

RESEARCH ARTICLE

Organisational communication management during the Volkswagen diesel emissions scandal: A hermeneutic study in attribution, crisis management, and information orientation

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The discovery in September 2015 of diesel emissions software cheat technology in Volkswagen (VW) cars initiated a process of organisational crisis management and damage limitation by VW, reflected in the contemporaneous intensive production of public information statements, including press releases, statements to shareholders and investors, and transcripts of oral evidence. Through taking stock of a selection of these public information statements, this article examines the organisational communication management strategies employed to respond to the crisis situation, making an integrated use of attribution, crisis management, and information orientation theories as an interpretive lens. An interpretivist, hermeneutic approach was used to carry out qualitative content analysis on selected statements issued by VW. The analysis reveals that there is a connection between statements relating to attribution and statements relating to information orientation, at the time of the crisis and in preparing future action. Priorities for action form part of the overall crisis management and image restoration approach. Proposed changes in information orientation constitute a key dimension of the company's public response to mitigate the offensiveness of the crisis. The analysis performed demonstrates the applicability of the proposed integration of attribution, crisis management, image restoration, and information orientation theories to better understand and explain how large corporations respond publicly to organisational crisis episodes, more specifically the ways in which attributions, crisis management, and image restoration strategies are related to aspects of information orientation as both components and consequences of the crisis.

1 | INTRODUCTION

On September 18, 2015, the German automotive company Volkswagen AG (VW) received a notice of violation of the Clean Air Act from the United States Environmental Protection Agency. It had been found that certain diesel engines in cars manufactured by VW contained a piece of software—a “defeat device”—that meant certain emission controls were only activated during laboratory testing (Volkswagen, 2016a, 2016b, 2016c, 2016e). The result of this is that in real world conditions, some engines were exceeding U.S. emission limits “by a factor of 15 to 35” (Center for Alternative Fuels, Engines and Emissions, 2014). VW admitted that, unbeknown to the general public, about 11 million cars worldwide were fitted with the device (Volkswagen, 2015a, 2015b, 2015c, 2015d, 2015e, 2015f, 2015g, 2015h, 2015i, 2015j, 2015k, 2015l, 2015m, 2015o).

What ensued from this discovery configures a situation of organisational crisis for VW, particularly as the series of events that unfolded was “specific, unexpected, and non-routine” (Seeger, Sellnow, & Ulmer, 2003), created uncertainty and mistrust, and presented a threat to its brand reputation and commercial goals. In an appraisal of the kinds of threats organisational crisis incidents engender, Coombs (2007a) proposes that the greatest damage occurs at the levels of public safety, financial loss, and reputation loss. Both these definitions indicate that VW faced a situation of crisis. Financial loss is shown as the company set aside €16.2 billion to deal with the emissions crisis. This led to VW making an annual loss in 2015 of €4.1 billion—its first annual loss in over 20 years (Volkswagen, 2016d). Reputation loss is shown as, by December 2015, sales of VW branded cars had dropped by 20% (Society of Motor Manufacturers and Traders, 2015). Muller, 2016,

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CEO of VW, described the situation as “the greatest challenge in the history of [the] Company” (Volkswagen A.G., Volkswagen, 2016d).

Against this backdrop, this study aims to examine the organisational communication management strategies employed to respond to the crisis situation, making an integrated use of attribution, crisis management, and information orientation theories as an interpretive lens. More specifically, this study will (i) explore attributions made by VW using selected attribution frameworks; (ii) examine the key elements of crisis management and damage limitation strategies employed by relating them to relevant theoretical frameworks; (iii) determine the ways in which attributions inform the crisis management process; (iv) identify dimensions of information orientation in the company's statements; and (v) determine how the perceived level of information orientation challenges or enhances corporate responsibility and the company's crisis response.

Several frameworks have been proposed for helping organisations deal with situations of crisis. Process-oriented approaches such as the one proposed by Mitroff (1988, 1994) are particularly helpful in organisations' attempt to mitigate vulnerabilities encountered at the different stages of the crisis life cycle: detection of early signs, prevention and preparation, containment and damage limitation, recovery, and identification of lessons to be learned. Wang and Belardo (2009) combine Mitroff's process-oriented framework with elements of knowledge management strategy, to explore the extent to which knowledge management positively impacts crisis management. Concerning the use of knowledge management at the containment/damage limitation stage—the one that most accurately corresponds to VW's crisis containment efforts and hence to the focus of this paper—a relationship is established between an integrated use of knowledge from internal and external sources and the organisation's ability to control the crisis. More recently, Ponis and Koronis (2012) propose an integration of organisational crisis phases with primary knowledge management activities: knowledge acquisition, selection, generation, assimilation, and emission. Their analysis reveals pathologies that offer pointers for the analysis of VW's own knowledge activities, such as the speed, timeliness, and effectiveness of information dissemination during the crisis or the organisation's ability to communicate a “fast and reliable resolution of the ‘what did go wrong’ question” (Ponis & Koronis, 2012).

Previous studies have evaluated multinational corporations' and high reliability organisations' response during and after large-scale crises. De Wolf and Meijri (2013) investigated the 2010 BP Deepwater Horizon oil spill making use of content analysis to examine secondary data from external sources other than BP. Thatcher, Vasconcelos, and Ellis (2015) performed a content analysis of four official reports on the 2011 Fukushima nuclear disaster, looking at the impact of information behaviour on information failure, but not examining the organisation's crisis management strategy.

Through taking stock of a selection of public information statements, this article examines the organisational communication management strategies employed by VW to respond to the situation of crisis resulting from the emissions scandal. This is particularly relevant when recent industry reports identify that 29% of organisations wait to experience a situation of crisis before constructing a response strategy (Steelhenge, 2014). Research into organisations' responses to situations of crisis such as the one presented in this article can examine

the role played by public information efforts and inform the design of successful organisational communication strategies.

In terms of structure, the following section of the article provides a discussion of the attribution, crisis management, and information orientation theories that will be used as interpretive lens to examine the organisational communication management strategies employed by VW. Section 3 introduces and describes the interpretivist, hermeneutic approach used to carry out a qualitative content analysis of selected public information statements released by VW. Subsequently, Section 4 presents a detailed content analysis that establishes the links between attribution, crisis management, and information orientation. This is followed by a discussion that relates the findings generated back to the frameworks of attribution and crisis management, image restoration, and information orientation. A final concluding section revisits the strategies employed by the company, the priorities arising from those strategies, and how both are linked to information orientation.

2 | THEORETICAL FOUNDATION

This section of the article reviews the frameworks and theories that will be used as lenses to analyse the VW case. The first of these is a group of attribution theories, which are concerned with identifying the cause of events and deriving responsibility. Attribution research is important for the study because it shows how an individual (or in this case, a company) arrives at a causal inference and what the consequences of such an inference may be.

Second, crisis management theories will be employed as a lens to examine how VW conducted itself in the wake of the crisis in order to deal with the three effects of a crisis: public safety, financial loss, and reputation loss (Coombs, 2007a,b), as well as legal concerns. These two groups are highly complementary. This is because “people interpret behaviour in terms of its causes and these interpretations play an important role in determining reactions to the behaviour” (Kelley & Michela, 1980, p. 458). As crisis management strategies are a type of reaction (although some might be pre-emptive), it follows that one should first form attributions in order to implement appropriate crisis management strategies. Coombs and Holladay (1996) followed this line of reasoning in developing their situational crisis communication theory (SCCT), by explaining the relationship between a situation and communication strategies.

Finally, it will be explored whether these crisis management strategies give any indication as to what aspects (if any) of information orientation theory have been prioritised. Information orientation theory was devised by Marchand, Kettinger, and Rollins (2002) as a metric of how effectively companies use and manage information. It is not within the remit of the research to discover whether VW had a quantified high level of information orientation before, during, or after the crisis. Rather, it will examine whether VW sought to change any of the aspects of information orientation as a result of the crisis.

2.1 | Attribution theories

Attribution theories stem from the social psychological concept of attribution, which is the process by which individuals explain the cause of behaviour. This has since been applied to the study of an

organisation's behaviour or event (Gailey, 2013; Gailey & Lee, 2005), as opposed to merely that of an individual (Jones & Davis, 1965; Jones, 1979). Attribution theories can help explain why something has happened in a company or organisation. In the context of the study reported in this article, they will inform understanding of the crisis management strategies used by VW to mitigate the effects of the emissions scandal in terms of customer response and legal liability. Kelley and Michela (1980, p. 458) define the term "attribution" as meaning "inference of cause." Attribution theories describe the process of attribution to make sense of events. For instance, if somebody who is a nervous driver has a crash, it is more likely to reach out for the explanation that it was their own driving conduct that caused the collision, rather than considering the possibility that they were the innocent victim of a dangerous driver, or simply bad luck.

2.1.1 | Internal and external attribution

It has been established that there are two main types of attribution (Heider, 1958). The first is external attribution, where behaviour is interpreted as having been caused by situational factors. Internal attribution, on the other hand, is where a behaviour is said to be caused by internal characteristics or disposition. In either case, Heider (1958, p. 152) developed the notion that the "condition will be held responsible for an effect which is present when the effect is present and absent when the effect is absent."

Taking forward the concept of attribution, Jones and Nisbett (1972) developed the notion of actor-observer asymmetry, stating that when seeking explanations for the actions of others, individuals are more likely to attribute cause to the disposition of the actor than to situational factors. A number of frameworks have been devised, which focus on the attribution of disposition as a causal factor for events, including Kelley's covariation theory (vide Section 2.1.2). In this context, disposition relates to factors that relate to the actor, such as characteristics or inclination.

Jones and Nisbett (1972) noticed that people tend to pay more attention to intentional behaviour. They identified that "strong and confident dispositional inferences are drawn about a person when we see him or her act under conditions of high choice." Attribution theories can easily be applied to the field of information management to help understand the way organisations operate. If managers are able to understand the causes of their employees' behaviour, they will have a greater understanding of how their business works and can employ future decisions accordingly. For instance, they would gain the capacity to intervene in working conditions in such a way that employee motivation is increased, leading to a happier workforce and an increase in performance. If an organisation understands its internal and external environments, it is more inclined to act purposefully (Gronhaug & Falkenberg, 1994). It is easy to see how this fits the context of a crisis. If organisational insiders have a perception of cause of a crisis, they can make more accurate judgments of suitable crisis management actions.

2.1.2 | Kelley's covariation model

Kelley (1967) developed the covariation model of attribution, identifying three distinct variables that have an effect on attribution. These are as follows: distinctiveness, meaning the uniqueness of an event as

distinct from the actor's track record; consistency, meaning the degree to which the event demonstrated the actor running true to type; and consensus, meaning the degree to which the actor behaved as others would have or have already done in similar circumstances.

Kelley (1967) found that when distinctiveness is low and consistency is high, an event is more likely to be attributed to the actor's internal disposition. Hewstone and Jaspars (1988) added the idea of consensus as a determinant of causal attribution, noting that when consensus is low, an act is more likely to be attributed to the actor's disposition. It is noteworthy that Kelley's (1967) covariation theory relates to attribution, but does not explore the connection between attribution and responsibility. It is useful therefore only in so far as it illustrates how people look for causes of events by attributing them to the actor's disposition and to what degree that disposition accords with the actor's history. Kelley's (1967) theory does not discuss any implications of causal attribution.

2.1.3 | Weiner's attribution theory and attribution-responsibility-action model

Weiner's attribution theory (Weiner, 1995) is used as an additional framework because, as Yum and Jeong (2014) found, it is useful in examining why a crisis has happened after it has happened. It is also useful in deciding whether it is a crisis that is likely to happen again. Weiner's (1995) attribution theory assumes that individuals try and determine the causes of other people's behaviours. A person might attribute a number of causes to another one's action. Weiner (1995) considered that the process of attribution could be broken down into three stages. First, a behaviour must be observed by a person. Second, the person must believe that that the behaviour was performed intentionally. Last, the person must decide whether the behaviour was a result of coercion, in which case one would assume an external cause, or free will, in which case one would assume an internal cause in the individual.

In the "attribution-responsibility-action" model, Weiner (1995) suggested that people's attributions of cause guide their future actions such as punishment or preventative measures. Weiner (1995) identified the two motivations for punishment as utility and retribution. Retribution is the balancing out of the wrong or injustice, and utility relates to the prevention of the event's recurrence. It is thought that retribution is increased where causes of the failure are perceived to be controllable. In corporate cases, punitive options may be carried out by individuals and have a behavioural nature, such as boycotting of consumer products; punitive options may also be legal in nature, such as prosecution by the state or regulatory authority. Weiner (1995) does not explore restorative justice: this is where the punishment serves to restore the debt caused by the wrongdoing.

One of the crucial differences between the concept of Weiner's original attribution theory and its application here is the fact that organisations consist of individuals, all operating with their own attribution models, and as a sum of their parts, operating as one.

2.2 | Crisis management

Attribution theories can inform crisis management theory, because response strategies tend to be based on the nature of the cause of

the crisis. Different attribution theories look at particular dimensions of the response, such as Coombs' (2006, 2007a, b) covariation attribution model with its emphasis on consistency and distinctiveness as dimensions of attribution, and Benoit's (1997) focus on damage minimisation and confidence restoration.

2.2.1 | Coombes' situational crisis communication theory (SCCT)

SCCT was developed by Coombs (2006) as an application of Kelley's (1967) covariation attribution model to corporate crisis communication. It focuses on consistency and distinctiveness as dimensions of attribution and looks at these in terms of crisis history and relationship history. Crisis history refers to whether the actor has any history of similar instances in the past; relationship history refers to how the actor has performed with respect to other stakeholders in other contexts. Both factors are significant in influencing public opinion after a corporate crisis. SCCT does not, however, examine the consensus dimension of attribution.

Coombs and Holladay (2002) explain that different crises would necessitate different communication strategies in order to manage them effectively. They discussed three significant types of crisis. In "human breakdown product recall," a product is recalled because of human error. The example is used of a hamburger recall by Hudson Foods after the beef was contaminated with *Escherichia coli* as a result of plant employees mistakenly putting contaminated beef back into the processing machinery. The second type of crisis identified is "organisational misdeeds with no injuries." In this case, stakeholders are knowingly deceived by management, without causing actual harm. The example is used where Chrysler knowingly manipulated mileage clocks on new cars to obscure the fact that they had been driven for miles during tests. The third type of crisis is "organisational misdeed management misconduct," where infringements of laws or regulations are knowingly made by management. An example of this would be failing to adhere to equal opportunities statutory requirements.

2.2.2 | Benoit image restoration discourse theory

In order to evaluate a corporation's course of action to manage a crisis, it is necessary to pay attention to the way it manages risk as it pertains to its corporate image. The preservation of corporate image, or restoration of a damaged image, is central to an organisation's response to threat.

Benoit (1997) developed a theory of image restoration discourse, looking at ways in which corporate bodies use communication strategies to minimise damage and restore confidence in the corporate image. It is assumed that the actor (corporation) is held responsible for an action and that the action is considered offensive. The responsibility or fault may be real or only perceived, but where it exists, the company's image is at risk. It is essential for companies to identify the relevant audience (audiences) when using communication strategies to restore their image.

Benoit (1997) identifies five image restoration techniques, which are denial or shifting of blame; evasion of responsibility (due to provocation, lack of information, accident, or misplaced good intentions); reduction of offensiveness (by bolstering a positive image; downplaying

the nature of the damage, differentiation from worse instances; undermining the accusers; offering compensation; or transcendence of motive); corrective action to restore original condition and prevent recurrence; and mortification, offering apologies, and remorse. These techniques have been applied to case studies of crises before. Benoit and Czerwinski (1997) applied the theory to USAir's response to media coverage after its aircraft crashed in 1994. It has also been used to show that Exxon have heavily downplayed damage after the 1989 oil spill (Benoit and Czerwinski, 1997) and that both corrective action and mortification were heavily used by AT&T after one of their major telephone lines failed in 1973 (Benoit and Czerwinski, 1997).

It should be noted that there could be a conflict of interests between image restoration strategies and the need to avoid future lawsuits. Benoit (1997) also observes that making assertions that are later found out to be false would be counterproductive in any image repair strategy.

2.2.3 | Crisis management and litigation

In the frameworks described in the previous sections, there is a link between attribution models and crisis management strategy, which is in turn linked to image restoration strategy. It can also be observed that some crisis management strategies, particularly image restoration strategies, may conflict with the need to avoid or minimise legal consequences, whether these be civil lawsuits or prosecutions brought in respect of offences against the state or other regulatory bodies. Unlike civil suits, corporate failures or violations that attract prosecution by the state cannot be written off by compensatory action, although compensatory action and contrition could be held as mitigating factors.

There is limited literature on the relationship between crisis management and litigation and the ways in which corporations address these potentially conflicting areas, but warnings about the impact of releasing statements into the public domain offer useful insight into the complexity of this matter. Barton (1990) and Jacques (2007) discuss the need for careful public information communication strategies when organisations are faced with the risk of litigation. They also discuss the implications of legal privilege as it relates to different categories of information and communications. It is noted that all communications—even those beyond the exchanges between the corporation and counsel—may be taken into consideration in court and this may impact on what statements the corporation chooses to issue and to whom. In a similar vein, Tyler (1997) clarifies the wide scope of liability claiming that it prevents corporate executives from stating they are sorry about a particular incident, because apologizing effectively means acknowledgement of some kind of responsibility.

2.3 | Information orientation

The concept of information orientation was proposed by Marchand, Kettinger, and Rollins (2000) to determine how the interaction of people and information, through the use of technology, can affect business performance. Developed in the context of a survey study involving 1,009 senior managers from 169 business teams and originating from different companies, nations, and industries, the concept is operationalised through an optimum "metric of information use" (Kettinger, Zhang, & Marchand, 2011). The metric consists of three different information

capabilities: information technology practices (ITP), information management practices (IMP), and information behaviours and values (IBV). These three capabilities contain 15 different competencies.

2.3.1 | Information technology practices

ITP refers to the manner in which a company manages their IT applications and infrastructure in support of their business decisions. For example, a company may decide to upgrade their client database system to something more complex. If the company grows fast, this could be a good decision because it could adequately suit a growing client list and an increase in operations for years to come. If the company does not expand, it may prove to be unnecessary, expensive, and difficult for staff to train for and use. A company can improve their information orientation by using a technology infrastructure that suits their current and future needs.

2.3.2 | Information management practices

IMP refers to the capabilities that manage information successfully in terms of information collection, processing, and organisation. For example, if the information a company collects is of poor quality, duplicated, or out of date, errors are likely to be made. Repairing such errors is a costly and inefficient process. A company can increase their information orientation by improving their management of information.

2.3.3 | Information behaviours and values

IBV describes capabilities that encourage behaviours and promote values in staff for successful information use. For example, staff can be trained to understand the benefits that effective information management has on their company (efficiency and therefore faster growth) and their own work-lives (making their job easier). Complementarily, a workforce that understands issues surrounding privacy and confidentiality is less likely to make errors that could incur costly legal consequences.

Information orientation therefore reflects a "people-centric view of information use" (Marchand et al., 2002). It is concerned with how organisational actors can adapt their technology practices, management practices, and values to increase performance. Its focus on people, rather than solely on technology, means it can be applied to any organisation, not just IT-based organisations. However, a review of the current literature suggests it has not been used in the field of crisis management before.

It is beyond the scope of this article to determine a quantitative measure of information use for VW, as this would not be possible without access to verifiable data about the information orientation of the business before, during, and after the crisis. This is not in the public domain. However, as information orientation helps a company to improve business performance by examining how the organisation processes information across the three competencies, it will be useful to look for evidence about certain dimensions of information orientation as part of the analysis of the emissions crisis. In examining the public information statements released by VW, it will be possible to determine whether or not the company displayed characteristics of information orientation and how these are prioritised in its strategic response to the crisis.

2.4 | Summary

An integrated use of the theories presented above will inform the analysis of public information statements released by VW regarding the emissions crisis. First, they will be examined for evidence of Heider's (1958) internal and external attribution. The dimensions of distinctiveness, consensus, and consistency, extracted from Kelley's covariation model (1967), will then be used to explore the company's responses in terms of attribution. In complement to this, Weiner's (1995) "attribution-responsibility-action model" will be mobilised to frame analysis as it provides a bridge between statements about attribution and the outcomes from it. Although some of the outcomes are imposed as the result of legal or regulatory proceedings, the company subsumes all outcomes into its crisis management and image restoration strategies. Subsequently, Coombs' (2006) SCCT, focusing on consistency and distinctiveness as dimensions of attribution, will be used to analyse the public information statements in terms of crisis history and relationship history.

Finally, the application of Marchand et al.'s (2001) information orientation framework will reveal by abductive reasoning the company's self-evaluation of the way it uses information and the priorities it identifies for the future. Given that the amount of technical information available from the documents in the data set is small, the focus will be on two of the competencies identified by Marchand et al. (2001), namely, the aspects of IMP and IBV. References to both IMP and IBV will provide a link to both statements of attribution and statements regarding crisis management and image restoration.

3 | MATERIAL AND METHOD

This article is concerned with VW's organisational communication in the wake of the emissions crisis. More specifically, it analyses the strategic use of public information statements: how attribution manifests itself, how information is handled to suit VW's corporate interests and public duties in the wake of the crisis, how the outflow of information is controlled to restore the company's image, and the extent to which the intersection of these perspectives is a reflection of information orientation.

The corpus of public information statements released by VW that will be analysed includes a comprehensive range of sources that highlight different perspectives of the distribution of information regarding the discovery and investigation of defeat devices in VW cars. The items have been chosen from voluminous amounts of written documents generated by the company since the onset of the emission's crisis in September 2015. The use of historical documents, rather than generating data specifically for this research, offered access to a much wider data set but required the research team to be selective (Silvester, 2016). The data originate from three main types of sources:

1. press releases, issued by VW and designed for consumption by the general public;
2. statements to shareholders and investors; and
3. transcripts of evidence presented to the UK Parliament Transport Select Committee.

Appendix A provides a detailed overview of the data used for analysis and its provenance. Obtaining a comprehensive range of sources is crucial in order to gain an accurate understanding of how organisational communication developed in wake of the crisis, particularly how information regarding the defeat device was presented to various audiences. To complement this information, Appendix B offers a timeline of significant events. At the time of writing, the VW case is ongoing, with new information being released into the public sphere every day. It was therefore necessary to establish a start and end point for the data set. It begins on September 2015, with a press release admitting that the Environmental Protection Agency had found evidence of emission manipulations. The original intention was to end with the public release of the Jones Day expert and independent investigation report, originally scheduled for April 2016. However, VW admitted that releasing it “would present unacceptable risks” (Volkswagen, 2016b), and this informed the decision to extend the boundaries of the data set to VW's acceptance in June 2016 of a consent decree in which it agrees to buy back vehicles from consumers in the United States and to fund manufacturers of clean car technologies.

In order to identify the source of quotations taken from the source documents, each document in the data set was assigned a number in chronological order, from 1 to 26 (see Appendix A). Within each document, each of the selected statements was numbered in the order of appearance within the text. Hence, the reference [1:1] refers to the first quoted statement from the first document in the list.

The data were analysed following the hermeneutic methodology (Karppinen, Lehto, Oinas-Kukkonen, Pätäälä, & Saarema, 2014). The data set lends itself to hermeneutic interpretation as a method of analysis, because of the richness of the material: it consists of long, qualitative accounts of both fact and opinion. In order to find meaning within them, a detailed and thorough interpretation of the text is necessary, “alternating between part and whole” of the text, and bringing about a “progressively deeper understanding of both” (Alvesson & Skoldberg, 2000, p.53). The analysis will therefore reflect “the dialectic between the understanding of the text as a whole and the interpretation of its parts” (Mingers & Willcocks, 2004).

All sources in the data set are documents where the author(s) are aware, at the time of creation, that the materials would be released into the public domain. In the case of press releases, text has been generated with the explicit intention of wide public diffusion. This distancing, evidenced by all the sources in the data set, means that the sequential and interpreter-driven method of hermeneutic analysis is particularly appropriate in helping to get behind the public face of the text to discover meaning and purpose.

Hermeneutics permits a wide range of strategies for conducting actual textual analysis, which can include discourse analysis, taxonomies, or open coding using grounded theory. A content analysis coding method has been adopted based on criteria from the frameworks of attribution (Kelley, 1967; Jones & Nisbett, 1972; Heider, 1958; Kelley and Michela, 1980; Weiner, 1995), crisis management (Benoit, 1997; Benoit and Czerwinski, 1997; Coombs and Holladay, 2002; Coombs, 2006), and Marchand et al.'s 2000 information orientation (Kettinger and Marchand, 2011; Marchand et al., 2002; Marchand and Kettinger, 2011) in order to investigate the organisational communication management strategies employed by the company in response to the

emissions violations crisis. This approach is abductive, which suits the hermeneutical approach in that it involves the researcher as a component of understanding.

An initial reading of all the data corpus revealed to aspects of each of the frameworks and, from this, an understanding of the data sources was developed through re-reading and identifying key passages to evidence the frameworks. In this way, a hermeneutic cycle of sequential readings was being followed, with analysis being content-led and interpreted by the authors.

In order to attain meaningful analysis out of the data corpus, the contents were coded. Codes were used “as a heuristic” (Saltana, 2009): they were used as an “initial step” (Saltana, 2009) that act as the foundation for further analysis. Crucially, coding allows to link between ideas that are prevalent throughout the data set. It is important that patterns were identified so that hermeneutic analysis could be used to extract meaning from the patterns.

Techniques from attributional coding (Silvester, 2016) were used to analyse and record attributions in the documents during the hermeneutic cycle. A simple system was developed so that, on further reading, references in the texts could be linked directly to specific frameworks and elements within the frameworks. Each framework was assigned a letter, and parts of each framework further broken down into numbers. Instances of certain attributive processes, crisis management strategies, or information orientation competencies were then labelled with the corresponding code. The coding system employed during the analysis is shown in Appendix C.

4 | A HERMENEUTIC STUDY IN ATTRIBUTION, CRISIS MANAGEMENT, AND INFORMATION ORIENTATION

The previous section offered an explanation of how the hermeneutic method was used to extract meaning from the data set. The heuristic coding mechanism (see Appendix C) enabled the systematic labelling of parts of data showing instances of high or low levels of attribution, crisis management, image restoration, and information orientation. These coded instances were then aggregated into three tables corresponding to each framework. The tables in Appendices D, E, and F show distributions of these instances. This section of the article presents the findings discovered upon examination of the tables.

The material analysed consists of public information statements produced by the company for release to the media, or statements from company representatives in response to questions from regulators or their representatives. A common feature of voluntary statements is that they are not triangulated by external investigation. This makes them the most useful in showing what they reveal about that the company's priorities, and how it wishes to be seen, rather than the facts of the case. However, it is important to recognise the potential to be misled by such information. Volkswagen's public information statements intended for an audience will have been crafted accordingly; the priorities that Volkswagen is shown to have (implicitly or explicitly) in their statements may not necessarily be their true priorities. The data set allows only access to VW's perspective.

Most of the content of the data corpus concentrates on crisis management and image restoration strategies. This is particularly the focus of all statements volunteered for public information, such as press releases. It is important at this point to establish that the facts of how and why the software deceit was allowed are not part of this debate. They were either not known at the point the statements were issued or deliberately withheld because of the ongoing investigation.

For the greater part, the documents seem to avoid making attributions. The reasons for this are likely to be twofold: first, VW was seeking to avoid admissions of liability. Second, they needed to be careful not to prejudge the results of the investigation by Jones Day. Nevertheless, there are some attributions made or implied in the VW material that provide an insightful perspective on their approach to the crisis.

The interim results of the Group Audit investigation (Volkswagen, 2015n) together with evidence given to the UK Transport Select Committee provide a more direct access to the information orientation and management practices that contributed to the crisis and ways in which they could be improved. The linking factor is the way the company seeks to preserve its "reputational assets" (Coombs, 2006) throughout.

4.1 | Attribution

The company's first public response was to issue statements relating to crisis management and damage limitation. Nevertheless, the attributions made or implied in the material analysed clearly underlie their crisis response strategy, and this is why attribution is examined first. The documents give some insight into the attributions made by the company. In addition to this, some of the texts indicate attributions that the company would like to be made. These two options are not necessarily the same thing and reflect VW's determination to control the external attributions of disposition that are or will be made about the scandal and the company's responsibility for it.

In the dialogue with the Transport Committee, some of the attributions are suggested by the committee members and then evaluated by the company representatives. Thus, the Managing Director at VW Group United Kingdom replies "Yes" to the question "Do you think that Volkswagen is an ethical company?" [20:48] and again, when asked "Do you think it knows the difference between right and wrong?"

From some of the earliest statements, it is suggested that the development and implementation of defeat software is attributed to a small number of individuals or a group rather than the company as a corporate entity. It is asserted that "responsible parties will be identified and held accountable" [7:15] and there is reference to the "misconducts and shortcomings of individuals" [18:10]. This is a consistent theme either explicitly or implicitly throughout the material and appears to constitute part of VWs corporate defence.

4.1.1 | Internal and external attributions

The repeated phrase "two rogue engineers" [8:23] becomes shorthand for attribution to a limited number of individuals and is borne out as nine employees are suspended. Elements of Heider's theory (1958) pertaining to identifying external and internal attributions can be clearly related to these attribution statements. The attributions are internal when considered from the perspective of the company as a whole. For instance, the attribution is made to "a group of engineers"

[8:28]. However, for the individuals concerned (whomever they are), the company culture itself becomes a form of external attribution. It is speculated that the motivation would be to "keep costs down" [20:40] or find a way of meeting the more challenging U.S. emissions regulations within the time and budget constraints placed on them, rather than an internal disposition of the persons involved.

The emphasis that it is the same group of engineers who worked on solutions for EU and the United States and also on software updates [20:37, 20:38] seems to present a further example of the company attempting to tether responsibility to individuals rather than the organisation. The former CEO of VW, Martin Winterkorn, who resigned at the end of September 2015, is the only individual named in the data set. The juxtaposition of the statement that he was informed about the emissions crisis and then resigned suggests that some responsibility is attributed to him [21:15].

Some internal attributions do not relate to individuals but are corporate. There is still an internal attribution of disposition, rather than external situational factors that caused the crisis. The lack of quality assurance for the developed software is admitted [20:13] and thereby attributes responsibility for allowing defeat devices to go forward. Company attitudes such as pressure to meet deadlines or keep costs down [20:40] and some acknowledged "deficiencies (...) in the reporting and monitoring systems" [18:18] that allowed the deceit to be developed may also be considered external, in that they are situational factors affecting the behaviour of individual employees.

In the documents resulting from the Transport Select Committee hearings, the VW representatives draw on external attributions relating the effectiveness of the testing regimes. For example, there are frequent references to the emissions regime [in the EU] being "out of date" [8:29] and the wider regulations relating to air quality that "needs to change" [sic] [8:40].

VW repeatedly highlights the fact that existing testing protocols do test real-time driving conditions: the inevitable discrepancy between testing situations and "what happens in the real world" [8:39] is offered as evidence of the present testing regime failure. Costs are further mentioned as a reason for the development of defeat software. These may be seen as an external or an internal factor, because they relate both to the company culture and to the wider pressures of business and competition.

4.1.2 | Kelley's covariation model distinctiveness, consistency, and consensus

Many statements validate Kelley's covariation principle and illustrate the three aspects of distinctiveness, consistency, and consensus to help determine attribution. A number of statements emphasise the distinctiveness of the events of the scandal both in terms of its contrariness to the values history of the company and its actions history. The scandal is presented as "contrary to VW core principles" [7:21]. These are described in key words such as "solidity, reliability, credibility" [5:8]. The company sees itself as "ethical" [20:48] and "upstanding [20:31]." Frequent references to the "VW brand" [5:8] act as reminders about enduring core principles, as detailed above, and help to give historical context.

There is emphasis on VW's history of positive environmental actions including previous green initiatives and reference to the company "that has invested in environmental efforts" [7:24] and spent

"billions on developing plug in hybrid vehicles" 20:54]. Unsurprisingly, the company volunteers no instances of the events of the emissions scandal being consistent with previous actions. The assertion that this is "not a one-time action but a series of errors" [18:31] is presumed to relate only to the events leading up to the discovery of the emissions scandal, not to previous instances of corporate wrongdoing.

There are some examples of consensus, where the company statements refer to similar instances involving other companies, identifying practices where it is "allowed to recognise the test" [20:46] and "comparable cases involving passenger vehicles" [21:4]. Inversely, the Managing Director at VW Group United Kingdom denies to the UK Transport Select Committee that he is aware of certain practices being prevalent in the industry [8:31] and refutes that the whole industry is dogged by similar problems [20:30]. He seems to be employing a reverse consensus strategy, by suggesting that if a type of malpractice is unknown in the industry, it would be highly unlikely to be occurring at VW in this point.

4.1.3 | Weiner's attribution theory and attribution-responsibility-action model

Weiner's attribution-responsibility-action model proposes outcomes to punish attributed wrongdoing or prevent its recurrence. Both aspects can be seen observed in the documents analysed. Punitive actions exacted on the company fall into two categories: utilitarian and retributive. The utilitarian aspects chiefly relate to consumer safeguards and restorative practices. These include first and foremost software and hardware fixes, paid for by the company, where the "vehicles will be corrected" [3:1] and buy-back end of leases schemes in the United States [23:8]. As a further restorative outcome, the company has also been required to pay towards costs of consumer protection training and enforcement measures [23:17].

Measures agreed in the U.S. settlement include \$2.7 billion to be paid over 3 years into an environmental trust [23:15] and \$2.0 billion over 10 years to develop zero emissions vehicles [23:16] may be seen as both restorative and retributive. Although retributive in their financial scope, these are also restorative measures in the sense that they are designed to make practical compensation for the adverse impact of the emissions deceit upon the environment.

It is anticipated that further retributive measures such as fines, legal costs [18:29], and potential criminal proceedings against individuals may follow but these, at the point of analysis, are unspecified. It is assumed that specific measures designed to prevent recurrence will be identified from the Jones Day report. They are not specified in the U.S. settlement, although the company itself offers a number of early suggestions to improve its practices. As these are voluntary measures, it is more appropriate to discuss them as part of the company's crisis management and image restoration strategy.

Strategies to prevent recurrence are discussed in detail in the following section on reduction of offensiveness in crisis management and image restoration strategies.

4.2 | Crisis management and image restoration

In the context of Coombs' (2006) SCCT, the VW emissions crisis may fall into either the "organisational misdeeds management misconduct"

or the "organisational misdeeds no injuries" categories. Much of Coombs' (2006) theory relates to the way crisis management relies on consistency and distinctiveness, and this is a recurring theme throughout the data corpus. Added to this, there is evidence of a number of specific image restoration strategies identified by Benoit (1997). These are chiefly intended to protect the "reputational assets" (Coombs, 2006) of the company.

The early responses from the company are all targeted chiefly to the public and consumer audience. The most common response targeted on reducing the offensiveness of what had happened (vide Figure 1). The "reduction of offensiveness" strategy was used twice as much as any other.

4.2.1 | Mortification

Most statements overwhelmingly express mortification, in the form of various apologies. Some of these apologies are phrased as if coming from the individual: "I absolutely apologise to all of you and to our customers" [8:45]. Other instances involve the personification of the company, particularly in press releases: "VW deeply regrets the incidents" [21:2].

Another persistent case of mortification is VW's apparent willingness to accept responsibility for the situation. Emphasis is placed on how a representative "volunteered" [7:1] to come before the UK Transport Select Committee, rather than having to be coerced. "Full responsibility" [7:10] is iterated, as is the company's readiness to "accept the consequences" [7:12].

4.2.2 | Reduction of offensiveness

By far the most common response from VW was to reduce perceived offensiveness of their actions by downplaying the damage. This is shown by the chart in Figure 1. VW made repeated references to how the vehicles still "comply with legal specifications" [5:15], emphasising the relatively small effect of their actions [8:10], stressing the fact that the engines "remain safe and legal to drive" [7:16], highlighting the lack of cost to consumers [18:37] and convenient recall strategy [8:54], and stating that there is no effect on business and dealers.

Euphemistic language was employed repeatedly to accentuate the perception that there is no crisis at all. For instance, VW assert how the engine "seems [to have] behaved differently" [8:20], using the artistic language to imply both that the irregularities were unexpected and that they were somewhat due to the idiosyncratic nature of the engine

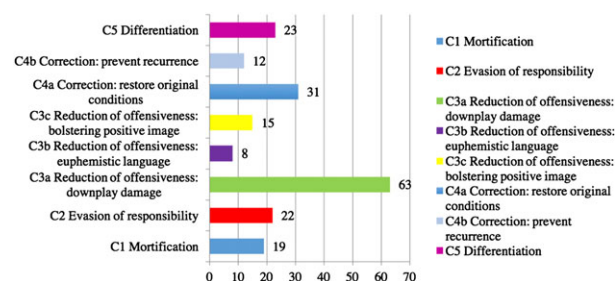


FIGURE 1 Occurrences of crisis management and image restoration strategies in the data corpus. [Colour figure can be viewed at wileyonlinelibrary.com]

rather than human deed. In addition to this, VW denied that the mechanism used to produce the engine irregularities was a defeat device at all [20:59] and that such labelling is incorrect. In many cases, the language is deliberately informal, suggesting that VW's focus is on keeping the public onside. Such language gives off the suggestion that there are no legal consequences associated to the crisis, which is another example of downplaying damage. There are clear instances of responses being worded to avoid the suggestion of legal responsibility. For example, software is said to be "not adequately described" [10:3], rather than hidden or misrepresented. Defeat devices are referred to as "irregularities"; perpetrators are thought to be "a few" "rogue engineers" [8:23]. Such colloquialisms replace accurate terms, with the tone being informal and softened.

Another technique VW employed to reduce the offensiveness was to bolster their positive image, making the problem appear less significant in comparison. VW highlighted their ethical values such as stating that they "stand for good and secure jobs" [5:19] and purporting that their business has not been negatively affected because customers are "returning to buy vehicles" [20:45]. Statements bolstering positive image are likely to be targeted at the shareholders and workforce, promoting a vision of the future beyond the current crisis, chiefly focused on the development of new technology and investment in the workforce. This is done in response to the need to restore business confidence as well as consumer confidence.

4.2.3 | Correction

Correction is a large part of the crisis management response (as well as part of punitive action—see Attribution). It can be divided into actions designed to restore the original conditions (in this case, legal conditions in making the cars compliant) and actions designed to prevent recurrence of the incident.

There is emphasis on the way in which corrective actions will be carried out with respect to customers, which is seen as crucial to the image restoration process. Early responses speak of "remedy" [7:26] and the need to "rebuild" [7:13] and "make things right" [7:20]. Later statements, offered to the regulators, address issues such as compensating the Vehicle Certification Agency [20:75] and Her Majesty's Revenue and Customs for costs and loss of tax revenues [8:60]. There is also discussion of new, lower bonus thresholds for dealers who may struggle to achieve existing sales targets because of the scandal [8:58]. For shareholders and the workforce audiences, corrective measures centre on organisational change, such as company re-alignment and better security processes (e.g. "4-eyes principle" [20:11]). Details are sparse, probably because they will ultimately depend on specific and as yet unknown recommendations from the Jones Day investigation.

There are few statements to the public about preventing recurrence. Responses to the regulators express intention to "learn the right lessons" and make sure it "cannot happen again" [7:18]. Finding out "what went wrong" and avoiding future "misconduct" [11:5] are part of these responses, but the implied acceptance of a degree of wrongdoing is evidently not something VW wish to promote to the public audience.

Finally, statements are used to express differentiation to show that this behaviour is exceptional and not characteristic of VW as a

company. VW state that they "do not tolerate any kind of violation of laws" [2:6] and that the incident has gone "against everything the Group and its people stand for" [5:2].

4.2.4 | Differentiation

Positive adjectives were used to describe the company's character as "ethical" [20:48], "upstanding" [20:31]. The company's historical legacy was mobilised to emphasise the VW brand and values such as "solidity, reliability, credibility" [5:8], "sustainability, responsibility" [5:20]. Their use of language emphasises continuity. For instance, "continue to stand for good and secure jobs" [5:5] is a largely unsubstantiated assertion, although there is reference to "billions" spent on developing hybrid vehicles [20:54]. These statements may have relevance to all audiences, although particularly the public and shareholders.

When looking at the entire data corpus, two of the largest documents—the evidence sessions given to the UK Parliament Transport Select Committee—stand out as containing the highest variety of crisis management and image restoration techniques, but comparatively fewer instances of C3c "bolstering positive image." This is evidenced in the two spikes in Figure 2. However, in the other shorter documents, C3a "bolstering public image" and C3a "downplaying damage" are used almost exclusively.

4.3 | Information orientation

Changes to IO are implied in several of the public information statements VW has issued in response to the crisis. From these, inferences may be made about the nature of IO prior to the emissions scandal. However, as this cannot be confirmed from the data corpus, this study does not attempt to evaluate the levels of IO before or after the emissions crisis. Instead, this study will examine the links evidenced in the company's response between crisis management (and image restoration) and IO, by identifying the perceived issues and the proposed solutions.

Two of the IO capabilities proposed by Marchand et al. (2000)—IMP, and IBV—have been looked at. These have then been broken down, where appropriate, to demonstrate individual competencies.

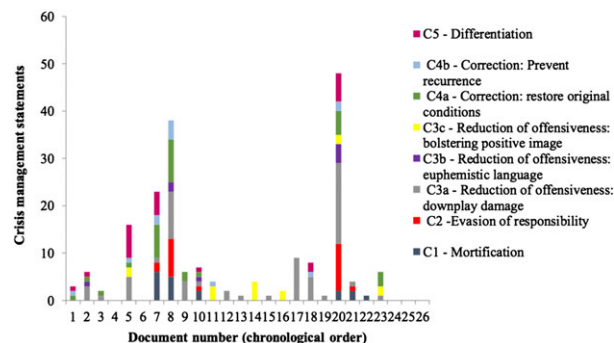


FIGURE 2 Crisis management and image restoration strategies employed in each document. [Colour figure can be viewed at wileyonlinelibrary.com]

4.3.1 | Information management practices

Organisational changes

The company's IMP were under scrutiny, both internally and externally, throughout the crisis. There is a focus on the need to make organisational changes to management structure and brands. One of the core elements of their response is to look at "new structures in the VW Group" [13:6] and to "fundamentally realign VW" with "leaner structures" [11:6]. By implication, the management structures were previously too centralised and should now be "managed in a more decentralized fashion" [18:43] and too complicated, requiring a reduction in "managerial complexity" [18:47].

Evidence from the UK Managing Director highlights structural weaknesses at board level. For instance, the UK Managing Director states that he has no technical remit, sits on no continental, or global executive boards and has limited face to face communication with his German superior:

No [I do not sit on the international, the European board or the world board] [20:79].

I sit on the UK board [...] communicate with [...] the supervisory board in Germany [20:80].

The statements above suggest a degree of isolation without autonomy. VW suggest that the benefits of introducing a more devolved management structure would be to make the company "more agile" [18:45] and make it easier to "prevent breaches of regulations" [18:24]. There are several references to giving "more independence for brands" [13:8, 18:44], although it is noticeable that the proposal is still to allow the board to "focus on [...] cross-brand strategies" [13:9]. The implication is that the board will concentrate on commercial strategies, with operational and technical matters devolved to the brand.

Improvements in processing competencies

As well as organisational changes, there are specific references to proposed improvements in processing competencies. There is a declared need to "investigate [...] processes, reporting and monitoring systems" [18:3], and VW acknowledge that there are "weaknesses in some processes" [18:8]. The processing issues can be broken down further into systems and responsibilities. Systems that are challenged relate specifically to "test and certification processes" [18:11] and quality assurance, of which "there was none before" [20:13].

With regard to responsibilities within processing, it is acknowledged that "responsibilities were not sufficiently clear" [18:19]. These issues are addressed by proposing the "'4-eyes' principle in software development" [20:11], which should help by "streamlining decision-making processes" [18:46] and also a check on quality assurance.

4.3.2 | Information behaviour and values

The central thrust of VW's response in terms of IO relates to the information behaviour and values dimension. The comments made exhibit six of the IO competencies: integrity, formality, control, transparency, sharing, and proactiveness (Marchand et al., 2000).

Integrity

Integrity relates directly to crisis management strategies to reduce offensiveness of the action by bolstering the company's positive image. VW also use it to differentiate the current situation from VW's previous behaviour and attitude. The latter aspect is crucial in evaluating attribution, with VW relying heavily on promoting the distinctiveness of the present case from the company's track record and core values.

There is an assumption that the company's core values are sound and remain unchanged. This is an important part of their defence, as they say that "commitment and social responsibility [...] must be maintained" [13:12]. Nevertheless, it is suggested that there needs to be a "realignment of the Group's culture and management behaviour".

Integrity is also relevant to how mistakes are viewed. Interestingly, some breaches of rules seemed to be tolerated, but mistakes were not. VW argue that there is a need allow for mistakes "as an opportunity to learn" [18:54]—in other words, as part of the creative process.

Formality

Formality is to be increased by having "sharply defined and binding powers and responsibilities" [18:17], and processes "developed more strictly in accordance with the 4-eyes principle" [18:14]. According to VW, "Four eyes means nobody can do anything on their own" [20:22].

Control

An increase in formality is associated with an increased level of control over individuals and procedures. It is suggested that this will be extended further once the findings from the internal investigation are published, when "internal compliance structures" will be put in place "to address those findings" [19:2]. It is also suggested that there is enhanced control from external agencies as "publication of figures [...] must meet regulatory standards" [8:65].

Transparency and sharing

Transparency and sharing are two closely interlinked dimensions. References to a commitment to "transparency and openness" [8:3] and "full transparency" [10:6] are multiple throughout the document data set. There is further evidence of this, such as

Obligation to become transparent, with testing in the real world [20:35].

This introduces the idea of genuine openness, with more company information (particularly test results) put into public domain, and not limited to statutory requirements. This is reiterated throughout the data set, through statements such as "We need transparency and openness" [8:32] or "commitment to full transparency" [10:6].

References to transparency also permeate responses relating to the investigation itself, although the company line is more guarded. For example,

We have been as transparent as we can [20:64].

I find it implausible that if you employed independent lawyers you would edit the report [20:38].

The statements above imply a defensive tone when talking about the investigation report and the possibility that the contents might be

edited before general publication. There are also issues relating to the sharing of information from the investigation report that may be seen to undermine the declared resolution to “inform the public” [4:7], because “disclosure ... would prejudice the rest of the investigation” [22:2].

There is more confidence in proposing measures to improve information sharing within the company, including “open discussions, closer co-operation” [18:53] and “co-operation between Board ... and the Works Council” [16:5]. This “new, open culture of co-operation” [11:7] is envisaged as extending to all stakeholders and particularly the shareholders. There are multiple references about openness and transparency with regard to shareholders, who are obviously a critical target for crisis management and damage limitation strategies. Thus, there is a reaffirmation that “VW will report to the shareholders” [4:6], and act “seeking shared decisions in the interest of the company, shareholders and employees” [16:6].

Crucially, VW intends to share more with outside regulators, with external verification of emissions tests [18:26].

Proactiveness

There is evidence in the data set of the company's proactiveness capability within information orientation. VW is determined to “drawn up an action plan” [5:10], but the proactive response goes further than addressing the immediate aftermath of the crisis. There is a focus on looking “beyond the current situation and create the conditions for VW's [...] further development” [13:1], which is focused in the “TOGETHER-Strategy2025” [23:6]. The thinking behind this is both strategic with “new alignment” that “affects thinking and [...] strategic goals” [18:42] and economic, there having been an avowed need to “make decisions that factor in economics just as much as employment” [16:1].

In addition to this, there is the implication that this “Clear mission” [18:58] will have a positive effect on the company's ability to recover after the crisis and become “better and stronger” [18:59]. Hints of change management strategies to be employed are also presented, with “renewal of personnel” [18:49] at the top, “co-operation between Board of Management and Works Council” [16:5] and, again, in the launch of “Strategy2015” [23:6].

4.4 | Summary

From the data corpus, there is a clear focus on reducing the offensiveness of the action by downplaying the negative effects and statements relating to this strategy significantly outnumber those on other strategies.

The second most prevalent strategy referred to in the data is that on correction by restoring original condition. Taken with statements to downplay the damage, there seems to be a consensus that the company's primary focus was to present a situation where everything is, or will soon be, fine and satisfactory. Over time, there also appears to be a slight movement in crisis management emphasis from mortification in the early stages to prevention of recurrence later on.

Overall, a multi-faceted response is maintained throughout, although there is some differentiation by audience. Statements directed to the public or consumer audience are heavily focused on

mortification, downplaying the damage and correction to restore original conditions. Statements directed to the regulators and shareholders are more concerned with evasion of responsibility, bolstering the positive image of the company, and correction to prevent recurrence. Statements aimed at differentiating the mistakes of the emissions crisis from VW's previous behaviours are focused strongly on the regulators and employees.

5 | DISCUSSION

5.1 | Attribution

Heider's theory (1958) describing internal and external attribution was useful in clarifying statements relating to both corporate and individual responsibility. In the context of VW, it was interesting to discover that, whilst the corporate culture could be seen as an external attribution from the point of view of an individual employee, external attributions could be made if the corporate body itself was under pressure from outside agencies such as the tighter emissions controls in the United States and scope for variation within the results submitted under different testing regimes.

Attributions regarding the origins of the software deceit are for the most part internal: They are either attributions to individual employees or attributions of disposition with respect to the company itself. One of the main thrusts of the crisis management strategy is to acknowledge responsibility and reflect this positively in contrition and mortification in the public sphere.

The treatment of attribution by VW is clearly very carefully worded. Although the company acknowledges an element of overall responsibility, the statements are guarded with regard to attributions about specific areas where they could be found liable. The attributions that they do make (or wish the public to make) inform their use of crisis management and image restoration strategies.

It is not the purpose of this study to evaluate the legal response to VW's emissions deceit. It would appear, from many of the statements relating to attribution, that the company is being careful to avoid comments that could trigger any further legal liability. There is a careful distance between reference to the Jones Day internal investigation, whose “findings [...] must hold up in court” [18:30] and “We [...] take full responsibility for our actions” [7:10].

Through applying Kelley's (1967) co-variation model as an interpretive lens, a number of instances of distinctiveness being used to reduce the attribution of disposition with respect to the company have been identified. VW makes similar points of differentiation as part of its crisis management and image restoration strategy, to mitigate the negative effects of the scandal on its corporate image. It is not in doubt that the events of the emissions scandal will be attributed to the company to some extent and that there will be both punitive and utilitarian judicial consequences. The settlement agreement of the U.S. Federal Regulators, Private Plaintiffs, and 44 U.S. states [26] requires VW to make large financial contributions to environmental protective and research initiatives. This is both punitive and utilitarian, following Weiner's model (1995), being simultaneously a retributive and a restorative measure. As the latter, it provides an element of correction, which the

company is able to include as part of its crisis management strategy, and a route towards eventual image restoration.

5.2 | Crisis management and image restoration

VW's public acceptance of responsibility and repeated apologies for the software deceit gives it an opportunity to demonstrate some of the positive corporate values that it publicly claims to espouse. The manner in which the crisis is managed therefore becomes an opportunity in itself to promote a better company image. This is developed further in the many assertions about the company's history as "an upstanding company" [20:31] "that has invested in environmental efforts..." [7:24]. These statements serve to minimise the effects of the crisis by differentiating it from previous actions.

The core of the company's crisis management strategy rests in reducing the offensiveness of the actions that took place. This is consistently addressed by downplaying the damage caused and statements relating to this strategy significantly outnumber those on all other strategies. This is further enhanced by the use of euphemistic language to describe the details of the offence. The use of examples to bolster the positive image of the company, with a strong forward-looking focus on jobs and investments, gives context to the offence and serves to reduce its overall significance.

The second most prevalent crisis management and image restoration strategy referred to in the data is that of correction by restoring original condition. Taken with statements to downplay the damage, there seems to be a consensus that the company's primary focus was to present a situation where everything is, or soon will be, "alright". Although technical fixes on the affected vehicles are the most immediate priority, a large part of the emphasis on correction relates to restoring consumer (and investor) trust, and the latter is arguably the company's highest priority over time.

There is a declared intention to prevent recurrence, to "learn the right lessons and avoid such misconduct in future" [11:5]. The resolution to achieve this is clearly part of the company's rehabilitation strategy as far as consumers and investors are concerned. Much of the detail as to how this is to be achieved relates to information orientation.

In analysing the data corpus, a slight movement in the emphasis of crisis management strategies is observed: from mortification in the early stages to prevention of recurrence later on. Figure 2 introduced in the previous section reveals a preference for downplaying damage and a slight tendency to bolster positive image in the press releases and announcements to shareholders. These are the shortest documents. This might suggest that VW favoured these strategies where verbosity was not suitable and also that they perceive them as the most generally effective strategies. Upon further examination of Figure 2, it can be observed that the "bolstering positive image" strategy was not employed at all in document 8 and not employed much in document 20. These were the two Transport Select Committee evidence sessions that give room to the question of why was this strategy not employed here. One possible reason may be because VW were catering for a different kind of audience in these documents—a panel of regulators instead of the general public (containing potential customers) or shareholders (already invested in the company), who do not have a necessary interest in VW being successful.

Overall, a multi-faceted response is maintained throughout, although as discussed above, there is some differentiation by audience. Statements directed to the public/consumer audience are heavily focused on mortification, downplaying the damage, and correction to restore original conditions. Statements directed to the regulators and shareholders are more concerned with evasion of responsibility and correction to prevent recurrence. Statements aimed at differentiating the mistakes of the emissions crisis from VW's previous behaviours are focused strongly on the regulators and employees.

5.3 | Information orientation

Statements made by VW representatives to the UK Transport Committee, and also to shareholders, are particularly revealing about aspects of information orientation in the company. Whilst it is not possible, within the scope of this study, to quantify levels of information orientation in the company either before the beginning of the crisis or afterwards, there is much valuable insight to be gained about perceived issues relating to information orientation and the status this will be given in the future, as a result of the emissions crisis. The company acknowledges a number of weaknesses in information orientation that, on the face of it, contradict the robust statements made in other parts of the dataset about VW values and relationship history with regard to consumers and the environment. Many of the attributions made about the company's responsibility, either corporately or individually, for the emissions deceit can be linked directly to statements about changes that it has identified as needed within information orientation.

It can be seen that "Deficiencies in some areas of VW's IT infrastructure" [18:21] links to multiple references to changes in company organisation through restructuring, decentralisation, and realignment. Similarly, the lack of information sharing ("I find it implausible that senior people in the company would have known" [8:62]) leads to "Changes are necessary in how VW communicates" [13:12]. The statement that it was "clear that some of the work processes needed to be improved" [20:44] is an acknowledgement of internal corporate responsibility and leads directly to remarks about "streamlining decision-making processes" [18:46] and the introduction of the "four-eye" principle in software development" [20:11].

Given the nature of the documents in the data set, it is understandable that there is not a great deal of technical detail about changes to the organisational and processing competencies within information orientation. It is, however, possible to detect a clear emphasis overall on changes to the information behaviour and values capability, particularly in the capabilities of transparency and sharing. This appears to corroborate the company's implied defence that the emissions deceit was perpetrated by a small number of individuals within one department and without the knowledge of senior management.

5.4 | Summary

The process of corporate rehabilitation after a crisis is initiated in the public sphere by press releases and reflected in every statement publicly made, including statements to stakeholders and evidence provided to regulatory bodies. The company's public attributions

regarding causation of the crisis must necessarily be consistent with the strategies it uses to manage the critical situation and to restore corporate image. In the case of VW, issues relating to different aspects of information orientation are presented as part of attribution (causation) and also part of crisis management and image restoration (consequence). Without specific detail of IMP or information behaviour and values in the company prior to the crisis, or subsequently, it is not possible to quantify levels, or changes, in information orientation. Nevertheless, it is apparent that the company has identified in information orientation both the roots of and the remedy to its problem. The acknowledgement of the problem and the declared intention to address those issues is a common thread in the company's public statements. It cannot at this stage be determined whether the views internally within the company align accordingly.

6 | CONCLUSION

The study reported in this paper makes an integrated use of attribution, crisis management, image restoration, and information orientation theories to better understand and explain how VW responded publicly to the discovery of diesel emissions software cheat technology in VW cars as an episode of organisational crisis communication.

Through conducting a hermeneutic analysis of public information statements, it was possible to identify attributions made, or implied, by VW and gain insight into the company's attitude towards its own responsibilities and liabilities. This in turn was reflected in a number of the strategies employed to manage the crisis and restore corporate image.

The coding of public information statements was informed by the integrated use of attribution, crisis management, and information orientation theories as interpretive lens. This facilitated the identification of specific strategies employed by the company and the priorities arising from those strategies.

As well as the inter-relation between attributions and crisis management strategies, it was clear from the study of these aspects that both were linked to information orientation, as a pre-existing condition before the crisis and as a potential means of remedy in the aftermath. A number of attributions were made concerning information orientation that implied pre-existing problems in this domain that enabled the emissions deceit to be perpetrated and contributed to the crisis overall. Many of the company statements explicitly refer to its resolution to make changes to and improve information orientation, and it was clearly important to demonstrate this intention to the public in order to minimise negative outcomes by making corrections and also to bolster consumer and investor confidence for the future. Although the analysis of crisis management and image restoration strategies forms the centrepiece of this study, information orientation provides a bridge into the company's future actions, by establishing a link from causal attributions to restorative and preventative reparations.

It is not possible at this stage to gauge how successful VW had been at handling the crisis. This would only be possible with the hindsight of future years' financial performance and feedback on company image. The paper looks at how VW wanted to be seen to deal with the crisis, rather than examining any internal actions. To some extent, the

latter could be triangulated to the Jones Day investigation; however, VW is currently withholding it from public release.

Nevertheless, and although each crisis is different thus requiring non-programmed responses, there are key managerial implications that stem from this research. Crises offer an opportunity for organisational learning (Carmeli & Schaubroeck, 2008), which should engage managers in a comprehensive assessment of both the immediate fixes and the far-reaching remedies that may take the shape of organisational policy. More specifically, VW's choice of strategies/priorities for managing the crisis through damage limitation reflect a rather reactive, defensive approach in information flow (e.g., denying knowledge and/or responsibility and downplaying impact), when in periods of crisis, completeness and an assurance that the organisation understands the full attributes of the crisis and is coping with it (fully addressing the concerns of stakeholders, regulators, and customers) are generally associated with effective crisis management (Reilly, 1993).

To conclude, the analysis performed demonstrates the suitability of the proposed integration of attribution, crisis management, image restoration, and information orientation theories to better understand and explain how large corporations respond publicly to organisational crisis episodes. This approach extends the scope and reach of existing research into corporate attitudes and information behaviour leading to critical incidents such as the Fukushima nuclear disaster (Thatcher et al., 2015) and the Deepwater oil spill (Wolf and Mejri, 2013), where it would be useful to investigate the dimension of information orientation before and after crisis.

It is acknowledged that the present study is limited in its exclusive use of data produced by VW sources. These sources have the advantage of revealing the priorities VW would like its audience to believe they have. However, there is a possibility that these explicit or implicit priorities are red herrings, because there is no guarantee that the statements VW released for public information are reflective of the organisation's actual behaviours or ambitions. Future research endeavours should therefore concentrate on triangulation and on the enrichment of the current data corpus with material extracted from independent reports and interviews with organisational insiders, consumers, and shareholders.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

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