

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

MPC MAJOR RESEARCH PAPER

Volkswagen's crisis communication: Twitter use during #dieselgate

The Major Research Paper is submitted in partial fulfillment of the requirements for the degree
of Master of Professional Communication

Josephine Lim

Ryerson University

Toronto, Ontario, Canada

August 12, 2016

AUTHOR'S DECLARATION FOR ELECTRONIC SUBMISSION OF A MAJOR RESEARCH
PAPER

I hereby declare that I am the sole author of this Major Research Paper and the accompanying Research Poster. This is a true copy of the MRP and the research poster, including any required final revisions, as accepted by my examiners.

I authorize Ryerson University to lend this major research paper and/or poster to other institutions or individuals for the purpose of scholarly research.

I further authorize Ryerson University to reproduce this MRP and/or poster by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

I understand that my MRP and/or my MRP research poster may be made electronically available to the public.

Abstract

On September 18, 2015, Volkswagen became embroiled in a global crisis after the U.S. Environmental Protection Agency (EPA) publically announced Volkswagen's violation of the Clean Air Act through the installation of "defeat devices" that trick emission tests. The Volkswagen emissions scandal was covered by media around the world and news spread quickly on social media networks, such as Twitter, though a trending hashtag, #dieselgate. Through studying Volkswagen's Twitter accounts (the Twitter account for the overall brand, a regional Twitter account and a Twitter account targeting the press), this case study analyzes Volkswagen's adoption of the Situational Crisis Communication Theory's (SCCT) rebuild and bolstering crisis response strategy on Twitter, but with little open communication through this medium. Information shared on Volkswagen's Twitter accounts was inconsistent and Volkswagen's limited adoption of a conversational, human voice on social media affected the virality of organizational messaging. Volkswagen was progressing towards recovering its social currency on Twitter, but updates on the crisis or similar news related to the situation encourages greater hostility and apathy towards the organization.

Table of Contents

Introduction.....	v
Literature Review.....	4
Research Questions	13
Methods.....	14
Findings & Discussion.....	18
Conclusion	41
Appendix.....	43
Appendix 1	43
Appendix 2	44
Appendix 3	45
References.....	46

List of Tables

Table 1	18
Table 2	19
Table 3	20
Table 4	21
Table 5	21
Table 6	23
Table 7	23
Table 8	37
Table 9	38
Table 10	39
Table 11	40

Introduction

On September 18, 2015, the U.S. Environmental Protection Agency (EPA) publically announced Volkswagen's violation of the Clean Air Act (CAA), an act that requires all vehicles sold in the US to meet federal emission standards. The EPA alleged that about 499,000 diesel passenger cars sold in the United States by the Volkswagen Group contained a software that deceives official emission testing. Affected vehicle models include the Jetta, Jetta Sportwagen, Beetle, Beetle Convertible, Audi A3, Golf, Golf Sportwagen and the Passat with model years from 2009 to 2015. These vehicles allegedly contained a "defeat device" that switches on the car's full pollution emission controls during emission testing and switches it off during normal operation (EPA, 2015). Upon the EPA's announcement, the Volkswagen emissions scandal was covered by media around the world. News spread rapidly on social media networks, such as Twitter, and the hashtag #dieselgate started trending.

When people hear about a controversial event, they often turn to social media to learn more information or reach out to organizations. During a crisis, organizations rely on media to share their crisis response with the public, but the angle the press chooses to take cannot be controlled. As a result, organizations have adopted social media channels that offer an opportunity to share undiluted messaging and to interact and engage with stakeholders online (Alfonso & Suzanne, 2008). During a crisis, however, some organizations are slow to engage with stakeholders online, which affects the information delivered to stakeholders and their opinions of the situation (Diers & Donohue, 2013).

The Volkswagen Group is an important organization to study as it is the second largest carmaker in the world and the largest carmaker in Europe (Bowler, 2015; Volkswagen, 2014). The company includes 12 brands in its portfolio, including passenger vehicles, such as

Volkswagen passenger cars and Audi; luxury vehicles, such as Lamborghini, Porsche and Bentley; and commercial vehicles, such as Scania (Volkswagen, 2014). Over the last few decades, Volkswagen expanded and its products are now sold in 153 countries (Bowler, 2015). The company, which is based in Wolfsburg, Germany, accounts for 12.9 per cent of the world's passenger car market and its goal is to provide consumers with environmentally-friendly vehicles (Volkswagen, 2014). Developments at Volkswagen have significant consequences around the world.

Through an analysis of Volkswagen's Twitter accounts (the Twitter account for the overall brand, a regional Twitter account and a Twitter account targeting the press), this case study provides insight into Volkswagen's use of social media during a crisis. It analyzes whether Volkswagen offered open lines of communication during the crisis and if the company followed crisis response strategies recommended by Situational Crisis Communication Theory (SCCT), as determined through a qualitative and quantitative content analysis of the organization's Tweets. To examine the long-term effect of the crisis response, this MRP also looks at the impact of the company's response strategy on public sentiment months after the crisis.

As more organizations adopt social media, its role in crisis planning and response affects the company's ability to weather the situation (Pang, Hassan & Chong, 2014). Based on the emissions scandal, Volkswagen adopts what Coombs (2007b) calls a rebuild strategy response on social media. Best practices for crisis communication recommend open and honest communication and while social media offers an opportunity to host open dialogue, Volkswagen demonstrates little evidence of taking advantage of this opportunity, as is recommended in the literature (Seeger, 2006; DiStaso & Bortree, 2012). Organizations should strive to synchronize their messaging to avoid confusion among stakeholders (Diers & Donohue, 2013), but

information shared on Volkswagen's Twitter accounts is inconsistent. Volkswagen demonstrates limited adoption of a conversational, human voice on social media, which researchers argue affects the sharing of organizational messages (Park & Cameron, 2014; Alfonso & Suzanne, 2008). To examine whether this crisis has stained Volkswagen's reputation, this study employs a manual sentiment analysis conducted on social media, which offers better understanding into consumers' behaviour post-crisis to gauge users' feelings towards an organization (Canhoto & Padmanabhan, 2015).

After the initial allegations, Volkswagen Group announced an external investigation. CEO Martin Winkerton apologized and resigned a few days later, but he insisted that he was unaware of any wrongdoing. A small number of staff were blamed for the incident and suspended by the company. The Volkswagen Group's board named Porsche CEO Matthias Müller as the new chief executive (Kollewe, 2015). Within the first few days of the scandal, the company's stock lost 23 per cent of its market value and the number of affected vehicles rose to 11 million around the world (Kresge, 2015; Kollewe, 2015). Investigations were launched by authorities from countries around the world, such as the US, Germany, France and Italy, and the company faces a number of lawsuits from car owners, dealership owners, shareholders and governments around the world (Kollewe, 2015; Randazzo, 2016; Wissenbach, 2016). The company's 2015 yearly sales dropped by two per cent, the first time in 13 years, as the company works towards resolving the crisis (Houston-Waesch, 2016).

The Volkswagen Group is facing a global crisis and this MRP will analyze their crisis communication response on Twitter and the effects the crisis has had on the brand's perception after the initial incident.

Literature Review

The literature review covers key concepts related to the research project. This includes examining the application of Situational Crisis Communication Theory (SCCT) to a situation in need of crisis communication. Two other key concepts that assist in understanding the MRP's results and analysis include understanding social media use during a crisis and building reputational capital.

Situational Crisis Communication Theory applied to a crisis

An organization should fulfill ethical obligations during a crisis

An organization is dealing with a crisis when it is forced to handle an unexpected event that could hurt its reputation and profits, which occurred when allegations in Volkswagen's use of a defeat device were announced by the US Government's environmental agency (Coombs, 2007a; Coombs, 2007b). Depending on the situation's severity, it can hinder the organization's ability to perform day-to-day operations or lead to its demise (Coombs, 2007b; Park & Reber, 2011). Stakeholders, those who are affected by an organization's actions, are affected either financially, emotionally, or physically and the majority of them learn about the situation through media or the Internet (Coombs, 2007b). Each organizational audience has its own specific concerns, and an organization should act in an ethical manner by focusing its efforts on protecting stakeholders from additional harm (Benoit, 1997; Coombs, 2007b). Organizations have an ethical responsibility to educate stakeholders on how they may protect themselves from physical harm, and a crisis response should acknowledge victims' concerns, whether physical or psychological (Coombs, 2007b).

Crisis communication aims to restore the trust of stakeholders and repair an organization's reputation, which is affected by the response and the speed of its delivery, the organization's ability to mitigate the situation, and their transparency of the situation (Benoit,

1997; Utz, Schultz & Glocka, 2013; Coldwell, Joosub & Papageorgiou, 2012; Padgett, Cheng & Parekh, 2013). A slow crisis response may hinder an organization's crisis communication efforts – an example of this is during the Exxon Valdez oil spill (Benoit, 1997). During a crisis, stakeholders seek details, and openness, candour, and honesty are considered best practices within crisis communication since they assist stakeholders in coping with psychological stress produced from the event's uncertainty (Seeger, 2006; Coombs, 2007b; Veil, Buehner & Palenchar, 2011).

For Volkswagen car owners, there was uncertainty about whether their vehicles met emission standards and what could be done to remedy the issue. For Volkswagen investors, there was uncertainty about whether the EPA's allegations were true and if so, what steps the company would take to rectify the situation. Stakeholders expect organizations to communicate next steps to prevent a similar situation from reoccurring and to provide reassurance (Coombs, 2007b). Stakeholders, both internally and externally, expect unlimited access to corporate information and hold organizations accountable for their actions (Thøger, 2002; Padgett et al., 2013). In specific cases, organizations may be legally required to share information about the situation, and if these obligations are not fulfilled, this could cause permanent damage to an organization's reputation and profits (Padgett et al., 2013; Shann, 2010). Honesty and transparency assist organizations with effective crisis management by reducing the likelihood of additional threats (Veil et al., 2011). Unlimited access to information can lead to distrust and alienation among audiences based on their interpretations, and organizations should carefully select what and how information is provided (Thøger, 2002). During a crisis, an organization should fulfill its ethical responsibilities before considering the protection of its reputation through SCCT's response strategies (Coombs, 2007b).

SCCT response strategies are determined by characteristics of the crisis situation

When an organization faces a crisis, SCCT offers a framework for determining the appropriate situational response based on the situation's characteristics (Coombs, 2007b). SCCT builds upon past crisis response strategies, such as Attribution Theory, where individuals faced with a negative or surprising experience react by attributing blame and by pursuing the reasoning behind a crisis (Benoit, 1997; Coombs, 2007b; Zamani, Giaglis & Kasimati, 2015). A person's behavioural response is based on the organization's ethics and whether the company is deemed to be at fault (Weiner, Osborne & Rudolph, 2010). If the organization appears to be responsible for the crisis, this negatively impacts its reputation since stakeholders may alter their behaviour based on the situation, including adverse reactions such as severing their relationship with the company or generating undesirable publicity by sharing harmful anecdotes about the organization (Coombs, 2007b; Coombs, 2007a). SCCT draws from Image Restoration Theory which suggests that the perception of fault can harm an organization's ranking (Benoit, 1997), a point demonstrated in the Volkswagen case through the drop in Volkswagen's vehicle sales and brand. SCCT also builds upon five crisis communication messaging strategies mentioned in Image Restoration Theory: denial, eluding responsibility, downplaying the event's seriousness, taking steps towards remediation and expressing degradation (Coombs, 2007b; Benoit, 1997).

SCCT provides organizations with a crisis response strategy based on three aspects of the situation: (1) the organization's responsibility in the situation, (2) the organization's crisis history and (3) the organization's stakeholder reputation. According to the SCCT, if stakeholders perceive that an organization plays a key role (responsibility) in the catastrophe, the harm to an organization's reputation will be more severe (Coombs, 2007b; Coombs, 2006). This perception is formed by the specific manner communication is framed, which is the information presented

in messaging and the framing in thought – this is how people interpret the information they learn. The communication framing affects one's perceptions of the issue. Specific aspects of crises can be categorized into three types of clusters: the victim cluster, the accidental cluster, and the intentional cluster. Within these three types, the organization holds the least responsibility if the situation is categorized as the victim cluster. In some situations, the company may be perceived as a casualty of the event. For example, when false rumour has arisen. The accidental cluster attributes a small amount of responsibility towards an organization and the situation may be seen as unintentional, such as when a product's technical error harms individuals. The intentional cluster attributes the most responsibility towards the organization and it's perceived to have caused the incident on purpose, such as an accident caused by human error. If an individual places a large amount of blame towards an organization for their role in a crisis, this will increase their feelings of anger and lessen their compassion (Coombs, 2007b). Based on the crisis situation, a cluster will be applied to Volkswagen within the Analysis section.

The other two factors, repeated crises situations in the past or good or bad relationships with stakeholders prior to the incident, can increase the event's threat to an organization's reputation (Coombs, 2007b). If the organization faced a comparable crisis in the past, this poses a greater risk to the organization's reputation. This relates back to Attribution Theory and the SCCT since perceived blame is determined by the regularity or uniqueness of an event (Coombs, 2004). If stakeholder reputation is negative or a similar situation occurred previously, this increases the attribution level of a victim type crisis, which could lead to a consumer behaving in such a way that harms the organization's reputation (Coombs, 2007b).

SCCT's crisis response strategies have different goals for the organization

The first step in any crisis response strategy is to advise stakeholders on how to protect

themselves from the situation and if they are affected, provide information on how to manage the situation (Coombs & Holladay, 2008). Based on the situational threat level in relation to the organization's reputation, SCCT suggests three types of crisis response strategies: denial, diminish and rebuild, each of which attempt to influence the public's crisis attribution, alter the public's views of an organization facing a crisis, and diminish the negative consequences created by a crisis (Coombs, 2007b). The denial strategy disconnects the organization from playing any role related to the crisis and by doing so, protects it from impacting its reputation. The diminish strategy minimizes the crisis' impact on the organization or argues its lack of control in preventing the issue from arising. This requires sufficient proof to support the organization's assertions, but may be unsuccessful if the media and public reject the framing. The rebuild strategy focuses on informing stakeholders of the organization's efforts undertaken to remedy the situation and its positive contributions in the past, which aims to restore reputational capital. Rebuilding involves first apologizing, taking responsibility for the situation, and discussing compensation. This should be used when the organization is deemed to be at fault for the incident, but this is the most expensive strategy since there is the risk that an organization's apology may potentially support a lawsuit against the organization, which impacts the organization's financial loss (Coombs, 2007b; Coombs & Holladay, 2008). Strategies should be selected based on the reputational threat level posed by the event, and organizations choose to adopt either a defensive or accommodative stance (Coombs, 2006).

Depending on the situation, two other secondary crisis response strategies include bolstering, which relies on goodwill accrued from positive relationships in the past, and expressions of concern, which showcase the organization's compassion towards the situation

(Coombs, 2007b). SCCT's crisis response strategies will be applied to Volkswagen's Twitter handles within this paper's Analysis section.

SCCT is limited in its scope since it was developed during a time where social media was not a common form of communication. But its premise is adaptable and researchers have developed the Social-Mediated Crisis Communication (SMCC) model based on SCCT. This model takes into account the medium chosen by an organization when delivering information to the public and the information source on potential crisis strategies, along with characteristics in SCCT, to recommend response strategies for organizations. To determine the appropriate crisis response strategy, the organization should consider the source of the crisis, the specific category that applies to the situation, the organization's structure, the plan for messaging, and the specific messaging format (Liu et al., 2011).

Social media's effect on an organization's reputational capital

Need for organizations to utilize social media

Social media encompasses many online tools, such as blogs, forums, micro-blogs, and Wikis (Austin, Liu & Jin, 2012). While each social media platform functions differently, they are all defined by seven key characteristics: identity, conversations, sharing, presence, relationships, reputation, and groups. Through the use of social media, everyday individuals and communities share user-generated content, which has impacted the role of an organization's marketing and public relations teams since they have less control over communication of the brand (Kietzmann, Hermkens, McCarthy & Silvestre, 2011). Organizations strive to control the message and flow of information when managing a crisis, but social media creates a unique challenge since it allows anyone to share information about an event (Wigley & Zhang, 2011). To prevent harm to an

organization's reputation, social media tools should be utilized during crisis management experienced by companies, such as during #dieselgate (Jin, Liu & Austin, 2011).

Social media has been adopted by organizations as a marketing tool through three main approaches: (1) using social media as a classic marketing tool to predict a user's behavior and determining the Return on Investment (ROI), (2) understanding unique aspects of social media, such as engagement, and seeking to understand social ROI and (3) adopting an approach that is more focused on understanding the unique features of social media and less focused on measuring marketing success. ROI in social media is different than traditional media since some marketers have the option to focus on building their organization's social currency to encourage or enable users to share its brand message. Social currency signifies an organization's relationship with users on social media, which is forged through an organization's ability to showcase genuine, informal and reciprocating behaviour. On social media, consumers are provided a powerful voice and organizations rely on building relationships with others to leverage their social currency. Tactics to build this relationship include engaging in discussions about users' interests, bolstering their positions, and sharing user-generated content. To respond to these topics, organizations need to monitor the social media of their target audience and respond to ongoing discussions (Weinberg & Pehlivan, 2011). Whether Volkswagen applied these principles will be analyzed within this paper.

Social media is frequently used by the public to express feelings, share updates during a crisis, and form bonds with others (Kaur & Kumar, 2015; Daugherty, Eastin, & Bright, 2008). Public relations professionals also rely on social media to manage corporate reputations and utilize its real-time engagement capabilities (Mei, Bansal & Pang, 2010; Wigley & Zhang, 2011). Studies have also been conducted on effective social media monitoring (Ruggiero & Vos,

2014), the tactics audiences use to search for information related to a crisis (Austin et al., 2012), the effects of messaging through different online mediums (Utz et al., 2013) and the difference in information consumption from social media in comparison to alternative sources (Jin et al., 2011). A study conducted on Instagram's usage during a crisis event found a lack of monitoring by public relations professionals, leading to unmonitored negative hashtags with limited company engagement (Guidry, Messner, Jin & Medina-Messner, 2015). But there is limited research on how an organization's social media crisis response impacts stakeholder sentiment towards a business and its reputation. This will be analyzed within the Discussion section of this paper based on a sentiment analysis of Tweets directed to the company's Twitter handles 7 months after the incident.

Social media is not always considered by organizations within their crisis communication planning, but for those that have, Twitter is the leading tool utilized to distribute information, according to a Public Relations Society of America survey (Wigley & Zhang, 2011). According to Utz et al. (2013) and Liu, Austin & Jin (2011), the medium that is used to update stakeholders and the source of this information affects the audience's reaction to a crisis situation. Information flow is an important aspect of crisis communication, which is a crucial characteristic of social media since public relations managers are placed in a reactive position due to user-generated information (Wigley & Zhang, 2011). Social media platforms can be used to keep the public informed about an ongoing issue, but they may also serve as the trigger in transforming a risk situation into a crisis (Pang, Hassan & Chong, 2014; Mei et al., 2010).

An organization's reputational capital impacts its operations

There are various definitions of an organization's reputation within the literature (Gaudenzi, Confente & Christopher, 2015; Coombs, 2007b; Wæraas & Byrkjeflot, 2012). One

general definition of reputation is the valuable and intangible long-term perception an organization holds with its stakeholders (Coombs, 2007b; Wæraas & Byrkjeflot, 2012). An organization's reputation has a widespread effect on the company, which includes its ability to attract sales, its ability to recruit workers, and its pricing model. Reputation affects Word of Mouth, which has been established as the most influential communication channel. With the popularity of social media, this exponentially expands its reach (Hong & Yang, 2009). Twitter is a popular social media tool for people to share their thoughts and experiences with companies. By analyzing the engagement Volkswagen received on Tweets, this study analyzes whether the company was able to receive uptake on its crisis messaging.

Research Questions

The literature review analyzes recommended crisis response strategies on social media that are based on the Situational Crisis Communication Theory (SCCT) concepts. It also provides a framework to understanding the effect a crisis has on a brand's reputation and its social media currency. Based on the information gathered from the literature review, this MRP will answer:

RQ 1: How transparent was Volkswagen on its Twitter accounts when addressing the diesel crisis?

RQ 2: How does Volkswagen's Twitter communications referencing the diesel crisis reflect the strategies recommended by the SCCT?

RQ 3: Seven months after the initial crisis announcement and Volkswagens' crisis response, how has Volkswagen's reputational capital been affected?

Methods

To answer the proposed research questions, three types of analysis were utilized: a quantitative and qualitative content analysis and a sentiment analysis. The two types of content analysis provide insight into whether Volkswagen's crisis response strategy on Twitter follows the suggested SCCT framework of rebuilding through apology and compensation due to the high level of responsibility attributed to the organization and whether the organization followed best practices of crisis management, including a swift response and communicating about the situation in an open, candid and honest manner. The sentiment analysis provides insight into the brand's social currency and reputation after the company's crisis response months after the issue arose.

The inductive qualitative content analyses provided an opportunity to examine the language used within the text to discover common themes. A conventional content analysis was performed to determine type of Tweets sent from these Twitter accounts, and the initial impression of Tweets helped create coding categories. Additional subcategories were created based on emerging trends. These coding categories were also measured quantitatively and concepts defined in the literature review were then applied to the information discovered. A directed content analysis was taken to support the application of SCCT to analyze Tweets for the different types of crisis response strategies defined in the theory (Hsieh & Shannon, 2005). A directed content analysis methodology was also applied to the sentiment analysis of reactions to the organization post-crisis in determining the emotions behind a user's Tweets (Hsieh & Shannon, 2005; Canhoto & Padmanabhan, 2015). A manual sentiment analysis was undertaken to better accommodate nuances found in Tweets, such as emoticons, irony, or sarcasm (Canhoto & Padmanabhan, 2015).

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

To answer RQ1 and RQ2, Tweets sent from the Volkswagen Twitter accounts (@Volkswagen, @VW and @vwpress_en) when the crisis began (September 18, 2015) to 7 months after the crisis (April 18, 2016) were examined. During this period, 253 Tweets were analyzed from the @Volkswagen account, 2,198 Tweets were analyzed from the @VW account and 303 Tweets were analyzed from the @vwpress_en account.

To answer RQ1, a deductive quantitative and qualitative content analysis was used to define the company's transparency on this issue. Tweets sent from these accounts were coded into different social media promotion tactics used by companies to build social currency among their audiences (**Refer to Appendix 1**). A quantitative content analysis was used to determine the frequency with which the company addressed the crisis on Twitter accounts @Volkswagen, @VW and @vwpress_en. The Twitter accounts targeting the general public (@Volkswagen and @VW) were then compared to the Twitter account providing information for the media (@vwpress_en) and the number of instances news was shared with media, but not with the broader public. A qualitative content analysis was then conducted to examine the type of news that was exclusively shared with the press. This data provides insight into whether the company's post-crisis response transparently discussed the situation with consumers on Twitter and how this compared to information shared with other stakeholders.

To answer RQ2, a quantitative and qualitative content analysis was conducted on the same Tweets as RQ1. A coding manual was created based on the SCCT crisis communication responses (**Refer to Appendix 2**). Word choice was used to determine the appropriate categorization and any Tweets, which multiple crisis response strategies were categorized as such. Similar to RQ1, the crisis response utilized for accounts for the general public (@Volkswagen and @VW) were compared to the response utilized in the account for media

@vwpress_en). A qualitative content analysis based on aspects of SCCT is also used to examine the organization's Tweets and offer insight into the organization's crisis response on Twitter.

To answer RQ3, Tweets addressing the company's public Twitter accounts (@volkswagen and @vw) were collected for a week starting 7 months after the initial crisis (April 18, 2016 to April 25, 2016). Retweets were not examined to avoid redundancy, and only Tweets in English were analyzed to avoid misinterpretation. A one-week timeframe was selected to avoid a massive corpus size that would be inappropriate for this MRP. A deductive sentiment analysis was conducted on 806 Tweets to @volkswagen and 1,123 Tweets to @vw (**Refer to Appendix 3**). A sentiment analysis was used to determine hostility, devotion, and apathy towards the organization. Based on studying this data, it will provide insight into the state of the organization's social currency and the effect of the crisis. A quantitative content analysis will also be used to determine the state of social currency among different geographic locations.

To conduct this MRP, two types of Tweets were collected: (1) past Tweets from three Volkswagen Twitter accounts (@Volkswagen, the official global Twitter account; @VW, the official Volkswagen USA account; and @vwpress_en, the official Volkswagen brand news account for press, media and influencers) and (2) Tweets sent from users to Volkswagen Twitter accounts (@Volkswagen, @VW). Tweets were collected automatically through the use of the Twitter API and exported into Excel spreadsheets. Data collection includes the date of the Tweet, the screen name of the user who sent the Tweet, the application source used to send out the Tweet, the Tweet's text and the engagement on the Tweet (number of Retweets and Favourites received). Tweets analyzed demonstrate: (1) the company's crisis management strategy on Twitter and (2) public sentiment towards the company 7 months after the crisis and its effect on the company's reputational capital on Twitter. The 7-month timeframe was selected due to

restrictions in data collection. Overall, text within 4,683 Tweets were manually analyzed with defined coding manuals. Images shared with Tweets were analyzed if they included text and any links provided additional context to a Tweet's categorization.

Findings & Discussion

RQ 1: How transparent was Volkswagen on its Twitter accounts when addressing the diesel crisis?

Infrequent Twitter updates shared about the emissions scandal

Among Volkswagen's 3 Twitter accounts, there were limited Tweets sharing information about the crisis, according to the quantitative content analysis (**Table 1**). The scandal was mentioned in 0.3% of the Tweets shared by the @VW account, 5.3% of the Tweets shared by the @vwpress_en account and 8.7% of the Tweets shared by the @Volkswagen account. For all 3 accounts, the emissions scandal was addressed less than 10% of the time within the analyzed timeframe. The @Volkswagen account addressed the crisis most frequently and the @VW account addressed the emissions scandal the least.

Table 1: Frequency of Emissions scandal Tweets

Account	Frequency
@Volkswagen	8.7% (22 Tweets/253 Tweets)
@VW	0.3% (6 Tweets/2,198 Tweets)
@vwpress_en	5.3% (16 Tweets/303 Tweets)

When news of the crisis broke on September 18, 2015, all 3 accounts continued publishing Tweets that engaged, advertised and promoted Volkswagen and its cars to users, without addressing the emissions scandal. An initial press release statement by former Volkswagen CEO Martin Winterkorn apologizing for the incident was published on the Volkswagen Group's Media Relations page on September 20, 2015, but it took 4 days since the crisis began for the first Tweet addressing the crisis to be shared with followers. The first Tweet acknowledging the crisis was sent from the @vwpress_en account on September 22, 2015 at 4:43 p.m., which included a link to a 2 minute and 30-second video apology by Winterkorn. A similar Tweet was posted on the @Volkswagen account at 7:33 pm on September 2.

Volkswagen's US Twitter account did not share this video, and it first addressed the emission issue on September 24, 2015. The former Volkswagen CEO was not cited and @VW published an apology quote by Michael Horn, President and CEO of Volkswagen Group of America.

Volkswagen's lack of updates and slow response does not follow best practices in crisis communication since stakeholders were left uncertain of how to protect themselves from the issue at a time when they sought additional information. Also, the public's concerns were not addressed, which hurt the organization's credibility on the situation (Seeger, 2006). Limited communication within that 4-day timeframe allows others to create the narrative on the Volkswagen crisis, which makes it more difficult for the organization to manage the crisis.

In analyzing the Tweets from the @Volkswagen account, the top three types of Tweets shared within the last 7 months were: encouraging engagement (54.5%), advertising its products (28.5%) and sharing updates on the emissions scandal (8.7%) (**Table 2**). Based on this analysis, the account's priority was to engage with users.

Table 2: Content analysis of @Volkswagen Tweets

Tweet Type	Frequency of Tweets
Engagement (E)	138/253 = 54.5%
Support (S)	0/253 = 0%
User-generated content (U)	2/253 = 0.8%
Advertisement (A)	72/253 = 28.5%
Emissions scandal discussion (Sc)	22/253 = 8.7%
Promoting the company or car rally news (C)	19/253 = 7.5%

The majority of Tweets (19 per cent) addressing the emissions scandal were sent during 2015 (**Table 3**). In 2016, only 3 Tweets were sent out about the crisis, with no Tweets updating followers in January. The @Volkswagen account shared limited updates after the initial crisis was announced (only 3 Tweets about the situation were shared during September), but the

VOLKSWAGEN’S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

Twitter account communicated more frequently about the situation in October, the month where the most updates were provided (9 Tweets).

Table 3: Frequency of @Volkswagen Tweets addressing the emission crisis

Month	Frequency of Tweets
September 2015	13.6% (3 Tweets/22 Tweets)
October 2015	41.0% (9 Tweets/22 Tweets)
November 2015	13.6% (3 Tweets/22 Tweets)
December 2015	18.2% (4 Tweets/22 Tweets)
January 2016	0% (0 Tweets/22 Tweets)
February 2016	9.1% (2 Tweets/22 Tweets)
March 2016	4.5% (1 Tweets/22 Tweets)
April 2016	0% (0 Tweets/22 Tweets)

When @Volkswagen’s did communicate about the emissions scandal, its Tweets shared new updates about the EPA investigation and actionability by the organization. On October 5, @Volkswagen Tweeted, “Volkswagen AG announces action plan to update diesel vehicles with EA 189 EU5 engines,” (Volkswagen, 2015g) which demonstrates to stakeholders that the company is working towards a solution to fix engines. On October 23, Volkswagen Tweeted, “Volkswagen confirms: EA288 engines designed for EU5 and EU6 are not affected,” (Volkswagen, 2015h) which demonstrates that the company is continuing its investigation into the matter. These messages share insight into the evolving situation and the organization’s response. Tweets shared links to articles from Volkswagen’s Media webpage that provided updates on Volkswagen’s progress, such as when the account Tweeted the link to an article sharing the news that 50 per cent of first wave vehicles affected by NOx issue in Germany had modifications completed to their EA189 engines. Shared links demonstrate the organization’s technological updates to remedy the issue and offers updates on how management has improved to prevent a similar crisis. An example of this can be seen when Volkswagen Tweets, “Volkswagen Brand Board of Management takes strategic decisions. <https://t.co/FKcomdty4hi>”

(Volkswagen, 2015i). These shared links demonstrate best practices in crisis communication by being open about the situation and lessons learned from the crisis (Seeger, 2006).

In analyzing the Tweets from the @VW account, the most common types of Tweets sent during the 7-month timeframe were: Tweets supporting users (73.6%), Tweets engaging users (23.3%) and Tweets advertising to users (1.5%) (**Table 4**). Tweets updating stakeholders about the crisis were infrequent (0.3%). Based on this analysis, the priority of the @VW account was to offer support to customers, which was done through monitoring mentions of the account.

Table 4: Content analysis of @VW Tweets

Tweet Type	Frequency of Tweets
Engagement (E)	512/2,198 = 23.3%
Support (S)	1,617/2,198 = 73.6%
User-generated content (U)	0/2,198 = 0%
Advertisement (A)	32/2,198 = 1.5%
Emissions scandal discussion (Sc)	6/2,198 = 0.3%
Promoting the company or car rally news (C)	31/2,198 = 1.4%

@VW sent all its Tweets addressing the crisis in 2015 (**Table 5**). This account addressed the situation less frequently than the official global Twitter account, which sent out 3.5 times the number of Tweets within the same timeframe.

Table 5: @VW Tweets addressing the emission crisis

Month	Frequency of Tweets
September 2015	33.3% (2 Tweets/6 Tweets)
October 2015	33.3% (2 Tweets/6 Tweets)
November 2015	16.7% (1 Tweets/6 Tweets)
December 2015	16.7% (1 Tweets/6 Tweets)
January 2016	0% (0 Tweets/6 Tweets)
February 2016	0% (0 Tweets/6 Tweets)
March 2016	0% (0 Tweets/6 Tweets)
April 2016	0% (0 Tweets/6 Tweets)

@VW's Tweets also don't appear to offer much detail about the organization's specific actions. For example, on October 16, @VW Tweeted, "Use our VIN look up tool to find out if

your 2.0L TDI is affected by the emissions issue” (Volkswagen USA, 2015a). Almost a month after the incident, this Tweet demonstrates that @VW is only offering insight into which vehicles are affected by the #dieselgate crisis, but no details about what steps the company is taking to remedy the issue.

All Tweets about the situation direct users to the VWDieselInfo.com website, but the @VW Twitter account shared less than half the number of updates posted on the VWDieselInfo.com's News section. For example, @VW's six Tweets were published on September 24, September 27, October 16, October 28, November 17 and December 8, but within the same timeframe, the website's timeline shows 13 updates published on September 18, September 20, September 23, September 25, September 27, October 8, November 2, November 9, December 9, December 17, January 11 and January 12. This demonstrates that the company was publically sharing information about the situation on the website, but not on social media. For example, when the news was first announced, allegedly only 2.0L TDI engines violated emissions standards, but in November, the EPA made additional allegations that some vehicles with 3.0L diesel engines did not meet requirements. Details of this situation and the extended goodwill package were not shared as openly on Twitter. This decision could relate to what was discussed in the literature review: too much information would demonstrate a history of crises.

Fewer Tweets addressing the emissions scandal were sent from the @vwpress_en account (16 Tweets) in comparison to the @Volkswagen account (22 Tweets). The most common types of Tweets sent from the @vwpress_en account during the 7-month timeframe were: Tweets promoting the company or offering news about the company's sports teams (54.5%), Tweets advertising the company's products (38.3%) and Tweets addressing the scandal

(5.3%) (**Table 6**). Based on this analysis, the priority of this account within the last 7 months was to promote the company and its sport teams.

Table 6: Content analysis of @vwpress_en Tweets

Tweet Type	Frequency of Tweets
Engagement (E)	6/303 = 2.0%
Support (S)	0/303 = 0%
User-generated content (U)	0/303 = 0%
Advertisement (A)	116/303 = 38.3%
Emissions scandal discussion (Sc)	16/303 = 5.3%
Promoting the company or car rally news (C)	165/303 = 54.5%

A limited number of Tweets addressed the crisis in September and October, when the crisis first broke. The most information shared about the situation was in February 2016 (**Table 7**). The account spread updates about the situation more evenly over the last seven months, which could demonstrate greater transparency in comparison to the other Volkswagen Twitter accounts.

Table 7: @vwpress_en Tweets addressing the emission crisis

Month	Frequency of Tweets
September 2015	6.3% (1 Tweets/16 Tweets)
October 2015	6.3% (1 Tweets/16 Tweets)
November 2015	18.8% (3 Tweets/16 Tweets)
December 2015	25% (4 Tweets/16 Tweets)
January 2016	12.5% (2 Tweets/16 Tweets)
February 2016	31.3% (5 Tweets/16 Tweets)
March 2016	0% (0 Tweets/16 Tweets)
April 2016	0% (0 Tweets/16 Tweets)

Tweets shared from the @vwpress_en account targeted a different stakeholder demographic, which can be seen through the published Twitter content. For example, there were more details shared about the CO2 issue that would be of interest to the press, links to press conferences about the situation, quotes and images of Herbert Diess discussing the topic at an automobile conference and high-level changes made to the overall Volkswagen brand as a result

of the crisis, such as the rollout of a new advertising campaign to restore stakeholders' trust and a change in strategic direction for the company. @vwpress_en offers few Tweets providing updates about specific actions taken to resolving the issue for customers, but they are also not the target audience for the account. There are fewer updates through this medium and Volkswagen appears to continue relying on the distribution of press releases to share information with media based on the frequent updates on the company's News webpage. Within a month of the crisis, 10 press releases were published about the situation that weren't promoted through @vwpress_en's Twitter.

Various assets shared on Twitter accounts

Tweets addressing the crisis shared from the @Volkswagen account only shared information through text within the 140-character limit. The majority of Tweets (18 Tweets) directed users to find more information from press releases or videos located on Volkswagen's Press Releases page. The text for these Tweets was the title of the press release. Only 1 Tweet shared by the account shared an image without a link or a video. Only 3 Tweets educated users by linking to videos on YouTube or embedded on Twitter. Images were not frequently shared with Tweets and only 5 Tweets used this type of asset.

When @VW sent Tweets addressing the crisis, it utilized a different approach to communicating with users. It directed users to find information through one microsite (www.vwdieselinfo.com) compared to visiting individual articles on the Volkswagen Group's Press Releases page. The @VW account used images frequently in its Tweets (5 out of 6 Tweets had images) that allowed the organization to publish more text beyond Twitter's 140-character limit. No videos were shared on @VW's Tweets.

Tweets addressing the crisis from @vwpress_en frequently shared links to the

Volkswagen Press Releases page that offered articles and videos which provided additional information. Only 1 video link from this account's Tweets linked users to a YouTube video. Only 6 Tweets included images and 2 of those Tweets only shared an image, without a link. Based on this analysis, it appears that @VW's social media approach utilized more of the tool's unique features to develop social currency compared to the @Volkswagen and @vwpress_en accounts.

Social media offers organizations the opportunity to offer open lines of communication with the public at any time. A limited number of Tweets providing updates on this issue could be seen as a lack of transparency on behalf of the organization, which doesn't follow best practices in crisis communication and it could hurt the company's reputation and recovery. This quantitative analysis demonstrates that there were limited attempts by the company to share status updates about the situation through this medium. Based on the information shared within these Tweets, it appears that followers of the @Volkswagen account were privy to more details about the situation compared to @VW and @vwpress_en followers. @vwpress_en and @Volkswagen utilize Twitter in a more similar manner compared to @VW, which demonstrates a greater attempt to build its social currency through monitoring conversations and sending Tweets supporting and engaging with Twitter users.

RQ 2: How does Volkswagen's Twitter communications referencing the diesel crisis reflect the strategies recommended by the Situational Crisis Communication Theory (SCCT)?

@Volkswagen and @VW relies on rebuild and bolstering strategy

Based on the situation, the #dieselgate situation falls into the preventable cluster within SCCT since it was the actions of the organization that violated the Clean Air Act. The situation

did not lead to obvious injuries, but Volkswagen deceived its stakeholders about its vehicles' emissions output, putting them at risk, and management's misconduct in its use of defeat devices broke the law. Based on this analysis, the #dieselgate crisis demonstrated a high threat level to the organization's reputation since a part of the company's identity was the messaging that its diesel vehicles were eco-friendly (Coombs, 2007b; Gibson & Seibold, 2014).

Prior to the crisis, Volkswagen possessed a strong relationship with stakeholders. In 2014, it was ranked as one of Interbrand's top-rising Best Global Brands when its rank climbed by 23% to #31 (Interbrand, 2014). The ranking cited the company's commitment to sustainability as a highlight for the company, but the crisis damaged Volkswagen's authenticity, which resulted in a drop to the brand's rank to #35 in 2015 (Interbrand, 2014; Interbrand, n.d.). The organization's strong stakeholder relationships in the past prevented the situation from escalating, but Volkswagen's announcement that carbon dioxide emissions may provide false readings in about 800,000 European vehicles in November demonstrated a history of deception. In December, the company announced that misrepresentation only affected 36,000 vehicles, but a trend of dishonesty may have hurt the organization's recovery (Volkswagen, 2015a; Volkswagen, 2015b; Coombs, 2007b). Based on the initial crisis responsibility analysis, the situation could significantly damage the organization's reputation, and due to the nature of the event, the rebuild strategy within SCCT is the ideal option to recovery. This strategy involves compensation, whether it's through monetary or non-monetary means, and an apology, which is when the organization accepts blame for the incident to improve the organization's reputation. The strategy's focus is to satisfy stakeholders to counteract the organization's negative character (Coombs, 2007b).

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

The first Tweet addressing the crisis from the @VW account issues an apology to stakeholders, which is determined based on the word choice in the image shared with the Tweet: “Volkswagen would like to offer our deepest apologies to those affected by our violation of CARB and EPA emissions standards” (Volkswagen USA, 2015b). Within the text, there is a plea for forgiveness, “We kindly ask for your patience as we work very hard to address this complex issue” (Volkswagen USA, 2015b) and Volkswagen accepts responsibility of the situation when it says, “We will make things right to win back the trust of you” (Volkswagen USA, 2015b). This Tweet demonstrates Volkswagen looking to reassure stakeholders that it is working on finding a solution. While this demonstrates Volkswagen's adoption of a rebuild crisis response through an apology, it doesn't mention any compensation for stakeholders.

In the second @VW Tweet sent out about the crisis on September 27, 2015, there appears to be a pattern in consistent messaging with a commitment to “remedy this issue,” “regain your trust” (Volkswagen USA, 2015c) and continually share information about the situation. There is a slight shift from “We kindly ask for your patience” (Volkswagen USA, 2015b) from the first Tweet to “Thank you for your patience” (Volkswagen USA, 2015c), which could be interpreted as ingratiation (part of the secondary SCCT strategy of bolstering), meaning stakeholders are recognized for their role. The first statement requested patience, but the second statement praises stakeholders for it. The second Tweet also focuses on providing instructional information to help TDI owners discover more about the situation through the VWDieselInfo.com website, which demonstrates the organization fulfilling its ethical obligation.

Within the third Tweet shared on October 16, 2015, the SCCT concept of ingratiation continues to be used. There is no longer an outright apology, but the company continues to take responsibility for the situation through its use of “our” within the text. Within this Tweet,

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

Volkswagen offers additional instructions to determine whether drivers are affected or not through the use of its VIN look-up tool.

Compensation, an aspect of the SCCT apology crisis response, is only offered on November 15 to assist with regaining the trust of Volkswagen customers. Within this Tweet, the company includes some of the key messaging utilized in previous Tweets sent early on in the crisis, such as “we’re working hard to make things right” (Volkswagen USA, 2015d). The Tweet also includes instructions of where to find additional information.

Based on the qualitative content analysis, @VW Twitter’s account crisis response followed the rebuild strategy, which is recommended by SCCT based on the situation’s preventable nature. Apology was the main tactic used and it was only two months after the initial crisis that the Twitter account mentioned compensation, which only occurred once. The account mainly provided users with instructive information with the occasional use of bolstering to create a better impression of the organization.

On the @Volkswagen account, the first Tweet provides stakeholders with additional information in a faster manner compared to the @VW account, but the text within the 140-character Tweet offers limited insight into the organization’s response strategy. Text shared in the first Tweet says, “Video statement of Prof. Dr. Martin Winterkorn: <https://t.co/htUtPC1iWM>” (Volkswagen, 2015j), which informs readers that the former CEO is addressing the situation, but users must take the extra step to click on the link provided to learn more. The first Tweet addressing the issue from the @VW account demonstrates a similar tactic in its Tweet, “Update from Volkswagen regarding the EPA investigation: <http://t.co/fcmMcFWt3G>” (Volkswagen USA, 2015b). The Tweet offers an update about the situation, without overtly revealing the

organization's stance. The difference with @VW is that an image appears when someone views the text on the Twitter feed and the text within the image divulges Volkswagen's stance.

Since the video statement is a part of the Tweet, its content was analyzed within SCCT. SCCT's apology tactic, which is a part of the rebuild strategy, can be seen in the video statement from Volkswagen's former CEO when he says, "I'm deeply sorry that we've broken this trust. I'd like to make a formal apology to our customers, to the authorities and the general public for this misconduct" (Volkswagen, 2015k). Similar to the first @VW Tweet, there is no mention of compensation. A secondary strategy of bolstering is also used in the video through this example of ingratiation, "Ladies and gentlemen, millions of people around the world trust our brands, our cars and our technology" (Volkswagen, 2015k). On this account, the company utilized additional bolstering tactics, such as victimage, which is when it demonstrates the crisis' harm on Volkswagen's employees (Coombs, 2007b). Within this video statement, the CEO says, "I'm aware many things have been called into question and I understand that but it'd be wrong to cast suspicion on the honest hard work of so many because of the terrible mistakes made only by a few. Our team doesn't deserve that" (Volkswagen, 2015k).

In the second Tweet sent on September 25, there is also limited insight into the organization's stance on the crisis. Based on the text, "Statement by the Supervisory Board of Volkswagen AG: <https://t.co/rL4xVq0GPJ>" (Volkswagen, 2015l), users are informed that Volkswagen is releasing statements about the situation, but that's the extent of the information shared through the direct Tweet itself. It is only by the third Tweet that Twitter users can directly glimpse Volkswagen's stance through the 140-character Tweet, "Dr Herbert Diess, CEO of the Volkswagen Passenger Cars brand, explains: 'We are working at full speed on a solution.' <https://t.co/CqDkTO2Xr4>" (Volkswagen, 2015m). This briefly demonstrates the organization's

stance of taking responsibility for the issue and working towards rebuilding and remedying the situation.

In analyzing only the 140-characters shared in the Tweet, there is no obvious evidence of the organization's crisis response strategy. Upon clicking on the provided links in the Tweets, Volkswagen demonstrates apology and asks for forgiveness from stakeholders. In one of the articles, Diess is quoted as saying, "I assure you that Volkswagen will do everything humanly possible to win back the trust of our customers, the dealerships and the public" (Volkswagen, 2015c). There is also frequent assurance that stakeholders will be continually updated about the situation, which provides direction for each of Volkswagen's national brands, "All of the Group brands affected will set up national websites to update customers on developments" (Volkswagen, 2015d). Within these longer articles, bolstering is demonstrated more frequently, such as when Volkswagen says, "The vehicles are and remain technically safe and roadworthy," within one of the linked press releases (Volkswagen, 2015c). This sentence is an example of reminding customers about the safety of its current vehicles. There's also the use of ingratiation, such as within another Volkswagen press release that says, "This Group and its brands stand for sustainability, for responsibility, for credibility" (Volkswagen, 2015e).

Both the @VW and @Volkswagen accounts demonstrate Volkswagen's adoption of SCCT's rebuild crisis response strategy, mainly through the use of apology rather than mentioning compensation. Both accounts also rely on a secondary strategy of bolstering through ingratiation and in some cases, victimage. Tweets addressing the crisis on both accounts offered instructive information about the situation and they commit to offering updates about the situation, but this isn't followed through based on the previous analysis of transparency within these Tweets.

@vwpress_en demonstrates greater denial strategy

When analyzing the @vwpress_en account, as mentioned earlier, the first Tweet about the situation is the same as the @Volkswagen account. Similar to the @Volkswagen account, the organization's response strategy is not obviously clear when reading the initial 140-character Text; it can only be seen when following linked press articles.

In the second Tweet about the situation, the link shared demonstrates the rebuild strategy through apology, but with less emphasis on asking for forgiveness from stakeholders. For example, the organization takes responsibility for the situation through committing to a thorough investigation with assistance from a third-party audit firm, but the content of the press release focuses on how changes to the organization will benefit the Volkswagen group rather than customers. This is demonstrated through the start of the press release, which states, “ ‘We have to look beyond the current situation and create the conditions for Volkswagen's successful further development,’ said Müller in Wolfsburg on Wednesday” (Volkswagen, 2015f). Within the press release, there's a greater use of bolstering the organization through the SCCT tactic of reminder, which is when the organization mentions positive work done in the past (Coombs, 2007b). This is demonstrated through this quote, “As his fourth priority, Müller is driving forward a realignment of the Group's culture and management behavior. He noted that the pursuit of perfection, the employees' commitment and social responsibility in the Volkswagen Group must be retained” (Volkswagen, 2015f), which emphasizes Volkswagen's past and upcoming changes in the future to prevent similar situations from reoccurring. @vwpress_en adopts aspects of SCCT's deny crisis response strategy through the tactic of attacking the accuser, which is when the organization takes an offensive stance against parties making statements about the situation (Coombs, 2007b). For example, in the press release it says, “

'Many people outside of Volkswagen, but also some of us, did not understand that our Strategy 2018 is about much more than production numbers' ” (Volkswagen, 2015f). This statement appears to attack “people outside of Volkswagen” (Volkswagen, 2015f) for their lack of understanding in Volkswagen's strategic motto: Faster, Higher, Larger.

Based on analysis of the @vwpress_en Twitter account, the organization's crisis response could be interpreted as denial. For example, within the article of the November 2 Tweet, there is a statement that says, “Volkswagen AG wishes to emphasize that no software has been installed in the 3-liter V6 diesel power units to alter emissions characteristics in a forbidden manner” (Volkswagen, 2015n). Text within the press release link shared with the December 9 Tweet has the statement, “The suspicion that the fuel consumption figures of current production vehicles had been unlawfully changed was not confirmed” (Volkswagen, 2015o).

Similar response strategies, various tactics

Leadership plays an important role during a crisis and it's crucial for organizations to designate specific personnel to speak about the matter within its pre-crisis planning (Seeger, 2006). The @Volkswagen and @vwpress_en accounts typically refer to information being shared from the organization as an entity where new information shared is not attributed to any specific party. There are occasional situations where Volkswagen leadership shares updates about the situation, which refers to new Volkswagen AG CEO Matthias Müller, who is also the Chairman of the Board of Management. But within the press releases, there appears to be some variation in the spokespeople quoted. Press releases shared with Tweets have quoted Herbert Diess, CEO of the Volkswagen Passenger Cars brand, Berthold Huber, former Deputy Chairman of the Volkswagen Supervisory Board and Hans Dieter Pötschis, Chairman of the Supervisory Board of Volkswagen AG, but frequently information shared within the articles is attributed to

Volkswagen AG or the Volkswagen Group. There was a leadership transition and Volkswagen's Supervisory Board underwent staffing changes during the 7-month timeframe, which plays a role in the various spokespeople that comment on the situation.

When comparing the @Volkswagen and @vwpress_en Tweets, there is different messaging shared with the general public compared to media. There is some overlap in the Tweets shared between the two accounts (7 Tweets shared on the @Volkswagen account were identical to Tweets shared on the @vwpress_en account), but the majority of the @Volkswagen account's Tweets (15 Tweets) were independent from the @vwpress_en account. Independent Tweets sent from the @Volkswagen account all offered messaging that is consistent with the Volkswagen Group's Press Releases page. Tweets that are only shared on the @vwpress_en account included information about the CO2 emissions crisis, information shared at the VW press conference and the VW North American International Auto Show relating to Volkswagen's turnaround strategy. Similar to the @Volkswagen account, Tweets from the @vwpress_en account link to articles on the Press Releases page with limited use of images and video. Based on this analysis, the @Volkswagen account attempted to offer greater transparency on the crisis to users, but the messaging shared was not always consistent with the @vwpress_en account.

In comparing Tweets from the @VW account to the @vwpress_en account, there are no similar Tweets among the two accounts. Tweets from the @VW account focuses on statements shared by the former President and CEO of Volkswagen America, Michael Horn, while Tweets from the @vwpress_en account focuses on statements shared by the Volkswagen Group's leadership, such as Matthias Müller, Chairman of the Board of Management of Volkswagen Aktiengesellschaft, and Herbert Diess, CEO of the Volkswagen brand. Both accounts adopt different uses of available assets, such as images or video, for their different audiences – the

@VW account uses more imagery with text overlays and it consistent links to the same website for users to find information, but it doesn't directly point users to certain updates. Also, Michael Horn's name is frequently attached to any images shared about the crisis. Users reading the @VW Tweets are directed to a separate microsite which offers updates about the company's actions during the crisis. Overall, the @VW account shared fewer updates about the situation compared to the @vwpress_en Twitter handle, which shared updates more than 2.5 times more frequently. Messaging from the @VW account does not address the CO2 issue, information about the company's revamp of its overall brand strategy and any technical steps the company was taking to remedy the amount of emissions released from affected vehicles.

Tone affects popularity

The @VW Twitter account adopts a more conversational tone in its posts through frequent use of words, such as "our," "we" or "you." This human persona could be an attempt to demonstrate authenticity and build trust with customers since many of them interact with the brand on a regional level.

Despite a lack of frequent updates, when the @VW account addressed the crisis, it received the most engagement from users. The most popular Tweets addressing the crisis were from the @VW account when it sent Tweets through Twitter Ads that offered more information to users on September 24 and September 27. @VW's first Tweet on the situation garnered 860 Favourites from users and 632 Retweets, which is 79 times more Retweets and 14 times more Favourites than @Volkswagen's most popular Tweet on the situation (September 22). @VW's choice to post the Tweet using Twitter Ads is notable since during the last seven months after the start of the crisis, only three Tweets were posted through this source with 2 addressing the emissions scandal. The use of Twitter Ads could have affected the popularity of @VW's Tweet,

but overall @VW Tweets on the scandal had greater engagement from users with an average of 273.2 Retweets and 344 Favourites. For this social media account, social media was a powerful medium for Volkswagen USA to distribute information, which could relate to the Twitter handle's efforts to develop relationships with users and gain social currency.

@Volkswagen's and @vwpress_en's Tweets adopted a similar formal tone of voice throughout the text. The account refers to the organization in third-person, such as "Volkswagen AG announces action plan to update diesel vehicles with EA 189 EU5 engines" (Volkswagen, 2015g). This tactic distances the organization from creating relationships with stakeholders since there appears to be a lack of human persona (Weinberg & Pehlivan, 2011). Within the 22 Tweets shared about the crisis by the @Volkswagen account, there are only two mentions of the word "we," both of which occur when quoting Volkswagen leadership in the Tweet. Engagement on these crisis-related Tweets was less frequent with these accounts: @Volkswagen received an average of 20.4 Retweets and 27.9 Favourites and @vwpress_en received an average of 5.1 Retweets and 3.3 Favourites. The first Tweet sent by the @Volkswagen account updating stakeholders about the scandal was the most popular with 88 Retweets and 61 Favourites.

There are a varying number of followers for each Twitter account and as of July 3, 2016, @Volkswagen had 74.2K followers, @VW had 482K followers and @vwpress_en had 78.5K followers, which could affect the levels of engagement on each account's Tweets. The high engagement on the first Tweets sent out about the crisis supports SCCT theory that during a crisis, stakeholders seek information.

Based on the situation analysis, the emissions scandal had a high reputation threat level since the crisis would be categorized within SCCT's preventable crisis cluster. Due to this risk, SCCT recommends Volkswagen adopt a rebuild crisis response, which was generally followed

by all the accounts through the use of apology, but there was little mention of compensation. All three accounts adopted SCCT's bolstering response as a secondary strategy through the use of ingratiation, but @vwpress_en's Tweets also demonstrated victimage and reminder tactics towards stakeholders within its text. @vwpress_en was also unique since there were some instances of the denial strategy. All the accounts had similar messaging that mentioned being open about the situation, but this wasn't followed through based on the number of Tweets shared by the Twitter handles in RQ 1. There was inconsistency in the messaging strategy since there were various spokespeople addressing the situation within the Tweets and also different tone of voices, which affected the Tweet's engagement. These aspects demonstrate that Volkswagen attempted to follow the suggested SCCT rebuild crisis response for its situation, but the company's lack of consistent messaging could impact the effectiveness of its crisis communication (Seeger, 2006).

RQ 3: Seven months after the initial crisis announcement and Volkswagens' crisis response, how has Volkswagen's reputational capital been affected?

When the news about Volkswagen's deception broke, social media users expressed their thoughts about the situation on social media. Hashtags such as #dieselgate started trending on Twitter in the early days of the crisis. As Coombs (2007b) mentioned, stakeholders attributed blame to Volkswagen and expressed anger over the situation. The situation hurt Volkswagen's reputation, which also translated into financial consequences for the organization in 2015.

When an organization faces a crisis, an important aspect to consider is its ability to recover from the situation. Word of mouth is an important aspect that affects an organization's ability to make sales based on its reputation with past customers. Twitter is a social media tool

that allows electronic word of mouth and offers the opportunity for organizations to go viral – whether it is for positive or negative reasons. It also allows organizations to build relationships with potential customers and share information (Austin et al., 2012). The sentiment analysis on the situation aims to determine whether the crisis continues to impact the organization as it continues its rebuild efforts through measuring the hostility, devotion or apathy expressed towards the brand on both its @Volkswagen and the @VW accounts.

Based on a manual quantitative sentiment analysis of the @Volkswagen Twitter account, the overwhelming response by users was apathy, which was expressed by almost half of users who Tweeted at the account (**Table 8**). While there was more hostility compared to devotion expressed towards the brand, only 22.6% of the hostile Tweets addressed the emissions scandal and 13.4% of hostile Tweets expressed anger about a different vehicle issue. For those who expressed hostility towards the brand, the hashtag #dieselgate continues to be seen. During this timeframe, there remain some devoted loyalists who continue to support the brand as it recovers from the situation. During the timeframe that this sentiment analysis was conducted, news broke

Table 8: Sentiment analysis of Tweets sent to @Volkswagen during April 18 to April 25, 2016

Sentiment Type	Description	Frequency
Hostility towards the brand	Angry statements that portray Volkswagen as the party to blame for the diesel engine issue.	180/797 = 22.6%
	Angry statements that portray Volkswagen as the party to blame for another car issue.	104/797 = 13.4%
Devotion towards the brand	Supportive statements that portray Volkswagen as the party to support when driving.	136/797 = 17.1%
	Supportive statements that portray Volkswagen as the party to support during a sponsored initiative (sports or TV).	7/797 = 0.9%
Apathy towards the brand	Statements that don't portray anger or support, but were informational in nature.	370/797 = 46.4%

on April 20 that Mitsubishi also falsified emissions data, and on April 21, sources shared that Volkswagen reached a settlement agreement with the US government to buy back diesel vehicles. This settlement did not apply to Volkswagen owners living in other countries. Prior to that date, many users contacting Volkswagen shared positive messages about the brand, but there's a greater sentiment of hostility and apathy after news about both these situations broke (**Table 9**). Hostile Tweets sent to the @Volkswagen account jumped from around 30% to more than 45% starting on April 20. There was also a huge jump in apathetic responses to this Twitter account, which could be attributed to increased press coverage about this company as a result of the recent news.

Table 9: Sentiment analysis of Tweets sent to @Volkswagen during April 18 to April 25, 2016

Date	Type	Frequency
18/04/2016	Hostility	26/81 = 32.1%
	Devotion	44/81 = 54.3%
	Apathy	9/81 = 11.1%
19/04/2016	Hostility	19/70 = 27.1%
	Devotion	32/70 = 45.7%
	Apathy	19/70 = 27.1%
20/04/2016	Hostility	70/144 = 48.6%
	Devotion	40/144 = 27.8%
	Apathy	34/144 = 23.6%
21/04/2016	Hostility	139/330 = 42.1%
	Devotion	38/330 = 11.5%
	Apathy	153/330 = 46.4%
22/04/2016	Hostility	97/234 = 41.5%
	Devotion	29/234 = 12.4%
	Apathy	107/234 = 45.7%
23/04/2016	Hostility	58/113 = 51.3%
	Devotion	19/113 = 16.8%
	Apathy	36/113 = 31.9%
24/04/2016	Hostility	29/63 = 46%
	Devotion	20/63 = 31.7%
	Apathy	14/63 = 22.2%
25/04/2016	Hostility	25/88 = 28.4%
	Devotion	16/88 = 18.2%
	Apathy	46/88 = 52.3%

In analyzing the @VW Twitter account, the general sentiment of messages including this account were hostile (41.3%) with 28.3% of messages expressing anger over the emissions scandal and 13% of messages expressing anger over other vehicle issues. There was more hostility expressed about the emissions compared to the @Volkswagen account, which could be due to the fact that @VW is a regional Twitter account for the US and it possesses a larger follower base on this social media tool (**Table 10**). News about Volkswagen's buy-back offer on April 21 directly affected the audience of this Twitter account which could have influenced the number of hostile messages received. Many users expressed apathy towards this brand's Twitter account, which could be influenced by sharing the news of Volkswagen's plans to compensate customers. Based on this analysis, there appears to be more hostility directed to the regional account, but also slightly more devotion. This could also be influenced by @VW's crisis response strategy which didn't update users as frequently compared to the @Volkswagen account.

Table 10: Sentiment analysis of Tweets sent to @VW during April 18 to April 25, 2016

Type	Description	Frequency
Hostility towards the brand	Angry statements that portray Volkswagen as the party to blame for the diesel engine issue.	317/1,119 = 28.3%
	Angry statements that portray Volkswagen as the party to blame for another car issue.	146/1,119 = 13%
Devotion towards the brand	Supportive statements that portray Volkswagen as the party to support when driving.	218/1,119 = 19.5%
	Supportive statements that portray Volkswagen as the party to support during a sponsored initiative (sports or TV).	20/1,119 = 1.8%
Apathy towards the brand	Statements that don't portray anger or support, but were informational in nature.	418/1,119 = 37.4%

When studying the sentiment over each individual day, the @VW account shows the same phenomenon as the @Volkswagen account. The predominant sentiment expressed on April 18 and 19 were devotion, but once news broke about the latest updates in Mitsubishi's and Volkswagen's situation, there was a jump in hostile and apathetic messages (**Table 11**).

Table 11: Sentiment analysis of Tweets sent to @VW during April 18 to April 25, 2016

Date	Type	Frequency
18/04/2016	Hostility	26/81 = 32.1%
	Devotion	44/81 = 54.3%
	Apathy	9/81 = 11.1%
19/04/2016	Hostility	19/70 = 27.1%
	Devotion	32/70 = 45.7%
	Apathy	19/70 = 27.1%
20/04/2016	Hostility	70/144 = 48.6%
	Devotion	40/144 = 27.8%
	Apathy	34/144 = 23.6%
21/04/2016	Hostility	139/330 = 42.1%
	Devotion	38/330 = 11.5%
	Apathy	153/330 = 46.4%
22/04/2016	Hostility	97/234 = 41.5%
	Devotion	29/234 = 12.4%
	Apathy	107/234 = 45.7%
23/04/2016	Hostility	58/113 = 51.3%
	Devotion	19/113 = 16.8%
	Apathy	36/113 = 31.9%
24/04/2016	Hostility	29/63 = 46%
	Devotion	20/63 = 31.7%
	Apathy	14/63 = 22.2%
25/04/2016	Hostility	25/88 = 28.4%
	Devotion	16/88 = 18.2%
	Apathy	46/88 = 52.3%

Overall, Twitter users expressed apathy towards the brand, but there were flare-ups of hostility about #dieselgate when a reminder of the event arose, such as when Mitsubishi admitted to also tricking emissions tests and when a settlement was announced for Volkswagen drivers in the US. This demonstrates that Twitter users equate falsifying emissions data with the Volkswagen brand and this appears to continue to harm its reputation.

Conclusion

Based on Situational Crisis Communication Theory's (SCCT) clusters, #dieselgate presented a high risk to Volkswagen's reputation due to the preventable nature of the incident. During the emissions scandal, Volkswagen had an opportunity to use Twitter as an avenue to update stakeholders with its crisis response, but they failed to follow best practices in crisis communication, including failing to offer a quick response, a lack of updates on the situation, despite the company's public commitment to keep customers updated, and inconsistent messaging. Based on the situation, the company attempted to respond with the appropriate SCCT response, the rebuild strategy, but while it offered an apology and taking responsibility, the details of compensation took much longer to be announced. The company also attempted to use SCCT's concept of bolstering as a secondary strategy, but there was a lack of consistent messaging and crisis response strategy among its different Twitter accounts. Also, engagement with the company's Twitter audience lacked a conversational tone, which could have impacted Volkswagen's ability to convince users to share its messaging.

Seven months after news of the incident broke, Twitter users appear to have forgotten about the situation since there appears to be a trend of apathy and loyalty expressed towards the company, which is rebuilding its social currency. But when a situation related to the incident, such as Mitsubishi's confession, and updates on the incident, such as the latest news on settlements, there appears to be more anger expressed by users. This demonstrates that #dieselgate could continue to stain Volkswagen's reputation for years.

Limitations

This MRP was limited in its scope since the timeframe and data collection method only allowed for a sentiment analysis only 7 months after the incident. Other timeframes may have been of more interest, but also a greater amount of data could affect the sentiment analysis.

Another limitation was the collection of data through Twitter's API, which had limitations to accessing past Tweets. It would have been ideal to analyze public sentiment expressed towards the company prior to the crisis. The MRP was also limited since it gathered Tweets that were directed towards these Twitter handles, but there could have been many messages shared about the issue that didn't directly mention the company.

Future Research

Areas of future research include analyzing public sentiment one year after the event and five years after the event to determine whether #dieselgate continues to have an impact on the company's reputation. Also, since other car companies appear to have also falsified their emissions data, such as Mitsubishi, their crisis response and public sentiment towards the organization could also be compared with Volkswagen. Another avenue to explore would be to conduct an analysis of Volkswagen's other social media properties and other mediums used to share messaging about the emissions scandal to SCCT theory to determine whether their messaging was consistent throughout.

Appendix

Appendix 1

Used to determine the brand's transparency on Twitter in regards to the crisis.

Type	Description	Example
Engaging in conversations with users about their interests (E)	Statements from Volkswagen responding to compliments, questions or encouraging users to engage with the brand overall compared to outright advertising the brand or products.	@solarint3042 We can feel your excitement through the monitor! #VDubLove @steeringnews Hope you had your popcorn ready! #VWGTI
Demonstrating support (D)	Statements from Volkswagen offering users assistance, comfort or an apology on an issue, complaints or suggestions for the brand.	@indiolrh If you'd like, DM us your email address and VIN and we'll reach out to you with more information. #VWcares @MikeCatalana We're sorry we were unable to meet your expectations, Mike. Please reach out to us again if you have any future questions.
Showcasing user-generated content (U)	Statements from Volkswagen sharing content created by another social media user.	
Advertising the product (A)	Statements from Volkswagen sharing specific features about its products or the company without commenting to another user.	
Discussing the emissions scandal (Sc)	Statements from Volkswagen discussing the emissions scandal.	Visit http://t.co/EpDCkECSwV for information regarding affected TDI vehicles. http://t.co/il2AjTXkCc Use our VIN look up tool to find out if your 2.0L TDI is affected by the emissions issue. http://t.co/kvM6MB8lx6 http://t.co/skiO5JFF3I
Promoting the company or car rally news (C)	Statements from Volkswagen about corporate changes or about the company's rally team.	

Appendix 2

Used to determine the brand's crisis response strategy on Twitter.

Crisis Response Strategy	Crisis Response Tactic	Description
Deny	Attacking the accuser	Statements from Volkswagen indicating another party is incorrect in its accusations against Volkswagen during the crisis.
	Denial	Statements from Volkswagen indicating a lack of crisis.
	Scapegoat	Statements from Volkswagen blaming an external stakeholder (individual or organization) for the crisis.
Diminish	Excuse	Statements from Volkswagen downplaying its role in the crisis and its ability to prevent it.
	Justification	Statements from Volkswagen diminishing the extent of the harm caused during the crisis.
Rebuild	Compensation	Statements from Volkswagen offering financial reimbursement or other assistance.
	Apology	Statements from Volkswagen claiming full blame for the crisis and asking stakeholders to pardon the organization.
Bolstering	Reminder	Statements from Volkswagen mentioning to stakeholders about positive actions taken in the past.
	Ingratiation	Statements from Volkswagen commending stakeholders and/or recapping positive actions taken in the past.
	Victimage	Statements from Volkswagen emphasizing its role as a casualty of the crisis.

Appendix 3

Used to determine the brand's reputational capital by measuring a user's hostility, devotion or apathy towards the brand.

Type	Description	Example
Hostility towards the brand	Angry statements that portray Volkswagen as the party to blame for the diesel engine issue.	Do you feel the tension? The days ahead will be remembered in Wolfsburg. #Volkswagen #dieselgate I'm very anxiously awaiting VW's meeting with Judge Breyer #dieselgate #volkswagen #tdi #plzbuyback
	Angry statements that portray Volkswagen as the party to blame for another car issue.	I don't understand why the fuck there'd be a safe mode for my car radio.. locked out of my radio. Bullshit. #Volkswagen
Devotion towards the brand	Supportive statements that portray Volkswagen as the party to support when driving.	So hot today I ha to turn the #AC all the way up. #VW #volkswagen #volkswagon #spring #pdx #hillsboro #beetle #bug #superbeetle #classiccar #thestruggleisreal #oldschool #airconditioning #weather #awesome #stressrelief Summer vibes today. New engine fired up 🐰 #mk1golf #volkswagen #sunset #mk1rabbit #mk1 #golf #vw #restoration #car ... https://t.co/03aLycVg18
	Supportive statements that portray Volkswagen as the party to support during a sponsored initiative (sports or TV).	
Apathy towards the brand	Statements that don't portray anger or support, but were informational in nature.	Cities Should Ban Cheating #Diesel Cars Until They're Fixed https://t.co/FgEMaIVvkK #SmartCities #Volkswagen #VehicleEmissions #pollution #Volkswagen shares surge as U.S. #Dieselgate #deal looms - Reuters https://t.co/9UWLZ7G2PN

References

- Alfonso, G. H., & Suzanne, S. (2008). Crisis Communications Management on the Web: How Internet- Based Technologies are Changing the Way Public Relations Professionals Handle Business Crises. *Journal of Contingencies and Crisis Management*, 16(3), 143-153.
- Austin, L., Liu, B. F., & Jin, Y. (2012). How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research*, 40(2), 188-207.
- Benoit, W. L. (1997). Image repair discourse and crisis communication. *Public relations review*, 23(2), 177-186.
- Bowler, T. (2015, October 2). Volkswagen: From the Third Reich to emissions scandal. *BBC News*. Retrieved from <http://www.bbc.com/news/business-34358783>
- Canhoto, A. I., & Padmanabhan, Y. (2015). 'We (don't) know how you feel'—a comparative study of automated vs. manual analysis of social media conversations. *Journal of Marketing Management*, 31(9-10), 1141-1157.
- Coldwell, D. A. L., Joosub, T., & Papageorgiou, E. (2012). Responsible leadership in organizational crises: An analysis of the effects of public perceptions of selected SA business organizations' reputations. *Journal of Business Ethics*, 109(2), 133-144.
- Coombs, W. T. (2004). Impact of past crises on current crisis communication insights from Situational Crisis Communication Theory. *Journal of business Communication*, 41(3), 265-289.
- Coombs, W. T. (2006). The protective powers of crisis response strategies: Managing reputational assets during a crisis. *Journal of promotion management*, 12(3-4), 241-260.

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

- Coombs, W. T. (2007a). Attribution theory as a guide for post-crisis communication research. *Public Relations Review*, 33(2), 135-139.
- Coombs, W. T. (2007b). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate reputation review*, 10(3), 163-176.
- Coombs, W. T., & Holladay, S. J. (2008). Comparing apology to equivalent crisis response strategies: Clarifying apology's role and value in crisis communication. *Public Relations Review*, 34(3), 252-257.
- Daugherty, T., Eastin, M. S., & Bright, L. (2008). Exploring consumer motivations for creating user-generated content. *Journal of Interactive Advertising*, 8(2), 16-25.
- Diers, A. R., & Donohue, J. (2013). Synchronizing crisis responses after a transgression: An analysis of BP's enacted crisis response to the Deepwater Horizon crisis in 2010. *Journal of Communication Management*, 17(3), 252-269.
- DiStaso, M. W., & Bortree, D. S. (2012). Multi-method analysis of transparency in social media practices: Survey, interviews and content analysis. *Public Relations Review*, 38(3), 511-514.
- EPA. (2015, September 18). *EPA, California Notify Volkswagen of Clean Air Act Violations / Carmaker allegedly used software that circumvents emissions testing for certain air pollutants*. Retrieved from <http://yosemite.epa.gov/opa/admpress.nsf/a883dc3da7094f97852572a00065d7d8/dfc8e33b5ab162b985257ec40057813b!OpenDocument>
- Gaudenzi, B., Confente, I., & Christopher, M. (2015). Managing Reputational Risk: Insights from an European Survey. *Corporate Reputation Review*, 18(4), 248-260.

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

Gibson, P., & Seibold, S. (2014). Understanding and influencing eco-luxury consumers.

International Journal of Social Economics, 41(9), 780-800.

Guidry, J. D., Messner, M., Jin, Y., & Medina-Messner, V. (2015). From# mcdonaldsfail to# dominossucks: An analysis of Instagram images about the 10 largest fast food companies.

Corporate Communications: An International Journal, 20(3), 344-359.

Hong, S. Y., & Yang, S. U. (2009). Effects of reputation, relational satisfaction, and customer–company identification on positive word-of-mouth intentions. *Journal of Public Relations Research*, 21(4), 381-403.

Houston-Waesch, M. (2016, January 8). Volkswagen Sales Drop for First Time in 13 Years.

Wall Street Journal. Retrieved from <http://www.wsj.com/articles/volkswagen-group-sales-drop-for-first-time-in-13-years-1452275074>

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis.

Qualitative health research, 15(9), 1277-1288.

Interbrand. (2014, October 9). *Interbrand's 15th annual Best Global Brands Report*. Retrieved from <http://interbrand.com/newsroom/interbrands-15th-annual-best-global-brands-report/>

Interbrand. (n.d.). *Volkswagen*. Retrieved from <http://interbrand.com/best-brands/best-global-brands/2015/ranking/volkswagen/>

Jin, Y., Liu, B. F., & Austin, L. L. (2011). Examining the role of social media in effective crisis management: The effects of crisis origin, information form, and source on publics' crisis responses. *Communication Research*, 0093650211423918.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business horizons*, 54(3), 241-251.

Kresge, N. (2015, September 21). Volkswagen Drops 23% After Admitting Diesel Emissions

Cheat. *BloombergBusiness*. Retrieved from

<http://www.bloomberg.com/news/articles/2015-09-21/volkswagen-drops-15-after-admitting-u-s-diesel-emissions-cheat>

Kollewe, J. (2015, December 10). Volkswagen emissions scandal - timeline. *The Guardian*.

Retrieved from <http://www.theguardian.com/business/2015/dec/10/volkswagen-emissions-scandal-timeline-events>

Liu, B. F., Austin, L., & Jin, Y. (2011). How publics respond to crisis communication strategies:

The interplay of information form and source. *Public Relations Review*, 37(4), 345-353.

Liu, B. F., Jin, Y., Briones, R., & Kuch, B. (2012). Managing turbulence in the blogosphere:

Evaluating the blog-mediated crisis communication model with the American Red Cross.

Journal of Public Relations Research, 24(4), 353-370.

Mei, J. S. A., Bansal, N., & Pang, A. (2010). New media: a new medium in escalating crises?.

Corporate Communications: An International Journal, 15(2), 143-155.

Padgett, D. R. G., Cheng, S. S., & Parekh, V. (2013). The quest for transparency and

accountability: Communicating responsibly to stakeholders in crises. *Asian Social Science*, 9(9), 31.

Park, H., & Cameron, G. T. (2014). Keeping It Real Exploring the Roles of Conversational

Human Voice and Source Credibility in Crisis Communication via Blogs. *Journalism & Mass Communication Quarterly*, 1077699014538827.

Park, H., & Reber, B. H. (2011). The Organization-Public Relationship and Crisis

Communication: The Effect of the Organization-Public Relationship on Publics'

Perceptions of Crisis and Attitudes Toward the Organization. *International Journal of*

- Strategic Communication*, 5(4), 240-260.
- Pang, A., Hassan, N. B. B. A., & Chong, A. C. Y. (2014). Negotiating crisis in the social media environment: Evolution of crises online, gaining credibility offline. *Corporate Communications: An International Journal*, 19(1), 96-118.
- Randazzo, S. (2016, January 20). New Mexico AG Sues Volkswagen Over Emissions Scandal. *Wall Street Journal*. Retrieved from <http://www.wsj.com/articles/new-mexico-ag-sues-volkswagen-over-emissions-scandal-1453303230>
- Ruggiero, A., & Vos, M. (2014). Social media monitoring for crisis communication: process, methods and trends in the scientific literature. *Online Journal of Communication and Media Technologies*, 4(1), 105.
- Seeger, M. W. (2006). Best practices in crisis communication: An expert panel process. *Journal of Applied Communication Research*, 34(3), 232-244.
- Shann, E. (2010). Transparency is the best policy. *Australian Financial Review*, 26.
- Thøger Christensen, L. (2002). Corporate communication: The challenge of transparency. *Corporate Communications: An International Journal*, 7(3), 162-168.
- Utz, S., Schultz, F., & Glocka, S. (2013). Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster. *Public Relations Review*, 39(1), 40-46.
- Veil, S. R., Buehner, T., & Palenchar, M. J. (2011). A work- in- process literature review: Incorporating social media in risk and crisis communication. *Journal of contingencies and crisis management*, 19(2), 110-122.
- Volkswagen. (2014, December 31). *The Group*. Retrieved from http://www.volkswagenag.com/content/vwcorp/content/en/the_group.html

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

Volkswagen. (2015a, November 13). *Next step in clarifying the CO2 issue*. Retrieved from

https://www.volkswagen-media-services.com/en/detailpage/-/detail/Next-step-in-clarifying-the-CO2-issue/view/2886249/7a5bbec13158edd433c6630f5ac445da?p_p_auth=7TToYSeC

Volkswagen. (2015b, December 9). *CO2 issue largely concluded*. Retrieved from

https://www.volkswagen-media-services.com/en/detailpage/-/detail/CO2-issue-largely-concluded/view/2966215/7a5bbec13158edd433c6630f5ac445da?p_p_auth=s3QAROmK

Volkswagen. (2015c, September 25). *Dr. Herbert Diess, CEO of the Volkswagen Passenger*

Cars brand, explains: "We are working at full speed on a solution.". Retrieved from http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/09/VW_PKW.html

Volkswagen. (2015d, September 29). *Volkswagen AG announces action plan to update diesel vehicles with EA 189 EU5 engines*. Retrieved from

http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/09/VW_Aktionsplan.html

Volkswagen. (2015e, October 6). *Matthias Müller: "We will overcome this crisis"*. Retrieved from

http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/10/Matthias_Mueller.html

Volkswagen. (2015f, October 28). *Matthias Müller unveils next steps for the Volkswagen Group*. Retrieved from

http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/10/naechste_Schritte.html

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

Volkswagen. [Volkswagen] (2015g, October 1). Volkswagen AG announces action plan to update diesel vehicles with EA 189 EU5 engines. LINK: <https://t.co/0q7bdtiM2s> [Tweet].

Retrieved from <https://twitter.com/volkswagen/status/649526731343298560>

Volkswagen. [Volkswagen] (2015h, October 23). Volkswagen confirms: EA288 engines designed for EU5 and EU6 are not affected. LINK: <https://t.co/Y12IPwZ7oA> [Tweet].

Retrieved from <https://twitter.com/volkswagen/status/657464369652060160>

Volkswagen. [Volkswagen] (2015i, October 23). Volkswagen Brand Board of Management takes strategic decisions. LINK: <https://t.co/FKmdty4hi> [Tweet]. Retrieved from

<https://twitter.com/volkswagen/status/653864469660073984>

Volkswagen. [Volkswagen] (2015j, September 22). Video statement of Prof. Dr. Martin Winterkorn: LINK: <https://t.co/htUtPC1iWM> [Tweet]. Retrieved from

<https://twitter.com/volkswagen/status/646406987270496256>

Volkswagen. (2015k, September 22). *Video statement Prof. Dr. Martin Winterkorn (English)*.

Retrieved from [https://www.volkswagen-media-services.com/en/detailpage/-](https://www.volkswagen-media-services.com/en/detailpage/-/detail/Video-statement-Prof-Dr-Martin-Winterkorn-English/view/2718368/7a5bbec13158edd433c6630f5ac445da?p_p_auth=9iRucc6i)

[/detail/Video-statement-Prof-Dr-Martin-Winterkorn-](https://www.volkswagen-media-services.com/en/detailpage/-/detail/Video-statement-Prof-Dr-Martin-Winterkorn-English/view/2718368/7a5bbec13158edd433c6630f5ac445da?p_p_auth=9iRucc6i)

[English/view/2718368/7a5bbec13158edd433c6630f5ac445da?p_p_auth=9iRucc6i](https://www.volkswagen-media-services.com/en/detailpage/-/detail/Video-statement-Prof-Dr-Martin-Winterkorn-English/view/2718368/7a5bbec13158edd433c6630f5ac445da?p_p_auth=9iRucc6i)

Volkswagen. [Volkswagen] (2015l, September 25). Statement by the Supervisory Board of

Volkswagen AG: LINK: <https://t.co/rL4xVq0GPJ> [Tweet]. Retrieved from

<https://twitter.com/Volkswagen/status/647488512095219712>

Volkswagen. [Volkswagen] (2015m, September 25). Dr Herbert Diess, CEO of the Volkswagen Passenger Cars brand, explains: "We are working at full speed on a solution." LINK:

<https://t.co/CqDkTO2Xr4> [Tweet]. Retrieved from

<https://twitter.com/Volkswagen/status/647508184291147776>

VOLKSWAGEN'S CRISIS COMMUNICATION: TWITTER USE DURING #DIESELGATE

Volkswagen. (2015n, November 2). *Statement on the announcement by the United States*

Environmental Protection Agency (EPA). Retrieved from

http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/11/Stellungnahme.html

Volkswagen. (2015o, December 9). *Volkswagen AG has issued the following information: CO2 issue largely concluded*. Retrieved from

http://www.volkswagenag.com/content/vwcorp/info_center/en/news/2015/12/CO2_Ad_hoc.html

Volkswagen USA. [VW] (2015a, October 16). Use our VIN look up tool to find out if your 2.0L TDI is affected by the emissions issue. LINK: <http://www.vwdieselfinfo.com> [Tweet].

Retrieved from <https://twitter.com/vw/status/655095904911904768>

Volkswagen USA. [VW] (2015b, September 24). Update from Volkswagen regarding the EPA investigation: IMAGE: <https://pbs.twimg.com/media/CPtIgphUEAAuPNM.jpg> [Tweet].

Retrieved from <https://twitter.com/VW/status/647190698223992832>

Volkswagen USA. [VW] (2015c, September 27). Visit <http://VWDieselInfo.com> for information regarding affected TDI vehicles. IMAGE: <https://pbs.twimg.com/media/CP6-1xfUcAEzAbD.png> [Tweet]. Retrieved from

<https://twitter.com/VW/status/648165227574374402>

Volkswagen USA. [VW] (2015d, November 17). 2.0L TDI Owners, we're working hard to make things right. Visit http://www.vwdieselfinfo.com/goodwill_package/ for more information. IMAGE: <https://pbs.twimg.com/media/CUB37-ZVAAEp8BJ.jpg> [Tweet].

Retrieved from <https://twitter.com/VW/status/666664617607852032>

- Wæraas, A., & Byrkjeflot, H. (2012). Public sector organizations and reputation management: Five problems. *International Public Management Journal*, 15(2), 186-206.
- Weinberg, B. D., & Pehlivan, E. (2011). Social spending: Managing the social media mix. *Business Horizons*, 54(3), 275-282.
- Weiner, B., Osborne, D., & Rudolph, U. (2010). An attributional analysis of reactions to poverty: The political ideology of the giver and the perceived morality of the receiver. *Personality and Social Psychology Review*, 1088868310387615.
- Wigley, S., & Zhang, W. (2011). A study of PR practitioner's use of social media in crisis planning. *Public Relations Journal*, 5(3), 1-16.
- Wissenbach, I. (2016, January 18). Volkswagen faces shareholder claims over emissions scandal. *Reuters*. Retrieved from <http://www.reuters.com/article/us-volkswagen-emissions-lawsuit-idUSKCN0UW1CP>
- Zamani, E. D., Giaglis, G. M., & Kasimati, A. E. (2015). Public relations crisis and social media: an investigation into extant and prospective consumers' perceptions through the lens of attribution theory. *Journal of theoretical and applied electronic commerce research*, 10(2), 32-52.