The Big Pharma & The Elephant Man
A Qualitative study on the TeGenero
Crisis Communication

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"perceptions are more important than reality"

- (Benoit, 1997)
Summary

The pharmaceutical industry is prone to crises, yet the communication strategy of these said crises has not been sufficiently explored. The perception of pharmaceutical crises is strongly dependent on how the cases are portrayed both by the pharmaceutical companies and the medical journals. Thus, the communication process of the crisis and the framing of the cases are of great importance. The main purpose of the thesis is to investigate how a pharmaceutical company facing a crisis communicates with the public, and secondly how medical journals frame a crisis. A specific case attracted a considerable amount of criticism by the pharmaceutical industry and the medical journals. TGN1412 was a developing drug by TeGenero that never managed to pass the clinical trials. Moreover, the drug's effect on several participants has been characterized even as ‘nearly fatal’. Situational Crisis Communication Theory and Image Restoration Theory equip the thesis with an adequate theoretical framework to examine the crisis communication of TeGenero through the company’s press releases. Additionally, a Framing analysis is applied on a number of medical journal articles in order to fully understand the narrative of the medical community regarding the case. The thesis objective is to explore the TeGenero case and subsequently the crisis communication in the pharmaceutical industry. As a result of the study, TeGenero’s main crisis communication strategy was towards Corrective Action, supported by Bolstering and Defeasibility. From the medical journals framing analysis it is demonstrated that a great amount of journals focused on the causes of the crisis event but also the moral standards regarding the TeGenero case. The results of this study suggest that crisis framing and perception should be considered as a more important element for crisis communication in the pharmaceutical industry.

Keywords: Crisis Communication, Framing, Pharmaceutical Industry, TGN1412, Medical Journals
Abstract

Titel: The Big Pharma and The Elephant Man - a qualitative study on the TeGenero crisis communication

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Material/Metod: En kvalitativ innehållsanalys har gjorts på pressmeddelanden publicerade av TeGenero, men även på artiklar publicerade i medicinska tidsskrifter.

Huvudsakliga resultat: Undersökningen visar att TeGenero effektivt använder sig att strategin Corrective Action, medan de medicinska tidsskrifterna ofta beskriver att krisen uppstod p.g.a. bristande kunskap från företagets sida. Undersökningen visar att tidsskrifterna fokuserade på andra faktorer än de TeGenero kommunicerade, vilket innebär att framing i media är en viktig faktor beträffande effekter av kriskommunikation.
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1. Introduction

Product crises often compel an organization to address the matter publicly and communicate with the audience. The communication with the public serves the organization with a chance to ensure the prosperity of the product but more importantly the welfare of the organization itself. Thus, communication between the organization and the audience becomes an important tool when a crisis occurs. The goal of an organization is not only to resolve the issue that caused the crisis but also to manage the relation between the company and the public during and after the crisis. The communication strategies used by organizations when facing a crisis under the public eye is the main focus of the thesis.

Every successful communication relies upon the relationship between the sender (organization) and the receiver (audience) (Benoit, 1997; Coombs, 2014; McQuail, 2010). Crisis communication is not an exception to that rule. The communication management of a crisis is as important as the perception the audience has regarding the crisis (Benoit, 1997; Coombs, 2014). Hence the perception of the crisis event by several audiences and stakeholders is also an important aspect of crisis communication (Benoit, 1997; Coombs, 2014). The audience's understanding regarding the crisis can determine the development of the company and the product.

The pharmaceutical industry develops products that mostly affect the health of the human body. The scientific idiosyncrasy of each drug operates as an obstacle for the audience -that is not familiar with the industry- and does not allow the latter to fully understand and subsequently create a holistic opinion. Thus, the medical journals provide an explanatory and informational platform that assists different audiences to overcome this barrier and permit a better understanding of both the complexity and the science behind each pharmaceutical product. Due to this important role of medical journals, this paper not only aims to analyze the crisis communication of a pharmaceutical company but also to explore on how medical journals frame
a pharmaceutical crisis. The framing of the crisis is what the medical journals deliver to the audience and influence the latter to form an opinion regarding each crisis. There has been limited research on the crisis communication aspect of the pharmaceutical industry, forming a knowledge gap that we aim to explore.

The main objective of this thesis is to investigate TeGenero’s crisis communication regarding their drug, named TGN1412. Our secondary purpose is to analyze the framing process of the medical journals when the crisis occurs and subsequently explore even further crisis communication as an aspect in the pharmaceutical industry. In order to do that, we chose a case that occurred in 2006, when a drug called TGN1412 was tested and failed to enter the market, resulting several adverse effects both on the patients and the industry. The main research question we intend to answer, is: How does TeGenero manage its communication during the crisis? The second question that this thesis intends to answer is what is the framing narrative of the western pharmaceutical and medical journals on the TeGenero crisis?

Although the German company TeGenero, which developed the drug was unsuccessful and subsequently resolved, the infamous TGN1412 surfaced again by the Russian pharmaceutical company TheraMAB as TAB08 (Ben Hirschler et al., n.d.; TheraMAB, 2014, 2011). The reappearance of the drug in the pharmaceutical industry is what triggered our interest to focus on the crisis communication and the framing surrounding the original form of the drug, TGN1412.

The paper consists of eight different parts. In the next two chapters, the background will be explored, starting with the literary background, where earlier research is presented, followed by a more detailed introduction to the TeGenero case. In the fourth chapter the theories chosen, i.e. Situational Crisis Communication Theory, Image Restoration Theory and Framing Theory will further be explored. In the Method chapter, the conduct of the study is explored, but also the Material chosen are presented. Following this, the Results of the study will be presented, followed by the Analysis, were the theories are used to further understand the results. Finally a
conclusion will be presented, were the research question will be answered. Both authors of this thesis have contributed equally to the study.

2. Earlier research

The amount of literature regarding crisis communication is fairly substantial. Before the Coombs model, which is now one of the main models used within the field, three other models, by Fink (1986), Smith (1990) and Mitroff (1994) were introduced. Fink devises a four-stage model while Mitroff (1994) devises a five-stage model. Smith’s model from 1990 has three stages. Fink (1986) identifies the stages as the prodromal stage, the acute stage, the chronic stage and the resolution stage. The first one refers to the time before the crisis, the acute stage to the event that triggered the crisis, the chronic stage the lasting effects of the crisis, and the resolution stage to the end of the events, and the recovery. Mitroff however, defines the stages as the signal detection, the probing and prevention stage, the damage containment, the recovery and the learning (1994). The two first both refers to the time before the crisis, with the first one being similar to Finks prodromal stage. The second one however, discusses the idea of the members of the organization trying to prevent the crisis before it occurs (Mitroff, 1994). The central stages of Mitroff’s model (1994) are quite similar to Fink’s model (1986).

The damage containment and the recovery match with the acute and chronic stages. However, while Fink (1986) argues that a recovery involves that the crisis is no longer a concern for the organization, Mitroff (1994) argues that a crisis involves a new philosophy within the organization. He called this stage the learning stage. Smith (1990) calls his three stages the crisis of management, the operational crisis and the crisis of legitimation. The first one refers to the moment when the crisis starts to increase within the organization but its members do not recognize it. The second stage is when the crisis begins to damage the reputation of the organization. This stage is quite similar to the models of Fink and Mitroff but defined with
different terms and divisions. Finally, the crisis of legitimation is also similar to the resolution stage of Fink; but Smith includes an additional learning component similar to the learning stage by Mitroff.

Similarly to crisis communication, the idea of framing theory is also widespread and there is a lot of work published about the topic. The idea of framing was introduced by Gregory Bateson in 1972. In his book *Steps to an Ecology of mind* Bateson discusses the idea of metalogues, which is defined as “a conversation about some problematic subject. This conversation should be such that not only do the participants discuss the problem but the structure of the conversation as a whole is also relevant to the same subject.” (Bateson, 1972). In his book these metalogues consist of conversations with his daughter. In his book Bateson further explore the idea of patterns, and how they can be understood, as the context of the discussion have importance for the understanding of it. (Bateson, 1972).

Following Bateson’s ideas of framing theory many other ideas have been published within many different fields within social sciences, varying slightly depending on the field. One article that is considered as important regarding framing was published by the sociologist Erving Goffman in 1974; *Frame Analysis – An Essay on the Organization of experience*. Here Goffman explains how so called *frameworks* are constructed, and explores the idea of perception.

Another article which appears relevant for our research is *Ideology, frame resonance, and participant mobilization* published by Snow and Benford in 1988, which explores the effects frames can have. Snow and Benford discusses something called frame alignment, i.e. how frames can be linked to one other, and how frames can be used by movement to affect different factors (Snow and Benford, 1988).

As framing theory, just like crisis communication is such a broad theory with many different aspects, any further theories will not be discussed in this paper, and some important ones within the field are simply mentioned to create a better understanding of the topic and its history.
Whereas there is plenty of research regarding crisis communication, there is a lack of research on the crisis communication within the pharmaceutical industry. There are of course cases of a crisis that has been written about, but the crisis communication aspect is lacking in a lot of cases. Two very notable cases are the Johnson and Johnson Tylenol incident, where people in the Chicago area were poisoned with the drug Tylenol, and the Merck Vioxx crisis, where the drug was withdrawn from the market for being unsafe. Both of these cases are discussed by Priporas and Vangelinos in their 2008 paper *Crisis management in pharmaceuticals: evidence from Greece*, one of the few papers published discussing the crisis communication aspect. The article explores the crisis management in pharmaceuticals companies in Greece. 16 companies has been researched, and interviews conducted, in order to research the reason for crisis, and if a crisis had in fact occurred during the past ten years and also what types of crisis occurred (Priporas, Vangelinos, 2008). Their research showed that most companies had faced a crisis in the past ten years, but that only 75% of the companies had an actual crisis management department (Priporas, Vangelinos, 2008).
3. Background

The TeGenero Case

In 2006 the German pharmaceutical company TeGenero produced its first drug (Goodyear, 2006). In order for a newly developed drug to reach the market, it has to go through a series of clinical phases testing the drug's safety.

Phase I trials are the first step of testing the drug and are conducted on a limited number of healthy volunteers. The purpose of Phase I trials is to determine possible side effects and calculate the appropriate dose of the drug. If successful, the drug is tested on a larger group of people who suffer from the condition the drug is targeting; this is called Phase II (N. H. S. Choices, 2015). Unlike the previous stages, Phase III trials often last a year or more and involve several thousand patients. If passing Phase III, the drug is eligible for a marketing license and subsequently patient prescription (N. H. S. Choices, 2015).

TeGenero's drug was targeting patients suffering from a certain type of leukemia and rheumatoid arthritis. The initial name of the drug was TGN1412 (Attarwala, 2010) and the trademark for its planned commercial use was superMAB (Rosenthal, 2006). Despite the company's intentions the drug never made it past Phase I of human clinical trials.

TeGenero, originally based in Wurzburg, Germany, initiated Phase I human clinical trials for TGN1412 on March 13th, 2006. The clinical trials took place in a research unit within Northwick Park Hospital in London, England. Although the drug was produced by TeGenero the clinical trials were conducted and supervised by Parexel, a US clinical pharmacology research company.
Eight healthy volunteers were chosen by Parexel to participate to the clinical drug trials. During the trial six of them were prescribed with the actual drug while two of them received a placebo (a medicine with no physiological effects) (Duff, 2006). A short time after the injection of the drug to all the volunteers, powerful side effects began to surface. The two men who took the placebo, naturally experienced no side effects, while the other six suffered nearly fatal effects and were immediately transferred to intensive care (Boseley, 2006; Duff, 2006; Rosenthal, 2006).

One of the severely affected volunteers was described as extremely swollen on the neck and the head (Marshall, 2006; Weaver, 2006). These temporary symptoms led to the famous description of the case as "The Elephant Man Case" (Boseley, 2006; Marshall, 2006) because of the patient physical similarities to Joseph Merrick, an Englishman in 1800’s with severe deformities (Tibbles and Cohen, 1986). The excessive neck and head swelling that the patient experienced shortly after the drug injection led the doctors to put him under an induced coma for eight days (Marshall, 2006; Weaver, 2006). Symptoms such as breathing difficulties, heart, liver and kidney failure along with excessive headaches were some of the symptoms described by the six men and their doctors (Duff, 2006). Finally, one of the patients suffered from pneumonia and frostbite-like symptoms that subsequently led to partial amputation of his toes and fingers (Hattenstone, 2007; Mendick, 2012). Since the trial was taking place within the Northwick Park Hospital, the medical response towards the patients was immediate (Boseley, 2006). Although the effects of TGN1412 on the patients were life threatening, none of the responses were fatal and the trial ended with no casualties.

The clinical trial results shocked the pharmaceutical industry and the failure of the drug became one of the greatest scandals in human clinical trials in the pharmaceutical industry (Boseley, 2006; Rosenthal, 2006; Wadman, 2006). The aftermath of the TeGenero crisis led the company to eventually declare bankruptcy and shut down (Goodyear, 2006).
4. Theoretical Framework

4.1 Situational Crisis Communication Theory

Situational Crisis Communication Theory is a theoretical framework introduced by W. Timothy Coombs that facilitates the exploration of response strategies during a crisis. SCCT is a contributing theory to crisis management. The theory provides response recommendations by analyzing and evaluating a number of possible responses and postures by an organization during a crisis event (Coombs, 2014). SCCT analyzes the strategies available to an organization's management.

SCCT primarily consists of crisis response strategies and evaluation of reputational threats (Coombs, 2014). Following the collection of information and data related to the press releases by TeGenero, the Crisis Response Strategies are the means to determine the communicational posture of the company. While evaluating reputational threats provide the mechanism to assess and subsequently analyze the reputational damage of TeGenero in the post-crisis communication phase (Coombs, 2007a).

4.1.1 Crisis Response Strategies

Crisis response strategies refer to the actual response the company has during and after the crisis; these responses could either be verbal or nonverbal (Coombs, 2014). Crises are highly connected to the reputation of the organization, thus the necessity of a crisis management is vital for the overall prosperity of the organization (Coombs, 2014; Garcia, 2006). In order for the organization to get through the crisis intact it is crucial to act in accordance to the guidelines of Initial Crisis Response (Coombs, 2007b).
4.1.1.1 Initial Crisis Response

The initial response of the organization, after the crisis occurs, may provide more powerful and positive results than any other repair strategy later on (Huang, 2008). The initial response must be quick, consistent and most importantly accurate (Coombs, 2007b; Huang, 2008). The importance of an efficient response when a crisis occurs lies partly in timing (Garcia, 2006). A response to the crisis within the first hour of the incident is a unique opportunity for the organization to present its side of the story and establish itself as the source of information; before the risk of rumors becomes part of reality (Blake, 1988; Coombs, 2007b). Consistency and accuracy are another two important factors for a sufficient primary response. A quick response may be useless if the information provided by the organization does not portray the reality of the events occurred or if stakeholders and spokespersons have different impressions of the same events (Coombs, 2007b). Being consistent is a rather complex effort. It requires by the organization to send a message that prioritizes the victims, is conscious about the public safety and keeps updated all the personnel (Coombs, 2007b).

4.1.2 Reputation Repair & Image Restoration Strategies

In accordance to Coombs and his theory on Situational Crisis Communication, a rather significant part of Crisis Response Strategies resides in Reputation Repair Strategies (Coombs, 2014, 2007b). A fairly notable influence on Coombs forming his reputation repair guideline is Benoit's Image Repair Theory (also recognized as Image Restoration Theory) (Benoit, 1997). Benoit's Image Restoration Theory precedes Coombs SCCT and argues that the nature, perception and responsibility of the crisis along with the various audiences play a critical role on creating the impression of a company during the crisis (Benoit, 1997). By identifying the organization's impression the theory provides a categorized list of strategies that an organization may use in accordance to the situation at hand (Benoit, 1997; Coombs, 2014).
The first category of strategies describes denial as a course of action including shifting blame and simple denial as possible attributes. When the organization shifts the blame of the crisis, it argues that another organization is responsible for the crisis, while using simple denial as a strategy indicates that any possible connection between the responsibility of the crisis and the crisis itself is false (Benoit, 1997).

The second category is Evasion of Responsibility. It includes the posture of provocation, defeasibility, accident and good intentions. If the organization tries to evade responsibility these four different attitudes conceptualize all the possible actions related to that aim. Provocation as a strategy is when the firm or organization responds to an act of an outside party. Defeasibility represents the justification of the organization based on lack of information or inability of retrieving the information about what caused the crisis. The Accidental posture, although it is not considered a clear evasion, it is based on stating that the crisis occurred by accident and the organization should not be held responsible. The fourth and final response regarding Evasion of Responsibility, portrays the good intentions of the organization and that, despite the crisis that occurred, the organization meant well.

The third general image repair strategy involves the attempt of the organization to reduce the offensiveness of the act that caused the crisis. Reducing the offensiveness of the harmful act can also be interpreted by other researchers as justification (Benoit and Drew, 1997; Coombs, 2014). The general notion of reducing offensiveness consists of six different mechanisms: bolstering, minimization, differentiation, transcendence, attacking the accuser, compensation and finally initiating a corrective action. Bolstering describes the effort of the organization to lessen the negativity surrounding the wrongful action by emphasizing the beneficial role and perspective of the organization as part of the society. Another similar possibility is to attempt and minimize the negativity surrounding the crisis by reducing the severity of the action in the eyes of the audience. Differentiation provides the opportunity to the accused to portray a wider field of
similar but more offensive actions. Hence through comparison the accused appears less offensive. Transcendence provides the opportunity to place the act in a less negative context and put the organization in a more favorable posture in front of the audience. Attacking the accuser diminishes the credibility of the accuser and lessens the impact of the crisis. Finally compensation suggests providing money, goods or services as an attempt to 're-balance' the situation and reduce the negativity of the act. Corrective action as a category stands solely on the act of repairing any existing damages caused by the wrongful act and apply the necessary measures to ensure the prevention of any similar outcome. Finally, Mortification, places the accused admitting the wrongful act and pleading for forgiveness or expressing regret in a form also known as 'apologia' (Benoit and Drew, 1997; Coombs and Holladay, 2008).

4.1.3 Evaluation of the Reputational Threats

Coombs raises the issue of matching Crisis Response Strategies to certain types of crisis in order to maintain or reach the best possible reputational outcome (Claeys et al., 2010; Coombs, 2014). It is also argued that crisis managers strongly connect their reputation repair strategies (as mentioned earlier) to the reputational threat the crisis poses towards each organization (Coombs, 2007b; Coombs and Holladay, 1996). Additionally it is proven that different types of crisis impose different reputational results (Claeys et al., 2010; Coombs, 2014). The need to introduce response strategies during a crisis surfaces not only the necessity of classifying different crisis types (Claeys et al., 2010; Coombs, 2014, 2006) but also the demand of an evaluating system for reputational threats for each category (Coombs, 2007b; Coombs and Holladay, 1996, p. 199).

Evaluation of the Reputational Threats must follow Crisis Response Strategies as the second and final stage of Situational Crisis Communication Theory. The importance of assessing the nature of the reputational threat assists on deciding if the selected crisis response strategies are appropriate (Coombs, 2014). This evaluation consists of three factors: Crisis Type, Crisis History
and Prior Reputation (Coombs, 2014, p. 150, 2006, p. 5). All of these attributes will be adopted in order to successfully portray a clear representation of the TeGenero crisis reputational evaluation and its accordance with the crisis response strategies. The reputational damage that threatens the organization after the crisis is greatly dependent on the crisis responsibility of the organization (Coombs, 2014, 2006). Thus in order to decide the type of crisis, firstly it is important to identify the amount of responsibility each type represents.

The first cluster is the Victim Cluster. If the organization experiences the crisis because of natural disasters, rumors or violence within the workplace, then it has a very little amount of responsibility regarding the crisis. If the crisis occurred due to technical errors, technical accidents or challenges then the type of crisis belongs to the Accidental Cluster. The low level of responsibility by the organization is the main characteristic of this category. Lastly, if the organization has a strong responsibility for the crisis, it is certain that we address the matter as a Preventable Cluster. The high responsibility of the organization is decided upon the following attributes as causes of the crisis: human - error accidents, human - error product harm or organizational misdeeds. Identifying the cluster that the organization belongs to, results in the identification of the type of crisis the organization faces.

The second step after assessing the Crisis type, is to detect any preceding cases that resulted the organization undergoing another crisis in the past. The reason for examining the crisis history serves to realize the holistic threat the organization's reputation faces. If the organization has faced other crises in the past, its reputation threat increases dramatically.

The third and final step is considering the reputational history of the organization. Similarly, if the prior reputation of the organization is negative, then both the audience and the stakeholders will probably re-evaluate their opinion.
4.2 Framing Theory

Entman (1993) defines a frame as the selection of "some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described." Further, Entman (1993) describes how a frame often defines the problem, diagnoses the cause, makes a moral judgment and finally suggests remedies. However, not all four factors need to be present in a certain frame. It is also possible that some parts of a text will not contain any of the four factors (Entman, 1993).

Similarly, Entman (1993) also explains that a frame has four, or more, different locations, being the communicator, the text, the receiver and the culture. The communicator makes the decisions, which may be both conscious and unconscious, on what message to deliver. The frames found in the text are created by certain words and information the text may or may not contain. The way the receiver perceives the text is also affected by frames, but these frames may not necessarily be the same as the ones found in the text, or the ones the communicator tried to create. Lastly, the culture, is the idea of generally used frames, that are common within a certain context, i.e. culture. Furthermore, when defining what part of a text is actually a frame, Entman (1993) suggests that; “the presence or absence of certain keywords, stock phrases, stereotyped images, sources of information and sentences that provide thematically reinforcing clusters of facts or judgments." is what defines text in the media as a frame. However, several different framing devices do exist, five of them being defined as metaphors, examples, catchphrases, depictions and visuals (Gamson, Modigliani, 1989). As several different framing advices can be found, the importance is that the frame does not only contain the actual core message (De Vreese, 2005)

Further connecting the ideas of framing to the media, De Vreese (2005) explains how ”one influential way that the media may shape public opinion is by framing events and issues in particular ways”, by presenting an issue. De Vreese explains how framing is a process, involving
both frame building and frame setting. Frame building is the idea of how a journalist frames an issue, i.e. which issues they bring forth. This can depend on both internal and external factors (De Vreese, 2005). Frame setting, however, is the relation between the media and the individual, as the frames portrayed in media, will affect the individual's understanding of a topic, hence, set the frame in the context. Lastly De Vreese (2005) suggests that the consequences of framing need to be considered, as a person’s attitude towards a specific topic may be affected depending on how the issue was framed in media.

5. Material & Methods

5.1 Material

The material used in this study is the seven available press releases published by TeGenero, from March 15th 2006 until May 27th the same year. These press releases are analyzed using Situational Crisis Communication Theory (SCCT) and Image Repair Theory (IRT). Furthermore, thirty articles published in medical journals after the crisis have been analyzed using framing analysis.

One of the important aspects in the implementation of the work is the selection of the samples for the analysis. As there is a vast amount of articles published about the case, both in the scientific and popular press, we had to narrow our research, in order to get a suitable amount of data. Regarding the amount of articles analyzed, the larger the sample the better and deeper the understanding of the issue. However, with limited time it was not possible to analyze all the articles found in our search. Therefore, it is of great importance that the selection of the articles is fair and efficient, in order to get a holistic understanding of the case. In order to make an efficient selection we have decided on some criteria that the articles selected for analysis need to meet, in order to get a consistent sample.
In order to efficiently refine our sample, we have decided to include articles in pharmaceutical journals specifically linked to the case, i.e. they discuss TeGenero and the drug TGN1412. This means that articles discussing strictly the medical specifics are not considered in the selection, as our point of interest is the communicational aspect of the crisis and not the pharmaceutical aspect. Another important parameter is that the medical approach of the case is outside the scope of the present paper.

For our selection we have also decided to only look at English speaking journals. This is partly done to create a sort of unity, as the way a message is conveyed may differ a lot between different languages. Another reason English speaking articles are chosen is because it creates a certain transparency, as readers of our study can look up the same articles and read them, without the language barrier.

When established which criteria we had for the articles, we had also to define our search methods. For our research we have decided to look at the articles published first after the crisis. Since there are many search engines, where it would be possible to search for articles, we have narrowed it down to one. The search database used is PubMed. The reason we have chosen this particular resource is that it is often used to find medical and pharmaceutical articles, hence suits our purpose. Using only PubMed operates as an advantage as it makes it possible to categorize articles and put the articles in the order they were published. A search with our chosen key-word, TGN1412, in the chosen database, gives 85 matches. The search has been limited to articles published within two years after the crisis. The reason is firstly because several different investigating reports over TGN1412 were published in late 2006 and 2007. Subsequently, many articles were published after these initial reports. Taking into consideration journal articles published between 2006 and 2008, would provide our research with a comprehensive reflection of the perception of the journals and its narrative development. Articles published more than two years after the crisis, i.e. after 2008, have been dismissed, as the information in them are regarded to be much different than the information in articles closer to the event. Many of the
articles published after 2008 are focused on the general guidelines regarding clinical trials, and contain little to none information on the actual TGN1412 events; therefore we have decided to exclude them from the study. After this selection we had a sample of 35 articles. Three of these articles were not possible to access, which means that the final sample of articles is 32. A point worth mentioning is that the crisis occurred in March 2006, hence, the first year is not a full year, but rather nine months. There is also a difference in the numbers of articles published in each year. In the year of 2006 eight articles were published, in 2007 fifteen and in 2008 nine articles were published, i.e. the number for year 2006 and year 2008 is similar, whereas the number is almost double in 2007. Furthermore, each year is divided into five different frames, catastrophe, risk, blame, justification and potential.

The articles vary in length from two pages up to 38 pages. The length is not considered in the results, as the amount of frames found does not appear to have any relation to the length of the articles. However, this is still an aspect worth noticing. Some articles may contain other frames than the ones we have defined. However, focus is only put on the predefined frames.

5.2 Method

The method chosen for the research is a qualitative content analysis. A qualitative content analysis is mainly considered as a text analysis. The idea is that the researcher reads the texts thoroughly, by either looking at the whole text, parts of it, or even the whole context (Esaiasson et al. 2012). Some parts of the text might be more important than others and thus it might be a more efficient approach to do a qualitative analysis rather than a quantitative (Esaiasson et al. 2012). It is also possible that some features are not explicitly mentioned, and thereby a more thorough reading is necessary (Esaiasson et al. 2012). According to the method the reader either searches for patterns in the text, or critically reads the text and analyzes its content (Esaiasson et al. 2012).
The purpose of the chosen method is to analyze the press releases published by TeGenero, as well as the articles in the medical journals. This will be performed by detecting patterns in the content, as well as looking at the word choices. As these choices are as a matter of fact choices they will “shape the way reality is presented” (Hansen, Machin, 2013, p. 115). By choosing certain words, and other features of language, the authors may shape the perception in a way they find suitable. Hence the authors are capable to sway the reader to understand an event in the same way they do (Alvesson, Sköldberg, 2008). Each chosen word can have different connotations, positive, negative or even neutral.

Qualitative research is sometimes assumed to rely on induction, whereas quantitative research often relies on deduction (Hjerm et al 2014). Induction is when the researcher finds results and patterns by looking at the empirical material they have collected. Deduction is the opposite, when the researcher already has a hypothesis, which they try to confirm with the empirical material they collect (Hjerm et al. 2014). Just like Hjerm et al. suggests, in our research we have used an inductive method. Before analyzing the press releases and the articles, we had no predetermined idea of what the results would be.

5.3 Using the Method

The analysis of the press releases consists of identifying patterns that narrate the intentions of TeGenero when presenting the facts or expressing the company’s perception and intention regarding the crisis event. Firstly, we took into account the date of each press release. The exact date of each press release is considered a rather significant part when the SCCT analysis occurs.

Secondly, we selected specific sentences or phrases in each press release that represent the posture of the company, its intention(s) or its course of action, while facing the crisis. The selected sentences or phrases must express concern, intention, excuse or the company’s aim before or after the crisis occurred. According to Coombs these sentences represent the patterns that an organization (TeGenero in our case) utilizes in order to communicate with the public.
(Coombs, 2007a). Identifying these patterns, will assist us to analyze the press releases through the scope of SCCT. The connection between these patterns and the crisis response strategies described in the theory lies within the common characteristics of our qualitative results and the ones provided by the theory. Each pattern is associated with a posture TeGenero decides to hold. SCCT identifies these postures as representations or parts of the company’s general crisis response strategy.

When analyzing and reading the articles we have divided the work equally. It is of importance that both of us have read all articles in order to acquire a complete overview of our sample. However, in order to make the process more efficient, we have divided the articles for analysis between the two of us. As the model has been created by both of us, the analysis will be fair, even though it was conducted by two different people. At the end of the analysis a cross-check was performed by both. The articles were read, and five reoccurring patterns were found. These themes were identified as catastrophe, risk, blame, justification and potential.

For catastrophe, emphasis is put on failed trials. The events are described as catastrophic, and the severity of what happened is in focus. A lot of focus is put on the particular symptoms the men in the trials suffered, and also long term harm they may have suffered. However simply stating that the medicine had some unexpected side effects is not considered parts of this category.

The theme risk discusses the risks of the drug, but also the risks of similar medicine in general. This theme puts a lot of emphasis on the uncontrollable nature of medicine, and the idea that medicine is always risky as all factors of the human body may not be known.

The blame category discusses the blame in regard to the case. The blame does not have to be put on a specific actor, but could be aimed at any company or institution the writer of the article suggests had something to do with the event. This category may seem similar to the risk category, which contains statements regarding the difficulty of anticipating the effects. However, even though the two categories are similar in some regard, the blame category focuses merely on statements were it is clear that the author suggests that the actors should have taken the risk into
greater account. This category may also at times overlap with the catastrophe category, however, when a statement blaming someone is made, it is going to be regarded as part of the blame category, even if the tone is catastrophic.

In contrast to the blame category, the justification category argues the absence of blame towards the actor regarding the crisis. Although both categories share a common ground of expression, the excuse or defence of the actor regarding the responsibility for the crisis act lies within the limits of justification category.

The last category focuses on the potential of both the drug, but also similar techniques of conducting research, such as the trials on monkeys and humans. The tone is positive, and the author suggests that the drug could, and possibly should, continue to be developed.

When deciding which parts of the text belonged in each of these categories, we considered both what was explicitly said in the article, e.g. if the article discussed the actual risk of a drug, but also other framing devices. We did focus on the text, and did not pay attention to any pictures, but did consider metaphors, examples and catchphrases (Gamson, Modigliani, 1989). Lastly, we also paid attention to word choice, as words with a positive or negative connotation could be of interest. An example of this is the use of words such as disastrous, having a negative connotation and a dramatic tone. When applying framing theory to the results, we looked at these specific bits of text containing the information, rather than the whole article, as one article in most cases contains several themes.
6. Qualitative Results

6.1 Press Releases

The purpose of our study also includes the investigation of TeGenero's communication during the TGN1412 crisis. The most common and efficient method for an organization to reach various media outlets simultaneously is through official press releases. TeGenero's official press releases, provide us with the ability to investigate thoroughly the original content and strategies used by TeGenero without relying on news outlets or other possibly biased media as our initial source of information. Press Releases are the initial form of response by the company, before entering the communication channels of the media. In order for this study to successfully and accurately derive results on the crisis response of TeGenero during the crisis, it seemed only reasonable to focus on the official press releases of the company.

Following the clinical trial adversity, TeGenero issued several press releases regarding the crisis event. Six total statements and a "Frequently Asked Questions" (FAQ) publication, constitutes the crisis response of the pharmaceutical company regarding the TGN1412 crisis. The focusing point of this chapter is to thoroughly review each official statement made by TeGenero and identify the existence of the selected frames. The results will subsequently assist our paper to formulate a holistic perspective of the communication strategies, used by the company during the crisis.
6.1.1 Press Release 1

The first statement of TeGenero was released to the press on March 15th, 2006. The first priority of the company was to inform the public about the events that led to the crisis, the purpose of TeGenero's clinical trials, and present a brief description of the events that occurred. The following paragraphs of their statement include an attempt to express to the public the fact that the results of their drug were "completely unexpected" and that the company couldn't have foreseen such development (TeGenero et al., 2006, p. 15). Both TeGenero spokespersons stressed more than once, the fact that the drug and its clinical trial have been approved by the UK regulatory authority. The intention to justify the company's actions and aim is evident.

"the drug was developed in accordance with all the regulatory and clinical guidelines and standards" (TeGenero et al., 2006, p. 15)

This particular statement was made two separate times. The spokesperson attempts to convince the audience that the company is not to blame, since it was following all the regulations regarding clinical trials and he does that again, in order to emphasize the importance of its meaning. Conclusively, TeGenero's press release provides basic information about the company and their organizational purpose
The second press release of TeGenero, operated as a supplementary statement following the rapid development of the crisis during the same day; March 15th, 2006. This is the first time, TeGenero expressed their concern for the victims. A strong support towards the members of the hospital that the patients were admitted, is clear. TeGenero's spokesperson, Dr. T. Hanke, officially stated that TeGenero will assist on any possible action that could improve the patient's health. Following, the company's expression of concern, the initial aim of the drug TeGenero produced was also stressed. More specifically, the company signifies the initial aim of the drug and the diseases that was meant to cure. Yet again, concern regarding the victims is made, this time, stating that "our thoughts are with the patients and the families" (TeGenero and Hanke, 2006a, p. 15)

After informing the public that another company (Parexel) was conducting the trial of TGN1412, TeGenero repeated that the clinical trial was approved by the UK regulatory agency MHRA Conclusively, TeGenero revealed the immediate termination of testing the TGN1412 drug on humans.
6.1.3 Press Release 3

Once again, TeGenero, publishes another press release with comments on the new information that surfaced regarding the crisis. Two days later since the first two statements, TeGenero present themselves encouraged from the health improvements of several patients, while expressing concern for the rest of them. TeGenero, by expressing concern about the victims also amplifies the impression of uncontrolled risks regarding the patient's health and their future recovery. As they did last time, TeGenero makes sure the public understands that the company fully cooperates with the hospital in order to improve the health of all the patients that suffer from the effects of the drug. They also state that they are fully cooperating with the investigating authorities that examine the incident. Additionally, TeGenero does not forget to remind again the public about the initial purpose of the drug, while making once again clear that the side effects in question couldn't have been foreseen.

"Extensive preclinical tests showed no sign of any risk [...] The drug was tested extensively in laboratories [...] We saw no drug related adverse events and there were no drug related deaths." (TeGenero and Hanke, 2006b, p. 17)

The emphasis on the inability of the company to predict such side effects, is interpreted as an attempt to avoid or lessen the blame regarding the results. As a last part of the statement, TeGenero spokesperson Dr. T. Hanke, expresses the company's concern once again.
6.1.4 Press Release 4

March 17th, 2006. This is the first time that TeGenero employ their press releases not only to comment on recent changes but also to provide information regarding new developments on the case. In their release include information about the discharge of some of the patients that suffered the side effects of TGN1412, but also released new information regarding those who are still under hospital care. They emphasize yet again the full cooperation of the company both with the hospitalization of the victims and the investigation regarding the clinical trial. TeGenero does not forget to mention their gratitude towards the hospital for the treatment provided to the victims while stating again their concern for those who are still under the hospital's care. Finally, they refer to the hospital's website as the new source of information and clarify that TeGenero will only release further statements when "significant developments" occur (TeGenero and Hanke, 2006b, p. 17).

6.1.5 Press Release 5

A few weeks later, and more specifically on April 5th of the same year, TeGenero released a new statement to the press. The main event that led to that initiative is the results of the investigation by the MHRA. After expressing their gratitude to the regulatory agency, TeGenero express their surprise after the results of the investigation showed that the drug was in fact responsible for the adverse side effect of the patients. Nevertheless, the company, in the same paragraph, promotes their good attributes and emphasize the initial purpose of the drug. The excusing process continues by including once again the inability of the company to foresee the negative side effects of the drug, despite the fact that they followed the regulations to the letter. Conclusively, TeGenero raises for the first time the challenge to improve the supervision of future trials and create a more safe environment for the patients and the drugs. TeGenero states that the new developments should challenge the industry to rethink and reevaluate the guidelines of the
clinical trials. This is the first time TeGenero promotes a potential improvement to the situational crisis.

6.1.6 Press Release 6

On May 25th, TeGenero released the final statement regarding the TGN1412 crisis. The purpose of this press release was to respond to the report of the MHRA findings on the same day. After expressing again the gratitude of the company towards the regulatory agency, TeGenero expresses their hard work into the industry of medicine and emphasizes the purpose of their existence as a company. TeGenero raises the challenge to improve the procedural framework of the clinical trials, despite the fact that, as the investigation showed, TeGenero followed all the rules regarding clinical trials. This is the second time TeGenero takes initiative to challenge the industry and the regulatory agencies to rethink the clinical trial models. Only this time, TeGenero put themselves as active participants of this corrective campaign for improved clinical models. The final sentences of TeGenero refer the interested audiences to the hospital’s official website for further updates and to the MHRA and Parexel website for additional information. When TeGenero decided to respond to the findings of the MHRA report, raised again the issue of an improved regulatory framework within the industry, regarding clinical trials. TeGenero challenges the authorities and anyone involved to improve the treatment procedures and make trials safer with lower risk levels. Yet again, TeGenero provides a counter argument and solution to the situational problems at hand.
6.1.7 F.A.Q.

Although, TeGenero released only six in total press statements, they also took the initiative to publish on May 19th, 2006 an informative document regarding the scientific specifications of the drug, the trial and the company. TeGenero released 21 questions regarding the medical specs of the drug and the trial while also providing answers to questions that explain the science behind the crisis. When TeGenero realized that the crisis that occurred on the TGN1412 trial, caught the attention of not only the medical community and journals, but also the popular and mass media outlets, TeGenero took the initiative to present the drug's scientific details in a more common and popular language. In this way, the majority of the different audiences would have the chance to understand the scientific details and formulate an opinion based on the company's information and not the media.

**Summary**

The overall posture of TeGenero illustrates their frequent and evident attempt to defend the company's name and justify their actions. TeGenero in almost every contact they had with the press, stated that they followed all the rules and guidelines considering the development of TGN1412. Although TeGenero until April 5th 2006 maintained a defending posture, the company also showed for the first time that day, initiative regarding propositions for future improvements of the industry.
6.2 Journal Articles

The results is divided into five recurrent themes, which have been found in the 32 journal articles read. The five themes present how the articles present the TeGenero crisis, and have been created both with the help of what is explicitly stated in the text, as well as the use of words with a certain connotation. The categories are catastrophe, risk, blame, justification and potential.

6.2.1 Catastrophe

6.2.1.1 Journal Articles 2006

It was during 2006, when the TGN1412 crisis occurred. The adverse effects of the drug made an impression to the medical community. Although the effects of the crisis were discussed numerous times, only a few authors made dramatic connotations regarding the events of the crisis. These few examples of the catastrophe theme, describe the clinical trial as a "research nightmare" (Wood and Darbyshire, 2006), emphasizing the unsafe environment of the clinical trials as problematic (Entman, 1993); or describe the patients as "desperately ill with multiple organ failure" (Wood, Darbyshire, 2006). Connotations such as "unheard events" (Wood, Darbyshire, 2006) and "devastating results" (Sharpe and Abbas, 2006) were also made.

"Life threatening toxic effects in a phase 1 trial, such as those seen in the TeGenero study, are virtually unheard of" (Wood, Darbyshire, 2006)

"the recent phase 1 trial of a “super agonistic” monoclonal anti-CD28 antibody that was conducted in Britain on behalf of the German firm TeGenero, with the unexpected and devastating results" (Sharpe, Abbas, 2006)
The overall posture of the selected journals towards the crisis appears to be relatively low when it comes to the failure of the clinical trials.

6.2.1.2 Journal Articles 2007

In the year of 2007 most of the catastrophe category appear to put focus on the effects of the event, with many of the articles mentioning the term *multi-organ failure*. Similarly, the term cytokine storm appears several times this year. This is a slight difference from the year before, were focus was mainly put on the use of dramatic language. The use of language is also of importance this year, and even though words such as *dramatic, tragic,* and *catastrophe* are still present this year, one main difference this year, compared to 2006, is that the language this year is even more dramatic. Instead of simply using words with a negative connotation, the use of similes is present, in order to paint dramatic pictures. Examples of this is found when the author claims that they saw “human guinea pigs explode” (Nada and Somberg, 2007). Another example can be seen is found as the author explains how the face of one of the men participating in the trials “now resembled that of the Elephant Man” (Stobbart et al., 2007).

6.2.1.3 Journal Articles 2008

In 2008, two years after the crisis occurred, only a minority of the articles seems to put any focus on the actual side effects of the drug. Most of the articles paint a picture of a disaster, without going into detail of what actually made the events so disastrous. Only two of the articles actually explains what the effects were, stating that they included “fever, pain, hypotension, disseminated intravascular coagulation and organ failure” (Longstaff et al., 2009) and “renal failure, and disseminated intravascular coagulation” (St Clair, 2008). Only the latter puts most of the focus on how seriously ill the volunteers became, whereas the other one only mentions it in passing.
The general way of portraying the events in articles from this year appears to be by painting a picture of a disaster, mainly by using words with a dramatic connotation, without any further explanation of the actual events. Words such as catastrophe, devastating and disastrous are used for this purpose.

6.2.2 Risk

6.2.2.1 Journal Articles 2006

Following the crisis of TGN1412 clinical trials, a considerable amount of journal authors took the opportunity to raise concerns regarding both the drug but also the general framework of clinical trials. During this first year of discussion through journal articles the safety of the clinical trials was under the microscope. The risks patients face during clinical trials is considerably high according to some: "Patients take a drug which is almost certain to be somewhat toxic" (George and Srinivasan, 2006). Although the focus was briefly on the general framework that the clinical trials operate within; notions of concern regarding the clinical trials of not only TGN1412 but also other similar drugs was characterized as "serious and difficult to manage(Kenter and Cohen, 2006). The risk of unexpected occurrences is also evident with these kind of trials while the dangerous concept these monoclonal antibodies (such as TGN1412) remains the same (Self and Thompson, 2006).
6.2.2.1 Journal Articles 2007

In the year of 2007 three main approaches seem to be taken. Most of the articles discuss the risks in relation to the specific event, specifically focusing on risks involving the immune system; “TGN1412, is critically dependent on an understanding of the risks associated with intense pharmacologic effects on the target system and the interaction with other biologic systems” (Nada, Somberg, 2007)

The two other approaches found this year, although not as common as the first one, is a discussion of a general risk involving medicine, and the discussion of the difficulty of estimating how big the risk. The second one shares some aspects with the first one, as both suggest that the risk is something inevitable. The second one does not appear to the same extent other years as 2007. This can be seen in the following example;

“The phase I trial of TGN1412 at Northwick Park demonstrated the delicate, but unpredictable, therapeutic ratio of some T-cell-directed treatments” (Isaacs, 2007)

Although the risk is not explicitly mentioned, the difficulty of affecting risks and effects is mentioned.

6.2.2.3 Journal Articles 2008

The general focus of the risk in 2008 is how the specific drug TGN1412, or in some cases, drugs in general, as long as they target the immune system are of higher risk than other drugs. The main idea in most articles is that dosing can be a risk factor, but also hard to calculate.
"This feature of the immune system is best exemplified by type 1 hypersensitivity, in which minute doses can have enormous systemic effects that vary between individuals” (Dayan and Wraith, 2008)

"Secondly, while every effort should be taken to calculate the MABEL, this may prove difficult with drugs targeting the immune system. Quite clearly, the immune system responds more efficiently in vivo than in vitro.” (Dayan, Wraith, 2008)

The risk discussed is generally explained as a necessary evil in order for medicine to evolve; “However, as researchers become bolder we see that these benefits do not come without real risks.” (Dayan, Wraith, 2008)

6.2.3 Blame

The blame category discusses the blame in regard to the case. The blame does not have to be put on a specific actor, but could be aimed at any company or institution the writer of the article suggests had something to do with the event. This category may seem similar to the risk category, which contains statements regarding the difficulty of anticipating the effects. However, even though the two categories are similar in some regard, the blame category focuses merely on statements were it is clear that the author suggests that the actors should have taken the risk into greater account. This category may also at times overlap with the catastrophe category, however, when a statement blaming someone is made, it is going to be regarded as part of the blame category, even if the tone is catastrophic.
6.2.3.1 Journal Articles 2006

Unlike catastrophe and risk, the category of blame was more frequent and evident on the majority of the 2006 journals. Many authors suggest that the effects that the patients suffered from, could have been foreseen either in the preclinical stage or if the procedural details were executed differently; indicating that TeGenero is to carry the blame for the known outcome (Bhogal and Combes, 2006; Kenter and Cohen, 2006; Vitetta and Ghetie, 2006; Wood and Darbyshire, 2006)

"Since the onset of clinical signs of the resulting adverse reactions was evident within two hours of dosing, staggering the administration of the TGN1412 to the volunteers by as little as one hour would very likely have reduced the number of volunteers that suffered the unexpected adverse reactions" (Bhogal and Combes, 2006)

There is also a number of notions in the journals that blame the regulations surrounding clinical trials and indicate that the framework medical trials operate within, are responsible for the turnout (Kenter, Cohen, 2006; Vitetta, Ghetie, 2006; Bhogal, Combes, 2006).

6.2.3.2 Journal Articles 2007

This year the blame is divided into three main categories. By far most common, the researchers, who failed to predict the effects are blamed.

“I do not know if the amount of money offered to potential subjects was irresistible, but I do know that Emanuel and Miller have not convinced me that the quality of the consent provided by the subjects was adequate because they did not address either of these issues in their analysis of the trial.” (Shamoo and Woeckner, 2007)
This suggests that the researchers did not disclaim enough information to the participants of the trials, which would be seen as an unethical choice. There is a general lack of solution when the articles discuss how the researchers failed with predicting the events.

The second most common variation of the blame category this year, is related to the first one, but focuses mostly on the dosage. The following quote shows an example of how the dose is suggested to be a problem;

“We now know that the preclinical testing program for TGN1412 failed to predict a safe starting dose for human evaluation” (Nada, Somberg, 2007)

Lastly, the least common variation this year is the one that criticises the actual conduct of the trial.

“Many scientists and concerned observers have criticized the fact that all NHRV in the TeGenero trial were dosed with the active drug within the interval of 1 hour without allowing for a suitable time interval to elapse to observe any possible toxic effects of the drug/.../A more careful approach to FIM intravenous administration of novel high-risk drugs is now recommended with slower infusion over several hours and frequent evaluation of participants and the injection site for reactions to allow for timely discontinuation of the drug at the earliest suggestion of an unexpected or severe adverse event” (Nada, Somberg, 2007)

6.2.3.3 Journal Articles 2008

The general notion this year is, similarly to last year, to criticize how the research before the actual trials were conducted, suggesting that the researchers should in fact have been able to predict the events;
"Warning bells would have likely sounded in the minds of the regulators if they had known that a superagonistic anti-human CD28 antibody induced rapid depletion of peripheral T cells in mice with a humanized immune system" (St Clair, 2008)

Only one of the articles point out several actors, “sponsors, investigators, a clinical research organization, and regulators” (St Clair, 2008), as responsible. Similarly, there is only one article, which suggest that there was something wrong with the conduct during the trials;

"Ten minutes is simply too short an interval between dosing to observe for infusion-related adverse events, and a longer period of observation for each subject would have saved the other five volunteers in the TGN1412 trial from suffering the same fate as the first subject who received the drug” (St Clair, 2008)

6.2.4 Justification

6.2.4.1 Journal Articles 2006

The majority of the authors during which claim no one can be blamed in 2006, argue that such diverse results could not have been foreseen (Bhogal and Combes, 2006; Sharpe and Abbas, 2006; Suntharalingam et al., 2006). While others justify TeGenero’s clinical trials as part of a necessary action (George, Srinivasan, 2006) by also recognizing the intention of the company to assist any further investigation (George, Srinivasan, 2006). This effort to ‘lighten’ the responsibility of TeGenero as the causing actor is the essential element that makes the arguments of the authors, part of the theme of justification.
6.2.4.2 Journal Articles 2007

In the justification category, the general notion this year is to emphasize that the effects could not have been foreseen, and that the trials in monkeys did not show side effects.

“They were convinced by the preclinical data that the chances of disastrous adverse effects were very low and precautions were taken to minimize these chances, such as starting at a very low dose” (Emanuel and Miller, 2007)

Interestingly, in opposite to several statements in the blame category, it is suggested, both that the research before trials was properly done, but also that the dose was in fact not high. Another interesting difference, is that several statements in this category this year states that the men participating in the trials were in fact informed about the risk of cytokine release;

“More importantly, the information sheet notes in a separate box identified as “Possible Side Effects” that ‘cytokine release (causing hive-like allergic reaction) or even anaphylaxis (a generalized allergic reaction that can be life-threatening)’ are possible” (Emanuel, Miller, 2007)

6.2.4.3 Journal Articles 2008

Out of the statements that try to justify the events, two of them simply suggest that TeGenero could not have foreseen the events, as the study and earlier trials were properly conducted.

“In fact, there was nothing wrong with the drug manufacture and the study itself, begun at 0800 h on 13 March 2006, was conducted according to the approved protocol” (Dayan and Wraith, 2008)
Another one does not go quite as far, but simply suggests that the company conducting the trials, Parexel, was not to blame in this case, perhaps insinuating that it may in fact be TeGenero who is to blame, however that is not explicitly stated.

6.2.5 Potential

6.2.5.1 Journal Articles 2006

Although the crisis was still recent, many authors supported the advance of research regarding TGN1412 but mostly the continuous progress of clinical trials.

"There are a number of possible solutions to this problem that deserve serious consideration in the wake of the problems encountered with TGN1412" (Bhogal, Combes, 2006)

"This only serves to highlight the importance of Phase 1 clinical trials in drug development" (Bhogal, Combes, 2006)

Several articles stress the importance to continue developing further the efficiency of the drug (Bhogal, Combes, 2006; Self, Thompson, 2006) but also the safety of volunteers during Phase I trials (Kenter, Cohen, 2006; Vitetta, Ghetie, 2006; Wood, Darbyshire, 2006)

Another suggestion includes the improvement of communication between different actors regarding the finding of clinical and preclinical trials in order to "boost the chance that the right questions are asked" (Kenter, Cohen, 2006) in time. That improvement of communication between the actors will make the clinical trials "more academic in nature, with open access to results and access" (Vitetta, Ghetie, 2006). Part of the potential is of course the suggestions for further improvements in the regulatory framework. Notions for safety enhancements, an "international and accepted format" (Kenter, Cohen, 2006) of clinical trials but also further
improvements regarding the effectiveness of the drugs were made (George, Srinivasan, 2006; Vitetta, Ghetie, 2006; Kenter, Cohen, 2006; Wood, Darbyshire, 2006).

"It is therefore important to look at the safeguards that exist [...] and examine how effective they are to prevent tragedies such as the TGN1412 trial " (George, Srinivasan, 2006)

6.2.5.2 Journal Articles 2007

The two general approaches this year is the discussion of the potential of the drug itself, including similar drugs, and a concern that the potential of similar drugs will not be fully used, due to the TeGenero events. Most focus, however, is put on the first category, where it is suggested that the drug can still be developed.

“There are encouraging signs of its translation to clinical practice. Short courses of anti-CD3 monoclonal antibody therapy have provided lasting benefits in recent-onset type 1 diabetes in association with evidence for the induction of immunoregulatory mechanisms.” (Isaacs, 2007)

The above quote suggests that a similar type of technology might be useful, and has potential. For the second category, there is a concern that the events will slow down future research. One example of this can be seen below;

"Hopefully, this tragic incident will not prevent future testing of potentially beneficial mAbs, although it is clear that Phase I protocols will now be subject to closer scrutiny" (Hünig, 2007)
6.2.5.3 Journal Articles 2008

There is only one article where the theme potential is found in 2008. Here focus is put on how medicine has been evolved through history, suggesting that there is potential for medicine to continue this positive trend, stating that "We are fortunate to live in an era of unprecedented success in medical research" (Dayan, Wraith, 2008).

Summary

Conclusively, the overall posture of the medical journals during 2006, focus on the catastrophic characteristics of the clinical trials but also the effects they had on the patients and their health. The safety of the trials but also the risks that TGN1412 and all similar drugs have, were under the spotlight too. During 2006 TeGenero is presented as the responsible actor that the majority of the journals, place the blame to. At this time period only a few authors hold the regulatory framework of the trials responsible for the crisis, while at the same time an equally small effort was made to justify TeGenero's actions under the excuse of not being able to foresee the events beforehand.

During 2007, the language used is more dramatic, resulting the overall enhancement of the catastrophe category. The dramatization of the journals during this year focus solely on the effects of the drug and the crisis event. The event of the crisis along with the similar drugs to TGN1412 were also the focusing point when the risks in such occasions was discussed. Although interesting differences have been observed between 2007 and the past year, the blaming actor is still TeGenero, and more specifically the researchers within the company. The same stability is encountered on the efforts of justifying the company's actions where during 2007 there are still evident arguments stating that the results of the trials were impossible to foresee. As far as the future potentials both of the drug and all the similar drugs, are quite evident during this year.
The third and final year that this paper investigates, 2008, presents a small amount of journal articles still focusing on the dramatization of the event. Although dramatic elements are not evident, the general notion of disaster surrounding the crisis is still present even in this minor extend. Risks about the event and the drug are still notable during 2008, but now the discussion surrounding safety and risks has also been extended towards the wider group of medicines that TGN1412 belongs to. The high risk of TGN1412 and its similar drugs is being discussed to the highest extend; TeGenero is still considered the actor carrying the most blame, while there are still efforts made to justify the company's actions based on the inability to foresee the events. Both evident, but nevertheless in a much smaller extent as in previous years. Finally, in 2008, two years after the crisis occurred, there was only one suggestion for further actions, and that emphasizes the importance to continue developing medicines in the same progressions that the industry does for so many years.
7. Analysis

7.1 Press Releases

The investigation of each press release will provide a clear image of the strategies used by the company, and subsequently assist the paper to determine the crisis response and finally evaluate the reputational threat TeGenero faced. In order to do that, a qualitative content analysis has been applied in order to identify patterns in the actual text of the press releases. This identification process of specific narratives in each press release, determines the character of the content. The selected patterns provide the material for the analysis in order for us to apply SCCT and IRT (as followed) and eventually obtain a holistic perspective of TeGenero's crisis communication.

7.1.1 Initial Crisis Response

The first step on identifying the crisis response strategies used by TeGenero facilitates the analysis of the initial crisis response by the company when the crisis occurred. The incidents that lead to the clinical trial misfortune, occurred on the 13th of March 2006. Coombs' initial crisis response model indicates that in order to be successful, the first communication response of the company regarding the crisis, must be quick, accurate and consistent (Coombs, 2014). TeGenero failed to meet the first characteristic of a successful initial response, since it took two days to publish the first official press release (TeGenero et al., 2006). Quickness, provides the advantage of establishing the company itself as a source of news, regarding the ongoing and rapid development of the crisis (Coombs, 2014). Coombs strongly suggests that the company facing the crisis should inform the public within the first hour of the crisis. The importance of an early response is essential in reducing and controlling the crisis (Coombs, 2007b; Fishman, 1999). It also reduces the chances of creating an information vacuum (Coombs, 2007b). When crucial information regarding a crisis are not provided in the initial stage of the crisis,
information gaps tend to be created. These gaps, news media and other information carriers, often tend to fill them with either personal perspectives or ungrounded assumptions (Coombs, 2007b). The 'media silence' by TeGenero not only during the first hour but also during the first two days of the crisis, led other parties to control the perception of the incidents and acquire control of the TGN1412 crisis communication process (Coombs, 2007b). Silence, reflects a passive and uncertain posture (Coombs, 2014). The media generating "elephant man" characterization, is an example of the results that can occur from a silent posture by the company (Ben Hirschler et al., n.d.; Fox News Agency, 2015; Hirschler, 2015). These kinds of generated unwanted descriptions are the result of the company crisis team letting third parties control the perception of the crisis from the very beginning.

Providing a response within the first hour of the crisis, usually ensures the control over providing any situation updates or new information. Nevertheless, it is argued that the immediate establishment of the company, that seems responsible for the crisis, as the source of news is rather significant. More significant than waiting until new developments occur. More specifically, TeGenero could have provided a press release, stating the facts known until then and the company's perceptive, without providing necessarily new information. Thus, the company could have established itself as the source of new developments regarding the crisis. It would also provide the unique opportunity to share TeGenero's side of the story (Coombs, 2007b). Subsequently, TeGenero would have been able to acquire more time to gather accurate information and attempt to fulfill the rest of the requirements: being accurate and consistent.

Although the importance of a quick response is great, it does not diminish the importance of accuracy when tending a crisis communication. Being quick ensures the establishment of controlled communication channels, but being accurate and consistent, ensures the quality and long-term prosperity of these channels, and of course the control over the crisis itself. Responding quickly to the crisis can be proven insufficient if the company provide inaccurate information. The accuracy of the messages distributed by TeGenero and their press releases is conclusively successful, since none of the information delivered have proven incorrect later on.
Finally, the third and final layer of investigation that determines the success of an initial response lies within the consistency of the message and the messenger, in this case the spokesperson(s) of TeGenero. Consistency is often considered highly connected with the impression of having only one specific person to address the media on behalf of the company. Coombs, begs to differ by putting more weight on the importance of "speaking with one voice" rather than speaking with one spokesperson (Coombs, 2014, 2007b). Broadcasting certain information about the crisis to several stakeholders or audiences, without any controversy, is a key element of a consistent posture during the initial crisis response phase. A unanimous message with one or more spokespersons is still considered by Coombs a successful strategy (Coombs, 2014). In TeGenero's case the message was always consistent, despite the fact that the first press release was carried out both by the Dr. Hatz, CEO (Chief Executive Officer) and Dr. Hanke, CSO (Chief Science Officer) of TeGenero (TeGenero et al., 2006, p. 15). All the remaining press releases following the first one, were conducted only by Dr. Hanke, the Chief Science Officer of TeGenero (TeGenero and Hanke, 2006a, 2006a, 2006b, 2006c, 2006d).

Apologia, although it is not considered a vital component of initial crisis response, is recognized as an assisting tool to the overall posture of the company facing a crisis. Employed with careful use it can provide a substantial improvement to the image of the company towards both the victims and the audience (Benoit, 1997; Coombs, 2014; Kellerman B, 2006). Despite the fact that it is not considered part of the official press releases by TeGenero, it has been made publicly acknowledged to several reporters during a press conference that the company's spokesperson Dr. Hanke made a formal apology to the victims' families (Weaver, 2006).
7.1.2 Reputation Repair & Image Restoration Strategies

Following the initial crisis response, companies facing crises must immediately initiate reputation repair strategies or also known by Benoit as Image Restoration Strategies (Benoit, 1997). In order to identify these strategies, we first must investigate the press releases by TeGenero. The examination of these press releases through the theoretical lenses of IRT.

7.1.2.1 Press Release 1 - March 15, 2006

On March 15th, 2006, TeGenero released its first statement following the clinical trial. After explaining briefly the crisis situation, TeGenero immediately presented the aim of the developing drug and clarified the importance of the drug as well as its positive purpose.

"...TeGenero's TGN1412...is being developed for the treatment of immunological diseases with a high unmet medical need, such as multiple sclerosis, rheumatoid arthritis and certain cancers" (TeGenero et al., 2006, p. 1)

Despite the anticipated negativity around the crisis, TeGenero attempted to bring forward the overall positive purpose of the drug and clarify its good intentions towards several medical conditions (Benoit, 1997; TeGenero et al., 2006). Additionally, one of the spokespersons of TeGenero expressed the unpredictable course the trial took, while at the same time ensuring the audiences, that TeGenero was unable to foresee these events.

"..These events were completely unexpected and do not reflect the results we obtained from initial laboratory studies." (TeGenero et al., 2006, p. 1)

The Defeasibility posture is quite evident, as the unanticipated development of the drug is mentioned more than once in the same press release. The lack of information that this kind of
outcome was even possible, compels TeGenero to self present as ignorant to that possibility and portray a defeasible posture (Benoit, 1997).

7.1.2.2 Press Release 2 - March 15, 2006

On the same day, March 15th 2006, TeGenero released an additional statement, following the ongoing development of the crisis (TeGenero and Hanke, 2006e, p. 15). Firstly, TeGenero's spokesperson and CSO (Chief Scientific Officer) T.Hanke, expressed concern about the victims.

"We are confident in the excellent treatment at this hospital and have made ourselves available to answer any questions from the doctors about the drug" (TeGenero and Hanke, 2006e).

Unlike, the first press release, TeGenero makes clear their intention of eliminating the offensive outcome of their actions and they attempt to correct the drug's wrongdoings by providing all and any necessary assistance from their end, in order to assist on the patient's health improvement during their hospitalization (TeGenero and Hanke, 2006e). This type of response by the company is evident and frequent from this point on. This corrective action, is solely focusing on repairing the existing damages created by the wrongdoings of TeGenero and TGN1412 (Benoit, 1997). Bolstering is another strategy used by TeGenero simultaneously with corrective action. Although bolstering is considered a strategy that focuses on reducing offensiveness, it is possible to use it also as a supplementary strategy in order to enhance the message (Benoit, 1997; Coombs, 2014).

Despite the fact that bolstering is considered a strategy that "stresses good traits" (Benoit, 1997), it can also be used as a method of creating positive connections between the company and several stakeholders (Coombs, 2014). In this case, TeGenero makes sure that an attempt to praise the hospital the victims are treated in, is clear.
Describing the positive purpose of the drug, during the crisis, only enhances the effort of TeGenero to reduce their offensiveness and the negativity surrounding their product.

"[..]TGN1412 is an innovative new treatment for the devastating illnesses of leukemia rheumatoid arthritis and multiple sclerosis." (TeGenero and Hanke, 2006e, p. 15)

More specifically, TeGenero's spokesperson, makes a clear connection between the development of the drug and the public health, by presenting the ultimate purpose of the drug; treating human illnesses. Benoit's Bolstering posture describes that very effort. Bolstering portrays the willingness of the organization to lessen the negativity surrounding the wrongful action of the drug; by emphasizing the beneficial role and perspective TeGenero has, as part of the pharmaceutical industry that constantly tries to improve the public health (Benoit, 1997).

A second effort of evading or minimizing responsibility is made by TeGenero. After encouraging the idea of an immediate investigation, TeGenero mentions yet again the absence of any warning indications regarding the safety of the drug in the preclinical phase.

"[..] a new medicine which showed no signs of any safety problems in previous testing"

(TeGenero and Hanke, 2006e)

This defeasible reasoning assists the efforts of lessening the accountability of the company regarding an outcome that, according to TeGenero, could not been foreseen.

Following these statements, TeGenero made a separate section labeled as "Notes" in order to emphasize certain information during the press conference. This last component of the second press release aims to clarify the immediate adjustment of the company's attitude towards the recent developments. Explaining that

"there is no further human testing of TGN1412 being pursued" (TeGenero and Hanke, 2006e, p. 15)
TeGenero clarifies the urgent action the company takes in order to correct the wrongdoings of the drug and enhances the already existing effort to reduce offensiveness in the eyes of the multiple audiences watching. They also clarify that the trial was approved both by the MHRA regulatory agency and the local ethics committee. This statement pushes the notion of obedience by the company, towards the rules and regulations and enhances the idea of innocence regarding the mistakes that were made.

7.1.2.3 Press Release 3 - March 17, 2006

The third, in chronological order, press release TeGenero published was on March 17th 2006, two days after the first two releases (TeGenero and Hanke, 2006b, p. 17).

After expressing their concern for the victims, TeGenero praises yet again the treatment Northwick Park Hospital provides to the victims, through bolstering:

"We are encouraged by the signs of progress in the conditions of the patients but remain deeply concerned for them and their families. They are receiving excellent treatment at Northwick Park Hospital in London". (TeGenero and Hanke, 2006b, p. 17)

Following the expression of concern for the victims, and the compliments to Northwick Park Hospital, TeGenero continued their 'reducing offensiveness of the event' strategy by reminding the audience and the stakeholders the actions they took and are willing to take, in order to correct as efficiently as possible, the malpractice of the clinical trial.

"We are working closely together with the doctors and have made ourselves available to answer any questions on the drug and to support them in choosing the most suitable treatment" (TeGenero and Hanke, 2006b, p. 17)
The same strategy seems to be suitable for a new update provided by TeGenero. During the days between the initial releases and the one at hand, an investigation regarding the clinical trial has been underway. In accordance to these latest developments, TeGenero continued their support towards reducing the negativity and offensiveness surrounding the company's name and offered their assistance and full cooperation to the forthcoming investigations (TeGenero and Hanke, 2006b, p. 17). The cooperation both with the doctors, regarding the improvement of the patients' health, and the investigative agencies, demonstrates a corrective and disciplinary approach to the crisis.

"At the same time we have offered any support possible to the institutions in charge of investigation, the MHRA in the UK and the German authorities. We will respond to any questions and provide information beyond the material already available[...]
" (TeGenero and Hanke, 2006b, p. 17)

TeGenero did not fail to remind the audience about the ultimate purpose the drug TGN1412 had, despite the anomalies presented during the trial. The bolstering strategy equipped TeGenero to emphasize again the various illnesses the drug was targeting.

"The tested substance TGN1412 is a new treatment for the devastating illnesses of leukemia, rheumatoid arthritis and multiple sclerosis"

(TeGenero and Hanke, 2006b, p. 1).

TeGenero mentioned again the inability to foresee the side effects the victims suffered from, in an effort to highlight the already defeasible strategy they use. Again, according to TeGenero there were no indications prior to the trial that could suggest such extreme results.

"Extensive preclinical tests showed no sign of any risk [...]The drug was tested extensively in laboratories[...]We saw no drug related adverse events and there were no drug related deaths." (TeGenero and Hanke, 2006b, p. 17)
7.1.2.4 Press Release 4 - March 29, 2006

The next (fourth) press release was on March 29th 2006. This particular press release includes updates on TeGenero's continuing efforts to reduce the offensiveness TGN1412 clinical trial produced. TeGenero's spokesperson informed the interested audiences about the company's continuing collaboration with both the hospital and the investigating agencies on the effort to provide the best possible treatment for the patients and determine the reasons behind the harmful side effects of the drug, respectively.

"TeGenero remains in close contact with the doctors treating the volunteers to provide all possible assistance to them."(TeGenero and Hanke, 2006a, p. 29)

"We are continuing to do all we can to support the investigations into what went wrong in the trial..."(TeGenero and Hanke, 2006a, p. 29)

The repetitive recognition of the efforts made by the medical experts in the Northwick Park Hospital, indicates the appreciation of TeGenero towards the Hospital administration. The bolstering strategy towards the hospital employees, is yet again evident and clear.

"[TeGenero] is grateful for the excellent work of all the staff at the hospital."(TeGenero and Hanke, 2006a, p. 29)
All the press releases by TeGenero were published during March 2006. During the following days, there were no evident changes to the case. While time passes, the development of crisis events tends to slow down. Subsequently, media attention also tends to settle down, or focus on other more recent matters. Nevertheless, TeGenero released a fifth press release on April 5th of the same year as a response to MHRA's results on the investigation of the TGN1412 drug (TeGenero and Hanke, 2006c).

"We are grateful to the MHRA for their conduct for this investigation" (TeGenero and Hanke, 2006c)

"...We are grateful for the excellent work of all at the hospital" (TeGenero and Hanke, 2006c)

Although praising another actor in press releases is proved as a rather common feature of TeGenero, this is the first time the German company shows gratitude to the MHRA. Bolstering is in fact a rather standard supplementary strategy for TeGenero until this point, but it is the first time that is targeting both the regulatory agency and the hospital. After thanking the MHRA and Northwick Park hospital for their actions, TeGenero expressed their surprise that the results of the investigation indicated that TGN1412 has triggered the side effects on the victims. Immediately, they expressed their regret and simultaneously promoted the original purpose of the company.

"For a company dedicated to developing medicines to help millions, it is devastating that such events could occur." (TeGenero and Hanke, 2006c).
7.1.2.6 Press Release 6- May 25, 2006

The sixth and final press release made by TeGenero regarding the TGN1412 crisis, was published on May 25th 2006. The cause for a statement this particular date was the report of MHRA on the same date. This statement is a response to that report.

"TeGenero is grateful to the MHRA for their efficient and thorough conduct of this investigation" (TeGenero and Hanke, 2006d)

Equivalent to the last statement, the German company uses the defeasibility strategy along with bolstering (once again towards the MHRA) in order to amplify the message of inability to foresee the extreme development of the clinical trial and praise the regulatory agency. As a supplementary strategy, TeGenero also employs good intentions strategy, in order to enhance the evasion of responsibility (Benoit, 1997).

"As a company that has worked hard to develop innovative medicines to help millions of people we remain devastated to suck unpredicted side effects could have been caused by one of our products". (TeGenero and Hanke, 2006d, p. 25)

The last addition to the comprehensive strategy by TeGenero is the corrective action, which they use in order to decrease the level of offensiveness around their company and actions once again.

"We will continue to work to establish exactly what happened and will support to the greatest extent possible ongoing efforts to make future trials as safe as they can be" (TeGenero and Hanke, 2006d, p. 25).

An essential part of understanding and subsequently analyzing the strategies used by TeGenero in order to confront the crisis and repair their public image, is the consideration of several
aspects of the crisis. The nature of responsibility of TeGenero, along with the perception of the TGN1412 crisis and the multiple audiences the German company addressed, are the key elements that assist in formulating a holistic understanding of the crisis response and the restoration methods used during the event (Benoit, 1997). The clarification of these characteristics will assist the forthcoming evaluation of the reputational threat and conclusively the overall portrayal of TeGenero's crisis response (Benoit, 1997; Coombs, 2014, 2007b).

7.1.3 Evaluation Reputational Threat

Obtaining the responsibility of the crisis, intentionally or not, can be done in various ways. The company responsible of the act could have performed it, ordered it, facilitated, encouraged it or permitted the act to occur (Benoit, 1997). Regardless of what actually happened, responsibility appears in Image Restoration theory only in the form of that the audience shapes it (Benoit, 1997). In this case TeGenero did not performed neither facilitated the clinical trial per se. Although TeGenero was the manufacturing company of the drug that ordered the trial, the performing actor of the clinical trial -as a process- was Parexel. Parexel also facilitated the clinical trial, although their facilities were part of the Northwick Park Hospital building. As far as the permission of trial goes, MHRA does obtain full responsibility, since it is the regulatory agency of the country the trial was taking place (UK).

Benoit insists that the perception of the crisis is more important than the reality of the situation. The audience's consideration of the company being at fault is greater than if the company is actually at fault (Benoit, 1997). This level of importance is what drives this paper to analyze the framing process and reaction of one essential part of the audiences regarding the TGN1412.

Of course, crisis events that catch the spotlight of attention in various media, are confronting several audiences. The TGN1412 case caught the attention both of the traditional media
(newspapers, news websites, TV, Radio etc.) but also the media within the pharmaceutical and medical industry (medical journals). The response of the company must consider the different characteristics of each audience group and adjust to each one's needs in order to deliver a coherent message as successfully as possible (Benoit, 1997).

TeGenero communicated through their first press release by using a more scientific language (TeGenero et al., 2006) that requires a certain level of biological or medical understanding. During the time the first press release was being published, TeGenero was only addressing the medical community. As soon as the company realized that several other audiences were also following the development of the TGN1412 crisis, TeGenero not only obtained a more common method of framing, but also released a F.A.Q. (Frequently Asked Questions) document; explaining all the scientific aspects of the trial and the drug, in a familiar and generally accepted language (TeGenero, 2006). Releasing a document such as this one, is probably a very efficient way to control the interpretation of the science regarding the drug, without leaving information gaps to third parties or actors to fill in with their personal perception of the scientific details. This specific gesture, enhances the company's connection with the audience and empowers the non-medical audiences to obtain a clear and comprehensive knowledge regarding the drug, the company and the clinical trial (TeGenero, 2006).

Coombs' Situational Crisis Communication Theory and Benoit's Image Restoration Theory, both consider several aspects of the crisis as crucially important when determining the perception of stakeholders and audiences regarding a crisis event (Benoit, 1997; Coombs, 2014, 2004). Both theories lay great value on organizational responsibility and perception of different audiences or stakeholders in a crisis.

Coombs Evaluation of Reputational Threat introduces us in a structured synthesis, where the type of the crisis, the crisis history of the company and finally its prior reputation, asses the risks
of the situation (Coombs, 2014, 2004). Subsequently this assessment assists the communication team to decide the proper crisis strategy; or in this case for the paper to determine the level of appropriation of the selected crisis strategies by TeGenero.

7.1.3.1 Crisis Type

The first and crucial part of this process is to determine which type of crisis the TGN1412 crisis belongs to. In order to do that we consider all the provided categories in the theory as described earlier (Coombs, 2014, 2004). The crisis type that best describes the characteristics of the TGN1412 crisis is the 'Human error product harm' from the preventable or intentional crisis cluster (Coombs, 2014, 2004). The 'human error product harm' describes the process of recalling a product (the TGN1412 drug) because of its harmful effect to stakeholders (the patients) (Coombs, 2004). The severity of the reputational threat is at the highest level considering the other two clusters, victim and accidental (Coombs, 2014, 2004). The preventable cluster is also introduced alternatively as the "intentional crisis cluster", due to the existence of the human factor. More specifically audience groups tend to believe that a human error could have been foreseen and prevented, thus the act is considered immediately intentional (Coombs, 2014; Mitroff and Anagnos, 2000). Subsequently, the responsibility of TeGenero in relation to the crisis is considerably high, since it fulfills all the criteria to fit into this cluster.

7.1.3.2 Crisis History

The second step towards the identification of the reputational threat includes the examination of crisis history of the company (Coombs, 2014). The importance of this step reveals any prior crises and examines them as potential indicators for specific patterns regarding the crisis management (Coombs, 2004). The existence of past crisis events reveals the potentiality of a behavioral pattern between crises and the company (Coombs, 2014, 2004). This potential pattern can change the perception of the audience and the responsibility of the company rather
significantly. This step determines the characterization of the crisis event as an isolated incident or as a stable behavior (Coombs, 2004). TeGenero, as a newly founded company at the time of the crisis, had only manufactured one drug; TGN1412. Thus, the company does not have any prior crisis history, mainly because they also do not have any other prior production history. This fact, only lightens the burden of the company, while it does not increase the responsibility of the company. This lack of prior crises does not affect the perception of the audience, outside the spectrum of the isolated incident (Coombs, 2004)

7.1.3.3 Prior Reputation

TeGenero also lacks indications of reputational history. Although the years of prior contribution of the company are considerably limited, the lack of reputation within the industry neither assists or diminishes the company's course throughout the crisis. It is important to remind ourselves that TeGenero was officially part of the industry since 2000. Lacking prior reputation is a coin with two sides. The fact that TeGenero does not have any history in the field, it provides the company with the opportunity to act in a ‘blank slate’. It also does not provide any positive attributes to the public profile of the company either. Coombs and SCCT do not explore the possibility of a company not having prior reputation as a contributing factor (Coombs, 2014). The only contribution we can make for this chapter is to admit that TeGenero was considered a relatively ‘new’ pharmaceutical company within the industry, lacking the financial and reputational capital of other ‘older’ and more established ‘Big Pharma’ companies in the same industry. Despite TeGenero’s limitations it is also important to state that this new German company entered the industry with high goals and expectations, by attempting to contribute to the medical community, with solutions to long lasting challenges against diseases such as certain types of arthritis and leukemia. These information can only be considered as part of the ongoing or future reputation of the company. Until the time of the incident, we have no knowledge of the company’s reputation. Situational Crisis Communication Model, includes the consideration of credibility as
a contributing factor to the reputational history (Coombs, 2014). The reputational history contributes to the crisis response strategy only in the form of credibility or as a protective layer against crises (Coombs and Holladay, 2006). Preserving and eventually employing the company's credibility can produce trustworthiness and a posture of expertise (Coombs, 2014). Thus, it is challenging to determine on whether the lack of TeGenero's reputational history influences positively or negatively their public image during the crisis. It seems only fair to consider the effect of the nonexistent reputation of the company as a non contributing factor regarding the overall threat evaluation assessment.

The Evaluation of Reputational Threat on TeGenero, provides the tools to assess the risks TeGenero faces while confronting the crisis regarding the level of responsibility and the perception of the audience. The assessment reveals the strong organizational responsibility TeGenero presents (Coombs, 2014); while the lack of reputation and crisis history do not reflect any information in order to contribute negatively or positively to the threat assessment.

Acquiring the results from the press releases of TeGenero provides us with the material to analyze the crisis response of the company and use the findings from the analysis to determine whether the crisis response of TeGenero meets the evaluation requirements of the Situational Crisis Communication theory.

TeGenero uses Corrective action, Bolstering and Good intentions as their main three strategies. The evidence of these indicate the intention of TeGenero to reduce its offensiveness in the eyes of the public and lessen or even evade responsibility for the incident. The latter strategy was additionally enhanced by constantly mentioning the company's good intentions regarding the development of the drug.

In order to evaluate the strategies acquired by TeGenero, we compare their use to the evaluation model provided by SCCT. According to the Evaluation Reputational Threat assessment, the
TGN1412 crisis was a series of events that occurred due to human factor. Since the manufacturing company created the drug, even though unintentionally, it resulted the severe side effects of the patients. Thus it is clear that the product harm was a result of human error. This type of crisis is considered a preventable crisis and creates a very strong organizational responsibility. SCCT's Evaluation Reputational Threat connects the following rebuilding strategies as appropriate courses of action. Surprisingly, TeGenero applied all the suggestive strategies of Coombs.

The use of rebuilding strategies, such as Corrective action, is strongly advised. Corrective Action was one of the main and more frequent strategies, TeGenero used. Additionally, the theory suggests that the use of corrective actions increases the possibility of stakeholders supporting the company during these challenging events (Coombs, 2014). The second but equally important suggestion of the theory regarding the preventable cluster cases, such as this one, is the use of reinforcing strategies such as bolstering and defeasibility. TeGenero successfully uses both; not only as supplementary strategies but also as main ones. Finally, the expression of concern to the victims by employing corrective action, is another strategy that is promoted for this case by the theory, and TeGenero also follows. TeGenero, throughout the majority of their press releases state clearly their concern for the victims and simultaneously provide corrective suggestions to reduce the effects of the crisis. It is essential to state that rebuilding strategies, such as the ones TeGenero uses, should not be combined with denial strategies. Thankfully, for TeGenero, they did not have a denial posture, not even once throughout their crisis communication. Thus, they did not have to face the complications of using both.
7.2 Journal Articles

7.2.1 Catastrophe

7.2.1.1 Journal Articles 2006
The overall posture this year of the selected journals towards the crisis appears to be relatively low when it comes to the failure of the clinical trials. The journals that do discuss the catastrophic aspect of the events mostly focus on the unsafe environment of the trials. Applying Entman’s framing theory on the framing this year, it is possible to see that the problem identified is these unsafe circumstances. The cause can in several cases be understood to be the regulations, which caused the unsafe circumstances. A moral judgement is done throughout this category, as the catastrophic tone implicitly suggests a problem with the event.

7.2.1.2 Journal Articles 2007

This year, the main focus appears to be on how the actual effects on the events, emphasizing that the men in the trials suffered multi-organ failure. The tone is generally even more dramatic this year, compared to the previous, the men are for example described as human guinea pigs. Using Entman’s model, we can see that the general problem this year seems to be the effects of the drug, and most specifically multi-organ failure. Within the catastrophe category, the only cause explicitly defined this year is the actual drug trials. Despite the general use of words with a negative connotation, no specific moral evaluation can be found this year, however, just like the previous year one could still call the negative tone a moral judgment.
7.2.1.3 Journal Articles 2008

In 2008 only a minority of the articles put any focus on the actual effects, and a more general approach is taken. A picture of disaster I painted, without any details. In the few cases where actual effects are mentioned, such as “fever, pain, hypotension, disseminated intravascular coagulation and organ failure” (Longstaff et al., 2009) the identified cause can be seen as the conditioned mentioned, and the cause the trials.

However, the general way of portraying the events is by painting a picture of a disaster, mainly by using words with a dramatic connotation, without any further explanation of the actual events. Words such as catastrophe, devastating and disastrous are used for this purpose. Here the problems and causes are similar as the other example, however the problem is more loosely defined as just a catastrophe.

7.2.2 Risk

7.2.2.1 Journal Articles 2006

The safety of the clinical trials were under the microscope, and both the risk of the trials and drugs similar to TGN1412 were in focus, hence identifying the trials, and the drugs as a group as the problems.
7.2.2.2 Journal Articles 2007

Three main approaches have been identified this year, the main one focusing on the risks related to the specific event, with the problem of drugs targeting the immune system in focus as exemplified here;

“TGN1412, is critically dependent on an understanding of the risks associated with intense pharmacologic effects on the target system and the interaction with other biologic systems” (Nada, Somberg, 2007)

In this specific example, as well as many other articles this year, the identified problem is the uncertainty of the immune system, the cause the drug, whereas neither moral judgment nor solution is found. However, many of the articles discussing the risks involved suggest a lower dosage as a solution.

The other two approaches discusses the general risk of medicine, and the difficulty of assessing it. Here the problem would be identified as the difficulty of assessing the risk. It often insinuated that the risk may be in the nature of medicine, which would explain why no solution is ever suggested.

7.2.2.3 Journal Articles 2008

In some cases drugs in general are identified as a risk, but the general focus is specifically on TGN1412, and even more specifically on the risk of the dosage of the drug. This means that the problem can be identified as risk itself, and the cause the dose. The risk is often discussed as a necessary evil in order for medicine to evolve; “However, as researchers become bolder we see that these benefits do not come without real risks.” (Dayan, Wraith, 2008). This idea of a risk
always being present goes against the idea of a moral judgment being present, as well as a solution, as the general idea is that the risk is inevitable.

7.2.3 Blame

7.2.3.1 Journal Articles 2006

Many authors suggest that the effects that the patients suffered from could have been foreseen either in the preclinical stage, or if the procedural details were executed differently. The actor blamed is generally TeGenero, which means that they can be identified as a cause, or in some cases the poorly conducted research may be, with the problem being the failed trials.

7.2.3.2 Journal Articles 2007

The most common idea this year is that the researchers who planned the study are to blame. In many articles this is suggested to be caused by carelessness, and a moral judgment is made in some cases, as it in a few cases is suggested that the researchers lack ethical values, as shown below;

“I do not know if the amount of money offered to potential subjects was irresistible, but I do know that Emanuel and Miller have not convinced me that the quality of the consent provided by the subjects was adequate because they did not address either of these issues in their analysis of the trial.” (Shamoo and Woeckner, 2007)

The second most common idea within this category this year is related to the first one, with the difference being that the researchers should have estimated the dose better. This identifies the does as a problem, and often a lower dose as a solution. The last variation of the category suggests there was something wrong with the trials, and specifically the effects of it. The
problem here is the side effects experienced, but the cause mentioned may differ. Commonly, the short interval between injections is suggested as a cause. Similarly, one of the solutions suggested would be having longer intervals between injections.

7.2.3.3 Journal Articles 2008

Similarly to last year, a lot of blame is put on the researchers who failed to predict the effects while planning the trials. This means that the problem is still identified as the failed trials, and the cause poorly done research. An indirect judgment is made as the failure to identify warning signs is brought up.

7.2.4 Justification

7.2.4.1 Journal Articles 2006

The majority of the authors during 2006, argue that such diverse results could not have been foreseen. Due to the nature of the category, it is difficult to apply Entman's theory on it, as not even a problem has been identified.

7.2.4.2 Journal Articles 2007

Similarly to the year before, emphasis is put on the idea that the results were hard to foresee, and that no signs were shown in the monkeys, which were exposed to the drug. This implicitly suggests that the problem might have been how the trials were conducted, but again due to the nature of this category, no explicit problem is identified, nor is the cause.
7.2.4.3 Journal Articles 2008

The idea this year, is just like previous years that the effects could not have been foreseen. A new aspect this year, is the idea that there was in fact nothing wrong with the conduct of the trials. As it is claimed that nothing was wrong with the trials, one could perhaps say this suggests that the problem could be the crisis itself. However, on a general notion, this years justification category does not identify any of Entman’s four factors.

7.2.5 Potential

7.2.5.1 Journal Articles 2006

Many authors supported the continuous progress of clinical trials, often with a focus on developing trials to make it more safe. Several other articles discuss the importance of developing the drug. Developing the drug, and the safety appears to be suggested as a solution. In many cases the lack of safety is suggested as a problem, even though no explicit cause is mentioned.

7.2.5.2 Journal Articles 2007

The two general approaches this year is the discussion of the potential of the drug itself, also including similar drugs, and a concern that the potential of similar drugs will not fully be used, due to the TeGenero events. The first category is however the most common one this year. Most of the articles suggest that further research could be a solution to a problem, which is most cases remains undefined.
For the second category, the problem is identified as the unutilized potential of the drug, and similar drugs, with the cause being the TeGenero crisis. A moral judgement is also indirectly made, as not using the drugs potential is in some cases suggested to be morally wrong.

7.2.5.3 Journal Articles 2008

In 2008 there is only one article in which the potential is mentioned. Focus is put on how medicine has been evolved through history, suggesting that there is potential for medicine to continue this positive trend. A positive moral judgment is made, however now problem, and thereby no cause has been identified.
8. Conclusion

The purpose of this study was to explore the crisis communication strategies used by TeGenero in the wake of the failed human trials for TGN1412, in 2006. Secondly, the study also investigated the framing narrative of selected medical journals regarding the same crisis. SCCT, along with IRT provided the theoretical ground for the study to analyze the crisis communication patterns found in TeGenero press releases through a qualitative case study. Additionally, framing theory equipped the second aim of the study with the proper tools in order to analyze the overall narrative of the medical journals regarding the crisis. By identifying different types of themes (catastrophe, risk, blame, justification and potential themes) the study came to realize that it is clear that the medical journals mainly focus on the company’s inability to foresee the events that triggered the crisis.

The SCCT and IRT analysis of TeGenero's Press Releases also revealed several interesting results. TeGenero failed to provide its initial response to the crisis events quickly enough. TeGenero, followed the theory's suggestion by providing an apology to their victims but the apology was not made officially or publicly. Although the company's first response was consistent, the overall initial response of the company is considered unsuccessful. A minor but positive attribution of the crisis response by TeGenero was the rather quick realization of the existence of multiple audiences. Publishing a F.A.Q. release, gave the company the chance to explain first the scientific background of the event before any other actor.

Conclusively, how does TeGenero manage its communication during the crisis? The overall communication strategy used by TeGenero when the crisis occurred, revealed that the company responded successfully to the evaluating criteria of the theory. The high responsibility of the company due to the human error product harm, as Coombs characterizes it, raised certain expectations regarding the company's response. More specifically, TeGenero successfully promoted a Corrective Action posture supplemented mainly with Defeasibility and Bolstering; exactly as SCCT suggests. Although the crisis is perceived by SCCT as intentional, burdening
TeGenero with high responsibility, the company had no crisis history or prior reputation to assist or diminish their efforts to overcome the crisis. The partly successful crisis communication by TeGenero did not assist the company on overcoming the crisis event and eventually the company went out of business. This case may be another reminder of the importance of developing further crisis communication guidelines in such crises.

*What is the framing narrative of the western pharmaceutical and medical journals on the TeGenero crisis?* The adverse events of the TeGenero crisis in the western pharmaceutical and medical journals was generally sketched as a crisis event that occurred mainly due to lack of information the company had beforehand and the absence of moral judgment. More specifically, Entman’s theory allowed us to realize that the majority of the journals focused on the inability of the company to sufficiently research and obtain all the information regarding the drug and its possible effects, before initiating human clinical trials. Additionally, a great amount of journals also focused on what caused the crisis event but also the moral standards regarding the TGN1412 human clinical trials.

Taking into account the general narrative the journals chose to use regarding the crisis but also considering that despite the fact that TeGenero communicated successfully in certain aspects of SCCT, the results were fatal for the prosperity of the company. TeGenero did in fact promote Corrective Action as a posture along with Defeasibility and Bolstering as suggested by SCCT. The fact that the medical journals chose to focus on a different aspect of the crisis, only enhances the importance of considering the framing narrative as a more important aspect in crisis communication in the pharmaceutical industry. The framing and subsequently the perception of the audience has been considered as a valuable aspect in crisis communication but has not yet been explored adequately (Benoit, 1997; Coombs, 2007a). The holistic depiction of the crisis and the results of the analysis only complement the paper’s suggestion to further research and explore crisis communication in the pharmaceutical industry.
Medical research is vastly developing the past few decades. The TeGenero case has revealed unknown aspects of the pharmaceutical and medical world that are still explored today. As earlier research in the field of crisis communication in the pharmaceutical industry is rather limited, this study could be a starting point for further research. Although the TGN1412 incident motivated the medical community for significant improvements in clinical trials but also in drug development, similar drugs to TGN1412 have been developed and researched rather slowly until recent years. Despite the notable progress, the community's skepticism surrounding similar drugs or treatments is still evident. It is therefore, rather important for communication experts and researchers to study and correspond to the growing public expectation regarding medical advancement. The public's perception regarding the 'slow' development of medical and pharmaceutical research has been mostly characterized by disappointment, rather than admiration for what has been achieved the past few decades (Dayan and Wraith, 2008). It is of great importance to be able to communicate with the public regarding medical or pharmaceutical research incidents, and always be able to supply the audience with the sense of improvement and medical development. However, no general guidelines regarding crisis communication in the field can be derived from this study, as it only explores a small part of the industry.

Since the same drug has now resurfaced (almost ten years since TGN1412 was introduced) by a different company and under a different name, the need for further research has not been decreased during those years. The reappearance of the same drug in clinical trials in Russia during 2015 is under the name TAB08. Additionally, the recent developments regarding a different drug trial in France, under similar but more adverse circumstances, only enhance the importance of establishing crisis communication as a crucial element in the pharmaceutical industry. Because of these similarities, the impression of the TeGenero case in the media and the industry is still evident and discussed, even ten years later (Ed Miseta, 2016; MacDonald, 2016; Ward, 2016).
9. Bibliography

9.1 Primary sources


Spielman, B., 2007. Faulty premise, premature conclusion: that money was extraneous to the research ethics of the TGN1412 study. *Am. J. Bioeth. AJOB* 7, 93–94.


TeGenero, 2006. Frequently asked questions regarding TGN1412.


9.2 Secondary sources


MacDonald, G., 2016. SAEs the only similarity between the BIA 10-2474 trial and “elephant man” study, says MHRA [WWW Document]. *Outsourcing-Pharmacom.*


McQuail, D., 2010. McQuail’s Mass Communication Theory. *SAGE.*


TheraMAB, 2014. TheraMAB presents new clinical data on theralizumab (TAB08).

TheraMAB, 2011. TheraMAB launches Phase I clinical trial of “first-in-class” agonistic monoclonal antibody TAB08 in Russia.


10. Press Release

The Big Pharma & The Elephant Man - What happens when a drug makes us worse?

Every organization, regardless the industry it is in, faces the threat of a crisis. When it comes to crises that are threatening a person's health, the fear of a possible misfortune or mistake becomes significantly greater. Drugs are directly connected to the human health. When a mistake is made or a negative outcome is produced by a drug, then the management of the crisis towards the public is of greater importance. How should the organization communicate with the public when facing a crisis? How does the framing of the crisis by the media in the pharmaceutical industry affect the public opinion or even the progress of the crisis?

The results of this study shine a light on one of the most disastrous and discussed human trials in the history of pharmaceuticals. TGN1412 was a developing drug targeting mainly arthritis, but never made it to the market. The adverse effects it had on healthy patients prevented the drug's introduction to the market.

The investigation of the crisis communication tactics by the company responsible, led the study to provide a holistic image of the intentions of the company by analyzing the company's press releases. At the same time an analysis of the way the medical community framed the crisis event, provided the study with the insight of how the crisis was presented by the media.

Communication is a crucial feature when an organization is facing a crisis. Crisis communication in the pharmaceutical industry is a new and developing aspect. The aim of the study, besides investigating the TGN1412 event, is also to contribute to the ongoing research of crisis communication in the pharmaceutical industry and inspire further development.
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Thesis: The Big Pharma & The Elephant Man: A Qualitative study on the TeGenero Crisis Communication

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