stronger positive or, in case of a crisis, negative effects. When a boomerang or buffering effect occurs, depends on the type of crisis. Sohn and Lariscy (2015) showed that this effect occurs in case of an intentional crisis, meaning that the company knew it was doing something unethical. Accordingly, despite the opposite findings for a favourable pre-crisis reputation, the positive effects are dominant.

A negative pre-crisis reputation has multiple undesirable consequences for organisations since the firm can be damaged on several aspects, like its financial performance or image of the company (Coombs & Holladay, 2001). This suggests that purchase intention and trust is affected by the perceived prior crisis reputation. Hence, this research has taken into account the pre-crisis reputation (positive vs. negative). Taken all together, it is assumed that a positive pre-crisis reputation will be of great value when a crisis strikes and will positively influence consumer outcomes. Therefore, the third hypothesis is as follows:

**H3**: A positive pre-crisis reputation will cause less (a) negative emotions (b), positive trust and (c) higher purchase intentions than a negative pre-crisis reputation.

# 2.6 Channel interactivity and crisis severity

The effect of live stream videos might differ for crisis severity. According to Heat and Palenchar (2009), negative emotions caused by a crisis, such as anxiety and uncertainty, make individuals more aware of and interested in the message and therefore are inclined to actively communicate with the organization during the crisis. This occurrence is explained in Uncertainty Reduction Theory (Berger & Calabere, 1975). The realm of this theory was focussed on finding cognitive and attitudinal similarities between two parties in order to reduce uncertainty. In the case of an organizational crisis, stakeholders will seek explanations as a way to reduce negative emotions (Coombs & Holladay, 2004). This implies that when crisis severity is high, the public seeks and demands for more interactive communication ways to reduce negative emotions. One of the characteristics of social media is the broad range of information (Austin & Jin, 2016). Accordingly, people tend to turn to social media in times of crisis. In order to avoid people speculating on the crisis and turning to unreliable sources, the interactive video provides the possibility to reduce uncertainty and provide clarity to the public immediately. By using a synchronous communication channel (i.e. live stream video), the organization is able to directly communicate with the audience and provide specific and demanded information for its stakeholders.

Dunn and Schweitzer (2005) found that one's emotional state has an impact on trust, especially when emotions such as anger are involved. Therefore, live stream videos may be a more suitable tool to communicate with the public as opposed to pre-recorded videos, since SLSS makes it possible to interact directly with the spokesperson in the video.

**H4**: When crisis severity is high, the use of a live stream video will cause (a) less negative emotions (b) more trust and (c) higher purchase intention and than a pre-recorded video.

# 2.7 Channel interactivity and pre-crisis reputation

As stated earlier, a favourable pre-crisis reputation can help organizations during crises to suffer less damage and revive faster (Coombs, 2007a). However, research has indicated that, when steps taken during the crisis were considered bad, a favourable pre-reputation can not always protect the company. One of the biggest crises was the 'Diesel gate' of Volkswagen, when Volkswagen was caught cheating on diesel emission tests. It resulted in ten billion euros of financial loss (Mačaitytė & Virbašiūte, 2018). The first two months after the scandal, the company was rated poorly and the market share dropped by 40 percent (Thompson, 2015). Even though their initial reputation was good and the crisis did not seem to have a very negative impact on their reputation, a study by the Reputation Institute (2016b) found that, besides financial loss, the organization suffered loss of trust because of how it handled the crisis. This implies that a favourable pre-reputation only acts as a

shield when the right response strategy (i.e. what kind of communication channel is chosen) is used. Evidence to support this claim was investigated by Coombs and Holladay (2006).

The effect of the chosen channel might also be moderated by the pre-reputation of the organisation. According to Eccles, Newquist and Schatz (2007), organisations do not always get full credit for attempts to redeem its reputation when the reputation is negative. So even though the company addresses the problem that has hurt its reputation, stakeholders remain skeptical. This implies that organisations with negative reputations should go beyond what is expected from them. On the other hand, when the pre-reputation crisis is positive, the organisation might not have to take the extra mile, as long as there is a response. In other words, the added value of SLSS might not be very strong for organisations with a positive pre-reputation. The effects for organisations with a negative pre-reputation might be stronger than for companies with a favourable pre-reputation, because stakeholders would expect more from the organisation.

**H5**: When pre-crisis reputation is negative, the use of live stream videos will cause more positive effects for (a) emotion, (b) more trust and (c) higher purchase intentions than pre-recorded videos.

# 2.8 Mediating role of trust and emotion

# 2.8.1 Mediating role of trust on purchase intention

Crisis communication researchers stress the importance of trust on behavioural intentions. The two consumer outcomes (emotions and trust) are very likely to influence the degree of purchase likelihood. According to Deutsch (1958) a high degree of trust leads to behavioural intentions, meaning that purchase intention might be higher when trust in the organisation is high. This suggests that the higher the interactivity of a channel, the more positive consumer outcomes are measured, compared to a less interactive channel. They argue that having a strong relationship, which merely is based on trust, will decrease the post-crisis effects on the organisation (Coombs, 2004; Coombs & Holladay, 2006; Ledingham, 2003). Jarvenpaa, Tractinsky and Vitale (2000), showed that trust affects people's attitude and therefore, influences their purchase intention. Gefen (2000), also reported that a higher level of trust influences the purchase intention of consumers. A more recent study of Mansour, Kooliand and Utama (2014) found that the level of trust in an online environment such as a website, increases the purchase intention on that website. Therefore, it is important to consider the effect of channel interactivity on purchase intention through trust. The appurtenant hypothesis is as follows:

**H6**: When trust is measured higher after being exposed to the crisis response, purchase intention will be affected positively.

# 2.8.1 Mediating role of emotion on purchase intention

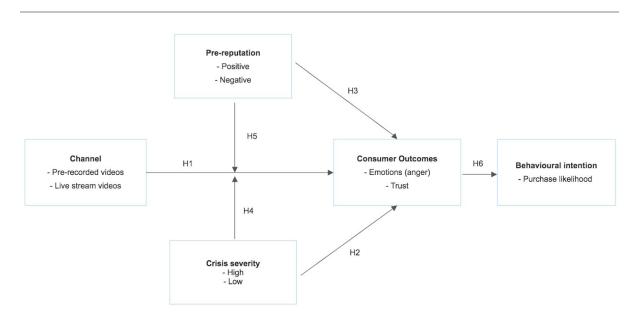
Emotions play a crucial part within crisis communication in several ways. Not only are emotional cues considered to be important in the crisis response, negative emotions perceived by the public are proven to have negative post-crisis outcomes. Kim and Cameron (2011) showed that various framing strategies in crisis communication elicit different emotional responses, which consequently influences the perception of the organisation. Especially negative emotions such as anger tend to affect post-crisis behaviour. Coombs and Holladay (2007) found that anger acts as a moderator for purchase intention. When attributions of crisis responsibility are high, meaning the crisis is perceived as severe, emotions towards the organisation are more negative. The researchers emphasize the need for further exploration on how to lessen anger in times of crisis. According to Weiner (2006), behavioural responses are negatively influenced when anger is evoked. Considering the effects of negative emotions, the following and final hypothesis is formulated:

**H7:** When negative emotions are higher after being exposed to the crisis response, purchase intentions will be affected negatively.

# 2.9 Research model

The two crisis cases of Vodafone and Boeing showed contrasting effects for post-crisis evaluation. The different characteristics such as the severity of the crisis and the pre-crisis reputation, may have influenced these outcomes. Literature was found for these variables to back up these possible effects. Based on the formulated research questions and hypothesis, the following research model is presented (Figure 1).

Figure 1. Research model



# 3. METHOD

# 3.1 Design

To test the hypotheses proposed for this research, a 2 (prior reputation: positive vs. negative) x 2 (channel interactivity: pre-recorded video vs. live stream video) x 2 (crisis severity: high vs. low) experimental design was conducted. Hence, eight scenarios were created. The study adopted a product-related crisis that had an impact on its consumers.

#### 3.2 Procedure

The online survey was distributed via snowball sampling. The Dutch respondents were recruited via social media (Facebook and Whatsapp), e-mail and face-to-face. The respondents were asked to participate in an online experiment, presented in Qualtrics. Firstly, the respondents were introduced to the experiment and told that participating was completely voluntary and that they could stop at any time. It did not reveal the aim of the study because it might have influenced participant's answers. Rather, respondents were instructed to answer a questionnaire after being exposed to the manipulated materials.

The introduction was followed by one of the eight scenarios, in which the respondents were randomly assigned to. After each manipulated stimuli, two manipulation check questions were asked. After being exposed to the stimuli, questions were asked regarding the items to measure the dependent variables negative emotions, trust and purchase intention. In the last step, demographic questions such as age, gender and level of education were asked to get insights in the sample of the experiment. Additionally, four lifestyle questions were implemented to measure product involvement. Examples of these questions are "My health is important to me" and "A spread is an important part of my diet". The questions regarding the dependent variables and lifestyle were answered on a 7-point likert scale ranging from 1 'strongly disagree' to 7 'strongly agree'.

# 3.3 Experimental materials

#### 3.3.1 Crisis characteristics

The study concerned a food-related crisis, from a fictitious Dutch company named Spreadtastic who produces spreads. Reason for this food-related crisis is that spreads are consumed on a daily basis in the Netherlands (Rossum, Buurma & Vennemann et al., 2017) Hence, the affinity with the product is considered to be high for the sample group. According to Seeger and Ulmer (2001), the CEO is perceived as a credible and trustworthy spokesperson, which are important characteristics that may influence post-crisis communication outcomes. The CEO was therefore chosen to be the spokesperson in the video. The independent variables (pre-crisis reputation, crisis severity and

channel interactivity) were manipulated in the scenarios and will be discussed in the following sections.

# 3.3.2 Channel interactivity

Two types of visual environments were created for the channel interactivity. In the pre-recorded video no interaction with the CEO was shown. The CEO only explained the situation, the severity of the crisis and advised consumers on how to react to the crisis in case they consumed the product.

The second video started with the same message. To simulate the live stream characteristic, the CEO instructed consumers to ask questions regarding the crisis in the chat function. These questions popped up in the left corner of the video (accompanied with a 'bleep') (see figure 2). The CEO read the question out loud and answered the question. Another characteristic of the live stream video, is the flashing 'LIVE', button in the upper right corner of the video. The pre-recorded video (see figure 3) solely has the CEO in front of the camera and does not show additional features.

Figure 2. Screenshot interactive video

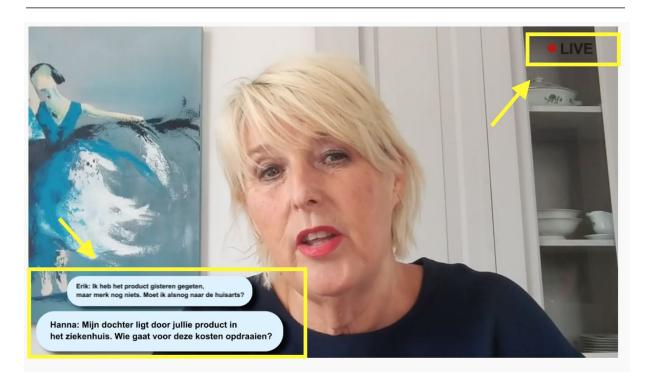


Figure 3. Screenshot pre-recorded video



# 3.3.3 Crisis severity

The severity of the crisis was explained by the CEO in the beginning of the video message. First, the CEO explained the crisis event, acknowledged the crisis was not intentional and made a sincere apology. Considering the type of simulated crisis, this strategy was considered as one of most effective strategies to maintain an organization's reputation (Coombs, 2007). The severity differed from a light allergic reaction to the food product with no further consequences (low severity), to an allergic reaction where 20 people ended up in the hospital (high severity).

# 3.3.4 Pre-crisis reputation

First, the participants were exposed to the prior crisis reputation of the company, as a positive prior reputation can minimize damage in times of threat (Coombs & Holladay, 2006). In order to measure the effect of the prior crisis reputation, participants were either exposed to the article focussed on a negative or positive reputation of the company.

The pre-crisis reputation (negative vs. positive) was manipulated in a short news article of NOS. NOS was used as a source because it is found the most credible news source among Dutch people (Matsa, 2018). Both articles begin with the same introduction about the company. The article states that the company produces fresh spreads, with no added chemicals or sugar. The spread is low in calories, but highly contributes to the 'Algemene Dagelijkse Hoeveelheid voedingswaarden'. For

the positive pre- crisis reputation, the second paragraph of the article explained how the company won the prize for 'most healthiest spread' for the fifth time, based on independent research. The article with a negative prior reputation followed the introduction that "independent research showed that a bad value for money and that the spreads were not healthy." Furthermore, the company suffered financial losses for years and working conditions of employees were mediocre.

# 3.4 Pre-test

The simulated materials (crisis severity, interactivity of the channel and pre-crisis reputation) were tested to make sure the measures were exposed as intended. The pre-test was conducted among five female and five male participants (N=10), with a mean age of 29.6. The participants were exposed to the qualtrics survey. In addition, spelling mistakes and formulations were corrected. Results of the pre-test showed that the crisis severity was considered unrealistic for the high severe crisis. Hence, the variable was altered and the number of critical cases that ended up in the hospital was changed from 3,000 people to 20 people. Another adjustment involved the interactive video, where the flashing 'LIVE' button in the right corner was not noticed. This button was made bigger and letters more thick.

# 3.5 Participants

In total, 241 Dutch participants conducted the experiment in qualtrics. The participants were randomly assigned to one of the eight manipulated scenarios. In order to enhance the quality of the data, respondents who finished the experiment under 3.00 minutes or took longer than 60 minutes, were removed from statistical analysis. Hence, 20 participants were excluded from the data. Respondents above 80 years old were excluded from the data as well. Consequently, a total of 220 participants were included in this study.

The respondents were roughly evenly divided into one of the eight scenarios, ranging from 20 - 32 participants per scenario. Table 2 shows an overview of demographics per scenario.

A total of 140 females (64%) and 80 males (36%) participated in the experiment. The age of the respondents ranged from 18 - 73 years old with a mean age of 30.17 (SD = 11.94). 72% of participants were educated high (at least hbo), 18% of the respondents finished the 'middelbaar beroepsonderwijs' (mbo) and 10% finished high school.

Table 1 - Demographic information per scenario

Scenario	Gender	Level of Education	Age M)	N	%
			<b>F</b> 33.1		
			<b>M</b> 29.9		
1	15 Female	5 Low		26	11.8
	11 Male	3 Medium			
		18 High			
2	18 Female	1 Low		21	9.5
	3 Male	7 Medium			
		13 High			
3	22 Female	4 Low		33	15
	11 Male	3 Medium			
		High			
4	18 Female	4 Low		29	13.1
	11 Male	5 Medium			
		20 High			
5	15 Female	3 Low		21	9.5
	6 Male	6 Medium			
		12 High			
6	16 Female	2 Low		30	13.6
	14 Male	3 Medium			
		25 High			
7	21 Female	4 Low		29	13.1
	8 Male	5 Medium			
		29 High			
8	15 Female	0 Low		31	14.1
	16 Male	7 Medium			
		24 High			

# 3.6 Manipulation check

To see whether all manipulation checks were considered as intended, the independent measures were checked with two items. The manipulations were answered on a 7-point likert scale, ranging from 1 'completely disagree' to 7 'completely agree'.

For the pre-reputation (positive vs. negative) variable, the respondents were asked to rank two questions "The reputation of Spreadtastic is positive" and 'Spreadtastic has a good reputation'. For the channel interactivity (pre-recorded vs. interactive), the participants were exposed to the questions 'The channel is interactive' and 'The CEO can answer questions of viewers' and 'As a viewer, you can respond to the video'. For crisis severity, two questions were asked, namely: 'The crisis is severe' and 'The crisis situation is worrying'. A factor analysis was performed to check the common variance of the fixed variables. An overview of the items can be found in table 2.

Finally, manipulations were checked using an independent sample T-test. It showed a significant difference for the prior reputation manipulation with (t(218) = 19.11, p <0.01). The positive pre-reputation manipulation was significantly higher (M = 5.6, SD = 1.16) than the negative pre-reputation (M = 2.44, SD = 1.43). The interactive channel scored higher (M = 5.5, SD = 1.18) for interactivity than the pre-recorded video (M = 4.0, SD = 1.5) and showed a significant difference (t (218) = 8.09, p <0.01). The crisis severity manipulation scored higher on crisis severity (M = 6.23, SD = 0.79) than for the low severity manipulation (M = 5,25, SD = 1.16). However, there was no significant difference for crisis severity. In other words, the crisis severity for both manipulations (high vs. low) were considered as severe. However, this study chose to measure the two conditions separately, because when the content analysis for crisis severity is taken into account, the low severe crises shows no serious injuries were caused due to the crisis and the crisis can be considered low (Coombs 2007). Also, separating the two conditions gives an understanding of effects in various degrees of crisis severity. In summary, two out of three manipulations (pre-reputation and channel interactivity) loaded correctly.

Table 2 - Factor analysis for correlated independent variables

Component					
1	2	3			
.858					
.872					
	.799				
	.865				
		.869			
		.900			
	.858	.858 .872 .799			

KMO = .848

#### 3.7 Measurements

The dependent variables trust was measured with six items, emotion (anger) was measured with four items, and purchase intention was measured with three items. The answers had to be given on a seven-point Likert-scale, ranging from 1 'strongly disagree' to 7 'strongly agree'. The items were translated in Dutch.

# 3.7.1 Factor analysis

A factor analysis was performed to extract maximum common variance from the variables. An overview of the items can be seen in table 3. All items were loaded with the intended variables. The items for benevolence and integrity together measure trust. Four items for anger were associated with the same component as well as the three items for purchase intention. Ultimately, the Kaiser-Meyer-Olkin (KMO) test measured meritorious with a value of .868.

Table 3 - Factor analysis for correlated dependent variables

ITEMS	Compo	onent		
	1	2	3	
TRUST1 – Top management is very concerned about my welfare.	.791			
TRUST2 – Top management would not knowingly do anything to hurt me.	.594			
TRUST3 – Top management will go out of its way to help me	.708			
TRUST4– Top management has a strong sense of justice	.721			
TRUST5 – I never have to wonder whether top management will stick to its word.	.556			
TRUST6 – Top management tries hard to be fair in dealings with others	.778			
EMOT 1 – When I think of Spreadtastic, I feel mad		.892		
EMOT 2 – When I think of Spreadtastic, I feel annoyed		.818		
EMOT 3 -When I think of Spreadtastic, I feel disgusted		.811		
EMOT 4 – When I think of Spreadtastic, I feel outraged		.866		
PURCH 1 – I am inclined to buy this product of Spreadtastic.			.930	
PURCH 2 – It is very likely I will buy this product of Spreadtastic.			.906	
PURCH 3 – I would probably buy this product of Spreadtastic.			.88	

KMO = .868

#### 3.7.2 Trust

According to Everard and Galetta (2006), Trustworthiness is considered to be a positive judgement regarding the dependability and reliability of a person or organisation. Yang (2007) addresses relational trust as one of the most important aspects for positive consumer outcomes. Following the findings of Shazi, Gillespie and Steen (2015), trust is measured by integrity and benevolence, both with three items. For integrity, questions such as "The company has a strong sense of justice", "I never have to wonder whether the company will stick to its word" and "The company tries hard to be fair in dealings with others" were adopted in the questionnaire. For the benevolence construct three

items were included, namely 1. "Top management is very concerned about my welfare", 2. "Top management would not knowingly do anything to hurt me and 3. "Top management will go out of its way to help me". The items were translated and rephrased in Dutch. The Cronbach's alpha test was conducted and measured a reliability of  $\alpha$  = .84, which is considered a valid measure.

# 3.7.3 Emotion (anger)

According to SCCT, negative emotions towards an organization can damage the reputation of the organization (Coombs, 2007). Anger is the primary and dominant emotion in case of a crisis. (Kim & Niederdeppe, 2013; Jin, Pang, and Cameron, 2007; Jin et al. (2012). Hence, the construct was measured with four items from Izard (1977) from the Differential Emotional Scale (DES III) to measure one's emotional state. The items that were included were 1. "I feel mad", 2. "I feel annoyed", 3. "I feel disgusted" and 4. "I feel outraged" ( $\alpha$  = .91).

# 3.7.4 Purchase intention

Purchase intention was measured with the three item scale from Burton, Garretson and Velliquette (1999), which measures the self-reported purchase likelihood of consumers based upon the information they received of the product. The items included questions such as "It is very likely I would purchase the product" and "I would probably purchase the product" and "I would consider buying the product". The items measured Cronbach's Alpha  $\alpha = .94$ 

# 4. RESULTS

The main effects in the proposed model were tested with a General Linear Model, specifically the multivariate analysis of variance (MANOVA). The Wilk's Lambda tests were interpreted to measure the contribution of each independent variable to the model.

# 4.1 Main effects

# 4.1.1 Channel interactivity

The Test of Between-Subjects effects shows that channel interactivity has a significant effect on the dependent variable trust (F (2,217) = 10.59, p < .01) but not on emotion (p = .28) and purchase intention (p = .088), meaning that those who were exposed to the interactive video had a higher level of trust (M = 4.86, SD = .10) than those who were confronted with the pre-recorded video (M = 4.40, SD = .09). An overview of the results are shown in table 4. Hypothesis 1b predicted that the live stream video would result in higher levels of trust compared to the pre-recorded video. The results confirm this hypothesis. Hypothesis 1a predicted that anger would be higher for the pre-recorded condition than for the live stream video. Anger was indeed rated slightly higher for the pre-recorded condition (M = 3.19, SD = .11) as opposed to the live stream video (M= 3.00, SD = .13). However, the means were insignificant, so hypothesis 1a was not supported and therefore rejected. Purchase intention was rated higher for the pre-recorded condition (M = 2.59, SD = .12) than for the live stream condition (M = 2.56, SD = .12) but the results were not significant. Hypothesis 1c is thus rejected.

Table 4 - Descriptive statistics Channel Interactivity

	Pre-red	corded video	Live st	ream video		
DV	М	SD	М	SD	F	P
Trust	4.40	.09	4.85	.10	10.59	.00*
Emotion (anger)	3.19	.11	3.00	.13	1.17	.28
Purchase intention	2.59	.12	2.56	.12	.023	.088

<sup>\*</sup> p < 0.001

# 4.1.2 Crisis severity

The hypotheses regarding crisis severity predicted that the more severe the crisis, the lower the level of trust and purchase intention and the higher anger would be rated. The results show a multivariate effect of crisis severity, as presented in table 5. More specifically, crisis severity has a significant effect on emotion (F(2,217) = 13.01, P(3,00) = 13.01) and on purchase intention (P(3,00) = 13.01), but not on trust (P(3,00) = 13.01).

= .883). The dependent variable emotion (anger) is rated lower for a low severe crisis (M = 2.78, SD = .12) as opposed to the high severe crisis (M = 3.40, SD = .11). Purchase intention is higher when the crisis severity is low (M = 2.83, SD = .13) than when crisis severity is high (M = 2.30, SD = .12). No main effect has been found on the dependent variable trust (F(2,217) = .02, P = .88). In summary, hypothesis 2a and 2bare supported, 2c is rejected.

Table 5 - Descriptive statistics crisis severity

	Low se	verity	High se	verity		
DV	М	SD	М	SD	F	Р
Trust	4.61	.10	4.63	.09	.02	.88
Emotion (anger)	2.78	.12	3.40	.11	13.01	.00*
Purchase intention	2.83	.13	2.30	.12	8.03	.00**

<sup>\*</sup> p < 0.001 \*\* p < 0.005

# 4.1.3 Pre-crisis reputation

The results of the Wilks' Lambda test show that the prior crisis reputation has a significant effect on the dependent variables trust, emotion (anger) and purchase intention (F (2,217) = 30.09b, p < 0.00). As presented in table 6, the level of trust is higher when pre-reputation is positive (M = 4.99, SD .09) as opposed to a negative pre-reputation (M = 4.26, SD = .09). A positive prior reputation also has a positive effect on emotion. The results show that anger is rated higher when pre-reputation is negative (M = 3.66, SD = .01) as opposed to the positive pre-reputation (M = 2.53, SD = .01). Purchase intention is also positively influenced when pre-reputation is positive (M = 3.35, SD = .13) against (M = 1.76, SD = .01) for the negative pre-reputation. In summary, hypothesis 3a, 3b and 3c are confirmed.

Table 6 - Descriptive statistics pre-crisis reputation

М					
	SD	M	SD	F I	P
4.99	.09	4.26	.09	28.63 .	.00*
2.53	.01	3.66	.01	44.57 .	.00*
3.35	.13	1.76	.01	60.62	.00*
	3.35	3.35 .13	3.35 .13 1.76	3.35 .13 1.76 .01	3.35 .13 1.76 .01 60.62 .

<sup>\*</sup> p < 0.001

# 4.2 Interaction effects

# 4.2.1 Channel interactivity \* Crisis severity (H4)

A MANOVA-test was performed to test the hypotheses regarding the interaction effects. As table 10 shows, except for a marginal significant effect for trust, no significant effects were found for channel interactivity and crisis severity.

Table 7 - Interaction effects channel interactivity and crisis severity

DV	Channel interactivity x crisis severity				
	F	P			
Trust	2.35	.12			
Emotion	.57	.44			
Purchase intention	.00	.96			

Table 8 - Descriptive statistics interaction effects channel interactivity and crisis severity

		Live stream Low (44)		Pre-recorded Low (60)		Live stream High (53)		Pre-recorded High (63)	
DV	М	SD	М	SD	M	SD	M	SD	
Trust	4.73	.15	4.49	.13	4.96	.14	4.30	.12	
Emotion	2.70	.18	2.87	.17	3.30	.17	3.49	.15	
Purchase intention	2.89	.20	2.77	.17	2.22	.18	2.39	.17	

Trust is valued highest of all dependent variables in all four conditions. The effects of the live stream video in the high severe crisis are measured strongest of all four conditions (M = 4.96, SD = .14). Interestingly, regardless of crisis severity, a more interactive channel is always preferred over the use of a pre-recorded video. The results indicate that the use of an interactive channel is important for the post evaluation of the firm with regard to trust. Regarding the dependent variables with no significant effects, results show there is a trend. As the descriptives show in table 11, for the live stream and low severity manipulation purchase intention is rated slightly higher (M = 2.89, SD = 2.77), and emotion (anger) is rated slightly lower M = 2.70, SD = .18) For the high severe crisis manipulations, emotion (anger) is rated lowest for the live stream condition (M = 3.30, SD = .017) Purchase intention is higher in the pre-recorded condition (M = 2.39, SD = .17). However, due to the insignificant effect, it means that the use of an interactive channel has no effect on people's

emotions and behavioural intentions such as purchase likelihood when the crisis is either high or low. The results for the high and low severe crisis show that it is more effective to use a live stream video than a pre-recorded video, especially in case of a high severe crisis.

As figure 1 visualizes, the use of a live stream video has a marginal effect on people's trust. In summary, for both outcomes (high and low severe crisis) using a live stream video is preferred over a pre-recorded video, especially to enhance people's trust in the organisation. With regard to the hypothesis, 4b is supported, 4a and 4c were not. The results must be interpreted carefully since the low crisis severity manipulation did not work.

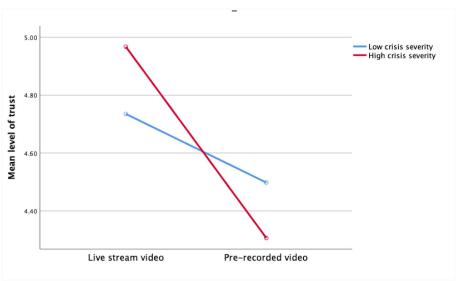


Figure 4. Interaction effect of channel interactivity and crisis severity on trust

# 4.2.2 Channel interactivity \* pre- crisis reputation (H5)

The hypothesis regarding the interactivity and pre-crisis reputation stated that when the pre-crisis reputation is negative, an organisation should go beyond what is expected from them. Consequently, the effects for the negative pre-crisis reputation would be higher as opposed to the positive pre-crisis condition. As can be seen in table 12, the MANOVA-test shows no significant effects for channel interactivity and pre-crisis reputation. However, the descriptive statistics in table 10 reveal a trend for the three dependent variables. Trust is rated highest for live stream and positive pre-reputation (M = 5.17, SD = .14). Emotion (anger) is slightly lower when a live stream video was used (M = 2.42, SD = .15) in the positive pre-reputation condition. Purchase intention is higher for the live stream condition and positive pre-reputation (M = 4.40, SD = .20).

When the pre-reputation is negative, trust and emotion are more positive for the live stream video than for the pre-recorded video. Trust is considered higher (M = 4.52, SD = .14), emotion (anger) is then slightly lower (M = 3.58, SD = .17). The trend shows that when the pre-reputation is either negative or positive, using a live stream video is considered more appropriate, because the level of trust is higher and negative emotions are lower. Following the trend and the insignificant results, hypothesis 5a, 5b and 5c were not supported.

Table 9 - Interaction effects channel interactivity and crisis severity

DV	Channel interactivity x pre-crisis reputation				
	F	P			
Trust	.37	.53			
Emotion	.01	.89			
Purchase intention	.61	.43			

Table 10 - Descriptive statistics interaction effects channel interactivity and pre-crisis reputation

	Live stream Positive			Pre-recorded Positive		Live stream Negative		Pre-recorded Negative	
DV	М	SD	M	SD	M	SD	M	SD	
Trust	5.17	.14	4.81	.12	4.52	.14	3.99	.13	
Emotion	2.42	.18	2.63	.15	3.58	.17	3.74	.16	
Purchase intention	4.40	.20	3.28	.17	1.70	.19	1.88	.17	

# 4.3 Mediation effect of trust

The final hypothesis was tested using Hayes Process for mediation (Hayes, 2012). Before a mediation effect can be measured, the conditions of Baron and Kenny (1986) for mediation have to be met. First, the analysis confirmed the significant effect of channel interactivity on trust (b = -.4307, se = .1448, p < .00) and on emotion (b = .0975, se = .1895, p < .00). Second, trust had a positive significant effect on purchase intention (b = .6184, se = .0919, p < .00), indicating that the higher people's trust, the more likely they are to purchase the product. For emotion, the results show a significant negative effect on purchase intention (b = -.4861, se = .0698, p < .00), meaning that persons scoring higher on anger are less likely inclined to purchase the product.

The final condition was to determine a significant direct effect of the independent variable on the dependent variable. The direct effect of channel interactivity on purchase intention is non significant (b = .2981, se = 1936, p = .12). Hence, the conditions of Baron and Kenny for mediation were not met and therefore, a mediation is not warranted.

#### 5. DISCUSSION

# 5.1 Channel interactivity

The aim of the study was to research the influence of channel interactivity in crisis communication. More specifically, the experiment examined the effects on trust, emotion and purchase intention of a live stream video compared to a pre-recorded video. The current study found that people tend to have more trust in the organisation after the crisis when the live stream video was used as opposed to the pre-recorded video. According to previous literature, this can be explained due to a high perception of social presence of the interactive channel. High social presence makes the source and message perceived as real and credible, which induces trust (Botha et al., 2014; Daft & Lengel, 1986; Gefen & Straub, 2004; Lewis and Weigert, 1985; Ogowoski, Montandon, Botha et al., 2014; Yang, Kang & Johnson, 2010) Utz et al. (2013) emphasize the use of a rich communication channel because stakeholders see it as 'a cue for the willingness of an organization to quickly inform its stakeholders and to engage in a dialogue with them.' (p. 45). People tend to turn to social media in times of crisis (Austin & Jin, 2016). Accordingly, instead of people speculating on the consequences of the crisis and turning to unreliable sources, the interactive communication channels provide the possibility to reduce uncertainty and provide clarity to the public immediately.

Negative emotions were not significantly influenced by channel interactivity. This indicates that after a crisis, the use of a more interactive communication channel does not reduce anger. These findings were also found by Ultz et al. (2013), who emphasized that more rational processes could be involved that counteract emotions such as anger. This study found that for both pre-recorded video and the live stream video, people were not angry. This could indicate that the effects of a video, regardless if it is a live stream, had a positive impact on people's emotions because anger was not evoked. This is then in line with Tang, Venolia and Inkpen (2016), who found that the use of video services have a positive effect on people's emotion.

Yang, Kang and Johnson (2010), found that when a company engages in a two way dialogue, it would positively influence emotion and purchase likelihood. It might be that anger did not significantly decrease after seeing the live stream video because the participants did not actually participate in the conversation. Perhaps the negative emotions that were felt were not 'taken away' by the two-way dialogue because the participants had other questions towards the crisis than were shown.

# 5.2 Crisis severity

The effect of crisis severity had a significant effect on emotion and purchase intention. These findings were supported by researchers (Arpan & Roskos-Ewoldson, 2005; Claeys, Cauberghe and Vyncke

,2010; Martinko, 2018) Utz et. al. (2013) showed that when people perceive the crisis as severe, consequences are that it negatively impacts the organisation. This can be explained by the term *hedonic relevance* (Jones & Davies, 1965), which explains what effect the actor (i.e. organisation) has on the perceiver. So when more hedonic relevance is perceived, the greater the negative emotions are. Lee (2014) also showed that when crisis severity is high because the internal attributions were considered high, this resulted in negative emotions. This is in line with Coombs (2007) SCCT model, which provides an understanding of crisis responsibility, that in both conditions was considered to be high. This also explains the significant impact on people's emotion and purchase intention. As backed by the research of Lee (2004), no significant effect was found for trust.

# 5.3 Pre-crisis reputation

The pre-crisis reputation has shown a direct effect on all dependent variables. This means that a favourable prior crisis reputation has a positive effect on people's trust, emotions and purchase intention as opposed to a negative pre-crisis reputation. These findings were supported by researchers (Coombs & Holladay; 2001, Claeys & Cauberghe; 2015). Moreover, Coombs and Holladay (2006) argued that a favourable pre-crisis reputation acts as a shield against crisis damage. According to Perloff (2010) the effect of a favourable pre-crisis reputation could be explained by cognitive dissonance theory as consumers try to reduce negative feelings in a crisis situation about firms they feel positive about.

# **5.4 Interaction effects**

# 5.4.1 Channel interactivity and crisis severity

The first exploratory research question addressed how channel interactivity interacts with crisis severity. The hypotheses were formulated in order to find out whether the effects of the channel would depend on the level of crisis severity. This study emphasizes that it does matter which communication channel to use if a trustworthy relationship with the consumer is important. Despite the crisis severity, an interactive channel is always preferred over a pre-recorded video. Interestingly, the effect in the high severe crisis and interactive video were stronger than for the low severe crisis. This indicates that people find it important to use proactive communication strategies or interact directly with the public when the public is hit more severely by the crisis. These outcomes are in line with previous literature (Berger & Calabere, 1975; Dunn, Schweitzer & Maurice, 2005; Utz et al., 2013). Accordingly, because a high severe crisis involves more uncertainty, people seek for more verbal communication ways to reduce uncertainty. In this study, the live stream video consisted of more information about the crisis which possibly resulted in higher levels of trust. It is also reasonable to think that the interactive characteristics induced perceived expertise, which knowingly

increases trust (Eisser, Stafford & Henneberry et al., (2009). Channel interactivity does not interact with crisis severity for emotion and purchase intention, which is in contrast to what researchers found (Dunn, Schweitzer & Maurice, 2005; Coombs and Holladay, 2004). The crisis response message might not have been sufficient enough. Even though the response strategy (apologize and rebuild) was framed according to the SCCT model (Coombs, 2007), respondents might not have conceived in that manner or might not have felt that this was the right response strategy considering the circumstances. This might have influenced and diminished the positive characteristics of the channel interactivity.

# 5.4.2 Channel interactivity and pre-crisis reputation

The hypothesis regarding the interaction effect of channel interactivity and the pre-crisis reputation was important to explore as the response strategy could depend on a negative or positive prior crisis reputation. The direct effects for channel interactivity were significant for trust. Pre-crisis reputation was significant for all dependent variables. Together the results show no significant effects. However, a trend is discovered for all dependent variables. First of all, trust in the organisation is highest (and influenced most) for a positive pre-crisis reputation and live stream video. Second, anger was rated highest for the negative pre-crisis condition together with a pre-recorded video and lastly, purchase intention was highest for the positive pre-crisis reputation and live stream video. These trends are backed by previous literature (Coombs, 2007; Coombs & Holladay, 2006): A positive pre-crisis reputation can form as a shield for how people perceive the organisation after the crisis but only if the right response strategy is used. A more interactive channel seems to be a better response strategy than a pre-recorded channel. However, the effects on consumer outcomes and purchase behaviour were non significant. A possible explanation is that consumers remain skeptical when the pre-reputation is negative (Eccles, Newquist and Schatz, 2007). In consequence, this could mitigate the effect of the channel interactivity. Another reason for the non significant effects could be that the pre-crisis reputation could not be assessed adequately. According to Dawar and Pullitla (2000), the interpretation of the crisis response is strongly attributed to the prior expectations of the firm. The participants were unable to form an overall opinion about the prior crisis reputation because of the non existing nature of the exposed organisation. Another possible explanation is the possibility of low personal involvement towards the product. Participants perhaps did not feel connected with the company or brand because of its fictitious nature. Consequently, they might have had difficulties attributing emotional cues or imagining purchasing the product because they never consumed the product before. Researchers indicate that the level of product affinity affects consumers' attitude and behaviour (Wu, 2002).

### 5.5 Mediation effect

The final research question involved the mediating role of trust and emotion on purchase intention. Several researchers found mediating effects for trust and emotion purchase intention (Coombs & Hollanday, 2007; Kim & Cameron, 2012; Weiner, 1986). One of the conditions that have to be met in order to perform a mediation analysis is that the direct effect of channel interactivity on purchase intention has to be significant. This condition was not met and therefore a mediation was not warranted. According to Boulstridge and Carrigan (2000), the organisation's deeds or misdeeds do not influence purchase behaviour, but are more inclined to evaluate or judge the product based on their personal experience. In addition, Dutta & Pullig (200) emphasize that existing brand attitude is an important factor in evaluating the brand perceptions. Because this crisis involved a fictitious product, no personal attachment was created towards the product and therefore purchase behaviour was supposedly not influenced.

#### 6. IMPLICATIONS

#### 6.1 Theoretical implications

The main goal of this study was to examine the effect of live stream videos as a crisis response strategy. Technology and social media have created opportunities for crisis communication researchers to find additional and perhaps more effective response strategies. Previous studies underpinned the positive effects of social presence (Short et al., 1975; Gefen and Straub, 2004; Lowenthal, 2010; Ogowoski, Montandon, Botha et al., 2014) and Media Richness Theory (Daft & Lengel, 1989) provide the basis of this assumption. However, the use of video within the field of crisis communication is understudied. In fact, only one recent study of video use in crisis communication was found (Coombs & Holladay, 2008). Therefore, this study provided an evidence based foundation for video use in crisis communication. It is proven that there is a significant difference between the use of a pre-recorded video vs. a live stream video for a product-related crisis. More specifically, it stresses the need to use live stream videos in order to enhance people's trust in the organisation after the crisis. These insights extend and contribute to Media Richness Theory (Daft & Lengel, 1986) as novel rich media were investigated and it extends the Social Media Crisis Communication Model (Liu & Jin, 2013) insights on new characteristics of social media in relation to crisis communication. In addition, it confirms the value of a positive pre-crisis reputation on people. Furthermore, it confirmed that crisis severity has a significant effect on people's negative emotions and behavioural intentions such as purchase likelihood. Another contribution to the study of crisis communication was the interaction effect of channel interactivity and crisis severity. It was found that this interaction showed a marginal significant effect for trustworthiness.

#### 6.2 Practical implications

This study helps organisations understand how their communication channel affects consumer outcomes in times of crisis. Due to rapid increase of new technologies and communication channels, it is important for organisations to consider using novel technologies, such as live stream videos, as part of a crisis response strategy. Trustworthiness of the audience is affected by the communication channel in times of crisis. The richer the channel, the more trustworthy the company. Hence, organisations should use a rich communication channel after a crisis to enhance people's trust. It can be stated that the higher the crisis severity, the more effective the live stream video will be and the more trust the company will gain when using an interactive channel. Thus, organisations who are involved in a very severe crisis should consider using an interactive channel to communicate with their audience. Another main implication for organisations is the major impact a severe crisis can have on people's emotions and purchase intentions. It is therefore important for organisations to take a crisis seriously and address it accordingly. Lastly, the study also stresses the importance for

organisations to work on a favourable reputation, as it can limit the damage when an organisation suffers from the crisis.

#### 7. LIMITATIONS AND RESEARCH RECOMMENDATIONS

#### 7.1 Sample

The first limitation regarding this study is the limited randomized sample size. Since it is a convenience sample, which is merely conducted through snowballing, the sample consists of people with merely the same traits and participants from the east of the Netherlands. A more randomized sample would enhance the generalization for the Dutch population. In addition, the results could be different from participants with other cultures and backgrounds. Therefore it is recommended to find samples outside the Netherlands to get a more global understanding of this study.

## 7.2 Manipulations

As for the manipulations, two out of three manipulations loaded correctly. Even though there were differences in the means, crisis severity was considered high for both conditions. Therefore, the differences for the high and low crisis severity manipulation were difficult to measure and it is unclear what, if any, effect a low severe crisis would have on the dependent variables. Moreover, it is unknown if and how a low severity crisis interacts with channel use. Coombs' crisis situation model for SCCT (2007) shows that the level of crisis responsibility has an impact on the post-crisis reputation of the firm. When the organisation is believed to be fully responsible for the crisis, behavioural responses are affected more negatively as opposed to a crisis which is not attributed to the company. To measure a low severe crisis, it might be better to use the victim crisis cluster from the SCCT model (Coombs, 2007), as these types of crisis are considered to cause weak attributions of crisis responsibility and hence, cause mild reputational threat.

Although the level of interactivity for both videos differed, the interactivity of the pre-recorded condition was measured rather high. This could be due to the fact that the videos were uploaded on YouTube, which was visible in the Qualtrics survey. A possibility is that people still rated the pre-recorded video as interactive because YouTube makes it possible to reply with a comment under the video. While this was not shown in the experiment, participants might have known about this feature. A recommendation for future experimental research is to implement the video in a 'plain' environment, not showing the platform the video was uploaded.

## 7.3 Dependent variables

There are a few limitations regarding the measured dependent variables. First, trust was measured using the character based constructs benevolence and integrity. However, to measure the complete

construct it is important to include ability, as it reveals perceptions of the leaders' knowledge and skills (Mayer, Davis & Schoorman schoorman, 1995).

Second, regarding people's emotions, only the items for negative emotions were measured in this study, because negative emotions directly predict behavioural intentions and are the primary related emotion to a crisis (Coombs and Holladay 2007; Jorgensen 1996). However, other emotions need other coping strategies, (Nyer 1997; Scherer 2000) and therefore, items for sympathy should be added to assess the positive emotions after the crisis.

Third, only three consumer outcomes were measured in this study. In order to get a more comprehensive understanding of the post-crisis reputation of the organisation, more consumer outcomes should be measured in one study. For example, the RepTrak model of Fombrun, Ponzi and Newsburry (2015) is used to predict an organisation's complete reputation using seven dimensions: product, innovation, workplace, governance, citizenship, leadership and performance. Ideally, researchers should strive to measure all these dimensions, dependent on the type of organisation. Performance for instance, might not be a suitable dimension for non-profit organisations.

# 7.4 Contingency

This study does not provide significant evidence for the effect of video use on negative emotions and purchase intention, indicating that the use of video in general does not impact behavioural intentions such as purchase likelihood or people's negative emotions. However, a trend was found for the main and interaction effects, which should keep researcher's attention. This is in contrast to what literature suggests and might be affected due to limitations described in previous sections. A possible explanation for this discrepancy might be due to the hypothetical environment. Although the design was simulated realistically, participant's answer might have been influenced by the fictitious stimuli. In order to emphasize on the contingency of channel interactivity, it is recommended to improve the manipulations of the study.

Lastly, this study focussed on a product-related crisis in the food industry. In order to get a more comprehensive understanding of channel interactivity, it is recommended to measure the effects among different types of organisations. These insights would provide a better understanding on what type of companies could benefit from using an interactive channel in times of crisis.

## 8. CONCLUSION

The results of the study contribute to a better understanding of the use of video channels in crisis communication. It provides evidence that responding to a crisis with a rich medium is important for people's trust in the organisation. The live stream video especially enhances trust in a high severe crisis, meaning that organisations should use rich communication channels when the crisis is severe. Furthermore, the study confirmed that when an organisation is caught in severe crisis, it influences people's emotions and purchase intention. Lastly, this study emphasizes and confirms the importance of having a positive pre-crisis reputation, as it lessens de post-crisis damage to the organisation.

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## Appendix A - Stimuli material

# Positive pre-crisis reputation

NOS, Binnenland, 22 juli 2019

# Spreadtastic wint prijs lekkerste en gezondste beleg

Spreadtastic is een Nederlandse organisatie die verse spreads produceert, gemaakt van pure ingrediënten zonder chemische stoffen en zonder toegevoegde suikers en kleurstoffen. Daarnaast zijn de spreads laag in calorieën, maar voorzien ze in de meeste Algemene Dagelijkse Hoeveelheid (ADH) voedingswaarden.

Dit jaar hebben ze voor de vijfde keer de prijs ontvangen voor lekkerste en gezondste beleg van Nederland. De prijs is gebaseerd op onafhankelijk onderzoek. Het onderzoek richt zich hierbij op de samenstelling van de voedingsmiddelen en de waardering van consumenten.

## Negative pre-crisis reputation

NOS, Binnenland, 22 juli 2019

# Spreadtastic slecht volgens onafhankelijk onderzoek

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Onafhankelijk onderzoek naar het product liet zien dat de prijs/kwaliteitverhouding van de producten zeer slecht is en dat de spreads niet goed zijn voor de gezondheid. Ook bleek uit jaarverslagen dat het bedrijf al jaren verlies lijdt en de werkomstandigheden van medewerkers in de fabrieken matig zijn.

# Screenshot - Live stream video



# Screenshot - Pre-recorded video



### Script Crisis situation - high severity x pre-recorded video (in text)

"Mijn naam is Paula van Dalen en ik ben algemeen directeur van Spreadtastic. Zojuist zijn wij geïnformeerd dat 20 mensen momenteel in het ziekenhuis zijn opgenomen door het eten van één van onze producten. Enkele mensen zijn momenteel in levensgevaar."

"We betreuren dit enorm en we hopen dat alle mensen die hierdoor getroffen zijn, er snel weer bovenop komen."

"Onderzoek wijst uit dat het product met code 041498 en houdbaarheidsdatum tot 13 augustus 2019 niet conform de richtlijnen is geproduceerd.

"Inmiddels hebben we maatregelen getroffen en is het product uit de supermarkten gehaald. Wij adviseren met klem, wanneer u een allergische reactie heeft gekregen door het eten van dit product, contact op te nemen met de huisarts. "

## Script Crisis situation - low severity x pre-recorded video (in text)

"Mijn naam is Paula van Dalen en ik ben algemeen directeur van Spreadtastic. Zojuist zijn wij geïnformeerd dat een aantal mensen licht allergische reacties hebben vertoond, door het eten van een van onze producten."

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Daarnaast staat er een gespecialiseerd klantteam voor u klaar om al uw antwoorden te beantwoorden en kunt u ook persoonlijk vragen aan mij stellen via de chatfunctie in de live stream.

Er komt een reactie binnen van Erik.

Erik: Ik heb het product gisteren gegeten, maar merk nog niets. Moet ik alsnog naar de huisarts? Dat is een goed vraag Erik. Als u het niet vertrouwd of alsnog een allergische reactie vertoont, raden we aan om langs de huisarts te gaan.

Ik zie een vraag van Hanna binnenkomen.

Hanna: Mijn dochter heeft door jullie een allergische reactie opgelopen en zit momenteel aan de antibiotica. Wie gaat voor deze kosten opdraaien?

Allereerst Hanna, Het spijt mij ons zeer dat uw dochter ziek is geworden. Wij hopen oprecht dat het snel beter met haar gaat. Uiteraard kunt u van ons een compensatie verwachten. Als u uw gegevens op onze website achterlaat, dan nemen wij zo snel mogelijk contact met u op.

#### Crisis situation - low severity x live stream video

"Mijn naam is Paula van Dalen en ik ben algemeen directeur van Spreadtastic. Zojuist zijn wij geïnformeerd dat een aantal mensen licht allergische reacties hebben vertoond, door het eten van een van onze producten."

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## Appendix B - Qualtrics questionnaire



Q1. Hoi!

Ik ben Mirna Ahmethodzic, masterstudent Communication Studies aan de Universiteit van Twente. Voor mijn afstudeeronderzoek doe ik een experimenteel onderzoek naar hoe bedrijven communiceren met klanten. Super leuk dat je meedoet aan dit toffe experiment. Het onderzoek duurt 5-10 minuten en bestaat uit een korte vragenlijst over wat je tijdens het experiment te zien krijgt.

Bij het invullen van de vragenlijst is het belangrijk dat je deze zo volledig mogelijk en eerlijk invult. Er bestaan geen goede of foute antwoorden. Alle gegevens worden vertrouwelijk behandeld, niet aan derden verstrekt en deelname is geheel anoniem.

Voor vragen of opmerkingen over dit onderzoek kun je contact opnemen via mirna.ahmethodzic@outlook.com

Q2.

Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud me daarbij het recht voor om op ieder moment, zonder reden, het onderzoek te beëindigen.

- O lk ga akkoord en neem deel aan het onderzoek
- O Ik wil niet deelnemen aan het onderzoek

Q3.

De vragenlijst is opgebouwd uit drie delen. Je krijgt eerst een tekstbericht als achtergrondinformatie te lezen. Lees dit bericht zorgvuldig door, want hierover krijg je later vragen. Na het bericht krijg je een video te zien. Kijk deze helemaal af. Ook hier krijg je namelijk straks een aantal vragen. In het laatste deel wordt om enkele algemene gegevens gevraagd.

Q6.

Hoe beschouw je de reputatie van Spreadtastic aan de hand van het tekstbericht dat je hebt gelezen?

	Helemaal niet eens	niet eens	een beetje oneens	Niet eens/ niet oneens	een beetje eens	eens	Helemaal eens
De reputatie van de Spreadtastic is positief.	0	0	0	0	0	0	0
Spreadtastic heeft een goede reputatie.	0	0	0	0	0	0	0

Q11.

Beantwoord de volgende vragen op basis van de video die je zojuist hebt gezien. Als je het antwoord niet zeker weet, kun je de video nogmaals zien door één keer terug te klikken.

	Helemaal oneens	oneens	een beetje oneens	Niet eens/ niet oneens	een beetje eens	eens	Helemaal eens
1.De omschreven crisissituatie is ernstig.	0	0	0	0	0	0	0
2. De omschreven crisissituatie is zorgelijk.	0	0	0	0	0	0	0
3. Deze crisissituatie kan ernstige gevolgen hebben voor het bedrijf.	0	0	0	0	0	0	0

Q12. Nu	ı volaen	een aantal	stellingen.	Lees ze o	noed door	en bear	ntwoord ze	allemaal.
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	Helemaal oneens	oneens	een beetje oneens	niet eens/ niet oneens	een beetje eens	eens	Helemaal eens
Het gekozen kanaal is interacief.	0	0	0	0	0	0	0
2. Als kijker kun je reageren op de video.	0	0	0	0	0	0	0
3. De CEO reageerde op de reacties van de kijkers.	0	0	0	0	0	0	0

# Q13. Nu volgen een aantal stellingen. Lees ze goed door en beantwoord ze allemaal.

	Helemaal oneens	oneens	een beetje oneens	niet eens/ niet oneens	een beetje eens	eens	Helemaal eens
Ik denk dat de CEO erg bezorgd is om mijn gezondheid.	0	0	0	0	0	0	0
2. Ik geloof dat de CEO mij niet bewust iets aan zou doen.	0	0	0	0	0	0	0
3. Ik geloof dat de CEO er alles aan doet om mij te helpen.	0	0	0	0	0	0	0

Q14. Nu volgen een aantal stellingen. Lees ze goed de	door	en beantwoord	ı ze allemaa	ŧΙ.
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	Helemaal oneens	oneens	een beetje oneens	niet eens/ niet oneens	een beetje eens	eens	Helemaal eens	
Ik denk dat dit bedrijf erg rechtvaardig is.	0	0	0	0	0	0	0	
2. Ik hoef mij niet af te vragen of het bedrijf zich aan zijn woord houdt.	0	0	0	0	0	0	0	
3. Ik denk dat het bedrijf zijn best doet om eerlijk om te gaan met anderen.	0	0	0	0	0	0	0	\

# Q15. Nu volgen een aantal stellingen. Lees ze goed door en beantwoord ze allemaal.

	Helemaal oneens	oneens	een beetje oneens	niet eens/ niet oneens	een beetje eens	eens	Helemaal eens
Ik ben geneigd om een product van Spreadtastic te kopen.	0	0	0	0	0	0	0
2. Ik zou overwegen het product te kopen.	0	0	0	0	0	0	0
<ol> <li>Het is waarschijnlijk dat ik het product zou kopen.</li> </ol>	0	0	0	0	0	0	0

# Q16. Als ik aan Spreadtastic denk, dan:

	Helemaal oneens	oneens	een beetje oneens	niet eens/ niet oneens	een beetje eens	eens	Helemaal eens
1. Voel ik mij boos.	0	0	0	0	0	0	0
2. Voel ik mij geïrriteerd.	0	0	0	0	0	0	0
3. Voel ik walging.	0	0	0	0	0	0	0
4. Voel ik mij woedend.	0	0	0	0	0	0	0

# Q17. Beantwoord de volgende stellingen.

	Helemaal oneens	oneens	een beetje oneens	niet eens/ niet oneens	een beetje eens	eens	Helemaal eens
1. lk eet graag broodbeleg.	0	0	0	0	0	0	0
2. Beleg is een groot onderdeel van mijn eetpatroon.	0	0	0	0	0	0	0
3. Ik ben mij bewust van mijn gezondheid.	0	0	0	0	0	0	0
4. Ik vind mijn gezondheid belangrijk.	0	0	0	0	0	0	0

Q26.	Q26.								
Ik heb ooit een allergische reactie gehad van een vo	pedingsproduct.								
O Ja									
O Nee									
Q27.									
Ik heb een voedselallergie.									
○ Ja									
O Nee									
Q18. Je bent bijna klaar!									
Wat is je geslacht?									
O man									
O vrouw									
anders									
Q25. Ken je de persoon in de video?									
Q20. Roll je de persoon in de video:									
O Ja									
O Nee									