

---

# ORGANISATIONAL CRISIS COMMUNICATION AND CRISIS PERCEPTION: HUMAN FACTORS AND OPPORTUNITIES TO STRATEGISE

---

Proefschrift voorgelegd tot het behalen van de graad van doctor in de Sociale wetenschappen: communicatiewetenschappen aan de Universiteit Antwerpen, en de graad van doctor in de Sociale en Militaire Wetenschappen aan de Koninklijke Militaire School, Brussel, te verdedigen door

Marinus (Erik) Snoeijers

promotor: prof. dr. Karolien Poels (Universiteit Antwerpen)  
prof. dr. Ir Jan Leysen (Koninklijke Militaire School)

Antwerpen, mei 2018

Supervisors:            prof. dr. Karolien Poels (University of Antwerp)

                              prof. dr. Ir Jan Leysen (Royal Military Academy)

Doctoral committee: prof. dr. Michel Walrave (jury president, University of Antwerp)

                              prof. dr. Patrick Vyncke (Ghent University)

Doctoral jury:            prof. dr. Wouter Van Dooren (University of Antwerp)

                              dr. Hugo Marynissen (Antwerp Management School)

                              prof. dr. Katerina Tsetsura (University of Oklahoma)

Copyright © 2018 Erik Marinus Snoeijers

All rights reserved. No part of this publication may be reproduced in any form or by any means, without written permission from the author.

Cover layout: Anita Muys

Cover illustration: Marcel Koopman ([marcelkoopman.nl](http://marcelkoopman.nl))

“Meanwhile, the poor Babel fish, by effectively removing all barriers to communication between different races and cultures, has caused more and bloodier wars than anything else in the history of creation.”

(Adams, 1979, p. 54)



# Content

Foreword.....	ix
Acknowledgements .....	xi
Introduction.....	1
Disciplinary environment of crises.....	4
Definitions of crises .....	7
Management issues with crises.....	9
Crisis communication models and theory.....	13
Communication issues with crises .....	18
Crisis perception .....	20
Crisis communication and social media.....	23
Gaps in crisis communication research .....	28
Approach and organisation of the dissertation .....	30
Project 1: crisis communication and social media .....	35
#universitycrisis: the impact of social media type, source, and information on student responses towards a university crisis .....	37
Abstract .....	37
Introduction.....	37
Literature Review .....	39
Research question and hypotheses.....	43
Method.....	48
Results .....	51
Discussion and limitations.....	54
Conclusion and further research .....	57
References .....	59
Project 2: crisis perception .....	65
Crisis perception from within an organisation following a social media crisis message.....	67
Abstract .....	67
Introduction.....	67
Theoretical background.....	68
Research question and hypotheses.....	76
Research design .....	78
Results .....	82
Discussion.....	84
Conclusion .....	86

References .....	87
Project 3: human factors in crisis perception.....	93
Factors that influence organisational crisis perception from an internal stakeholder's point of view. ....	95
Abstract .....	95
Introduction.....	96
Theoretical framework .....	97
Method.....	103
Results .....	109
Discussion.....	111
Conclusion .....	118
Literature .....	118
Additional discussion of results .....	125
Culture.....	126
Project 4: crisis communication exercise.....	129
A crisis communication exercise simulation: individual profiles having an influence on organisational crisis perception .....	131
Abstract .....	131
Introduction.....	131
Theoretical background.....	133
Method.....	143
Results .....	148
Discussion.....	152
Conclusion .....	157
References .....	158
Appendices .....	166
Conclusion .....	171
Practical implications and recommendations.....	172
Theoretical implications.....	175
Future research .....	178
Final considerations .....	180
References.....	183
Summary in Dutch.....	209

## *List of figures and tables*

Figure 1: Crisis management and its disciplinary environment.....	5
Figure 2: The traditional and the simplified Chinese word for "crisis", often misinterpreted .....	9
Figure 3: Needs and availability of information during a crisis (adapted from Marynissen et al., 2010).....	19
Figure 4: Needs and availability of information during a crisis (adapted from Marynissen et al., 2010).....	98
Figure 5: Individual factors and personality traits, and possible correlations .....	141
Figure 6: Issue-driven crisis build-up model with human factors influencing crisis perception .....	178
Table 1: Research results by hypothesis .....	52
Table 2: Stimuli in 2*2 conditions .....	79
Table 3: Adapted from Personal Involvement Inventory (Zaichkowsky, 1994) .....	80
Table 4: Crisis perception scale items .....	81
Table 5: Issue perception scale items .....	81
Table 6: Willingness-to-act items.....	82
Table 7: Significant ANOVA results.....	83
Table 8: Interaction effects on crisis and issue perception, and willingness to act, when commitment is high .....	84
Table 9: Scenario stages .....	107
Table 10: Crisis perception attributes and items .....	108
Table 11: Overview of main statistical outcome for hypotheses .....	110
Table 12: Constructs and items from the crisis perception scale .....	147
Table 13: Results from repeated measures ANOVA with between-subject factors, with crisis perception score as outcome variable.....	149
Table 14: Factor correlations in Pearson's $r$ .....	151





## Foreword

What you are about to read in this book, is a report of the results of my digging into the subject of crisis communication by organisations. Still, apart from the content of this research and its results which I will discuss in detail in the next chapters, the broader context of this scholarly feat may be of interest, which is why I chose to write it down in this foreword.

Commencing a journey that may lead towards a PhD degree, is no adventure to be taken lightly. One enters into an agreement to start but also to finish working on a subject for several years, and it is no commitment to go back on without ending in failure. When I was asked to come and teach communication courses at the Royal Military Academy in 2010, the plan to undertake a third cycle academic education had already taken form, having myself applied for a full-time research position in crisis communication at the department of Economics, Management, and Leadership in the same Academy a year earlier. That, together with the communication courses that I was teaching, as well as the fact that I became part of the Social and Military Sciences faculty research group of Risk, Crisis, and Disaster Management, induced me to engage in research in the domain of crisis communication. The proposition on the basis of which my PhD study had been accepted by the University of Antwerp and the Royal Military Academy, by the latter as a co-doctorate, held on the one hand the argumentation that government organisations, such as my employer Belgian Defence, need to be able to communicate in a swift and effective way, especially when problems or crises occur, and on the other hand the observation that Defence's communication policy tends to be at odds with good practices, an understanding I gained during the 8 years that I worked for Defence's public relations department. Additionally, the image of Belgian National Defence in the public opinion, that of *la grande muette*, 'the big mute', makes one suspect that the organisation has issues with crisis communication, examples of which include the unfortunate corporate communication on Operation Vigilant Guardian (Bertolo, 2017) and, more recently, the events surrounding the fighter-jet acquisition files.

In my quest for demarcating my subject, I met a fellow researcher, Hugo Marynissen, who was then working on his PhD at Cranfield University, UK. He invited me to assist him in his research (Marynissen, Ladkin, Denyer, Snoeijers, and Van Achte, 2013), putting me on the way for my own projects. During this first research project, I was able to conduct a pre-study for my subject and find my way in the literature on risk and crisis communication and, more importantly, on perception. Because it was my first but not my own research project, and in view of the fact that I could take advantage of the experience for zeroing my own research - zeroing is a military term for sight setting that enables a firearm to shoot on target - I referred to this research as project zero throughout my contacts during the whole of my research. However, I chose not to include that study in this report. I have continued to work together with Hugo, e.g. at Antwerp Management School and in preparing the crisis communication team Discipline 5 (emergency communication and information to the citizens) from Belgium's federal government crisis centre, who won a European award for their social media communication during the awful assaults in Brussels airport and in the Brussels metro, March 22, 2016.

My own research really got under way by 2013, grounded on Timothy Coombs' Situational Crisis Communication Theory and the fast-evolving communication research field of social media, initially inspired by then fellow PhD candidate An-Sofie Claeys at the Royal Military Academy. In 2014, I was lucky enough to meet prof. Coombs at a seminar in Antwerp, still in an early stage of my PhD study, to discuss my research subject. During our short conversation, he stressed the fact that the perception of stakeholders determines the designation of an event as a crisis and that this aspect of his theory had scarcely been researched. My subject began to take form.

The rest of my story you can read in this book.

## Acknowledgements

I would like to thank my promotors, prof. Karolien Poels en prof. Jan Leysen, for their guidance and trust, and for providing me with the opportunities and facilities to perform my research and expanding my expertise and professional and academic network. I am also grateful to the other members of my PhD committee, prof. Michel Walrave and prof. Patrick Vyncke, who regularly assessed and (re)oriented my studies and were a continuous source of encouragement. I am indebted to dr. Hugo Marynissen, who included me in his PhD research and thus supported me in laying the basis for my own research. For their feedback on my papers and research in general, and for introducing me in the international circle of crisis communication and public relations researchers, I am beholden to prof. Katerina Tsetsura, chair of the Public Relations Division of the International Communication Association, and her colleagues.

I got continuous support from my colleagues at the department of Economics, Management and Leadership, especially from lieutenant-colonels Ivo Van Lembergen and Xavier Balanck, and from my fellow PhD students at the University of Antwerp, specifically within the research group Media and ICT in Organisations and Society (MIOS). Also, the colleagues at the federal government communication network CommNet have been a major help and support.

At a more personal level, there are numerous friends who deserve my gratefulness for their support and for sparking my inspiration, and by not mentioning them all by name I hope I do not risk leaving anyone out, which makes my gratitude no less sincere. Cathérine, my other half, has not only been morally supportive and patient with me, she also incited me to carry on when things were looking a bit bleak. That was the case after my dad died in December 2016. If he were still alive, he may not have been able to grasp my defending my PhD research, Alzheimer's disease having adversely affected him, but I am sure that he would have been proud if he knew. Thank you, dad.

Finally, I may have to thank myself. When in elementary school the other boys in school said that they wanted to become firemen or astronauts in later life, I was determined to become a professor. Finally, better late than never, I seem to be getting there.

## Introduction

The subject of this dissertation is crisis communication, containing the concepts *crisis* and *communication*. A crisis is a major occurrence with a potentially negative outcome affecting an organisation, company, or industry, as well as its publics, products, services, or good name. A crisis interrupts normal business transactions and can sometimes threaten the existence of an organisation. In a crisis, in contrast to a problem, emotions are on the edge, brains are not fully functioning, and events are occurring so rapidly that drafting or even following a plan during a crisis is very difficult (Fearn-Banks, 2016). Crisis management is a process of strategic planning for a crisis, which removes some of the risk and uncertainty from the negative occurrence and thereby allows the organisation to be in greater control of its destiny (Fearn-Banks, 2016). Crisis communication is the dialog between an organisation and its publics prior to, during, and after the negative occurrence. The dialog details strategies and tactics designed to minimise damage to the image of the organisation (Fearn-Banks, 2016).

In this introduction, I will position the subject of crisis communication in the domain of communication research, crisis research and other adjacent research domains. From that, I will gather elements for a new working definition for crises and identify the gaps in current crisis communication research, on the basis of which I will develop my research questions.

To situate crisis communication in the domain of communication sciences, I would like to refer to Cornelissen's reference work on corporate communication, in which he defines corporate communication as "a management function that offers a framework for the effective coordination of all internal and external communication with the overall purpose of establishing and maintaining favourable reputations with stakeholder groups upon which the organisation is dependent" (Cornelissen, 2014, p. 5). In the same book, Cornelissen illustrates the evolution of communication from a tactical support tool in the last century to a strategic asset in our century, where stakeholders have become active agents in

the communication dynamics of organisations and reputations have become more vulnerable than ever (Cornelissen, 2014).

For any organisation, a favourable reputation can attract customers, generate investments, improve performance, attract top-employee talent, and create a competitive advantage (Coombs, 2007b). Crises threaten to damage reputations because a crisis gives people reasons to think badly of an organisation, possibly causing stakeholders to sever ties to the organization or spread negative word of mouth about the organisation (Coombs, 2007b). Nothing damages reputation faster or deeper than a crisis or an issue mismanaged (Jaques, 2014). No organisation, no matter how financially successful, powerful, or reputable, is immune to crises. Very often, organizations ignore the warning signals which are so obvious in hindsight (Regeister and Larkin, 2008). Many organisations seem to struggle with communication during crisis situations, examples of which are British Petrol during the Deepwater Horizon environmental disaster (e.g. Coombs, 2014; Harlow, Brantley, and Harlow, 2011) and, more recently, Volkswagen regarding an exhaustion-regulating software addition to their cars (e.g. Zhang, Marita, Veijalainen, Wang, and Kotkov, 2016). Stakeholders expect organisations to perform and behave in an open, socially caring, and responsible way, all the more in times of intense pressure, where there is a real or perceived risk or crisis (Regeister and Larkin, 2008).

The communication challenges involved in crisis situations have been and still are broadly studied and documented (e.g. Austin and Jin, 2017; Fearn-Banks, 2016; Frandsen and Johansen, 2017; Jaques, 2014; Schwarz, Seeger, and Auer, 2016), but often only focus on the for-profit sector, probably since the possible damage to a company's reputation involves direct economic loss. Therefore, the body of research devoted to crisis communication rarely addresses one of the largest areas of public relations, the public sector (Sisco, 2012). It is important, though, for government organisations to handle a crisis professionally and thus adopt effective crisis communication (Horsley & Barker, 2002), as they are accountable to their main stakeholders, the public and the political decision makers. To avoid cuts in funds, personnel, or other resources, it is in their

interest to protect their reputation and safeguard the public and politicians' confidence in them. Research in profit or non-profit organisations may differ in the motivation of members of an organisation to act in case of crises, and in the organisational culture, which not only differs between profit and non-profit organisations, but also between each organisation. In a government context, crisis communication is closely connected with disaster management and emergency planning, in which communication has its own discipline, discipline 5: informing, warning, and reassuring the citizens (Mertens, 2014). Other disciplines are firefighting and civil protection (discipline 1), medical and psycho-social assistance (discipline 2), police (discipline 3), logistic support (discipline 4) and, more recently, legal support (discipline 6). Communication mechanisms during disasters and emergencies are similar to those at work during organisational crises, but in this dissertation, I will essentially focus on the latter form of crises. Mitroff (2001) explains that difference by linking emergency and risk management to natural disasters, and crisis management to man-made crises, which, contrarily to natural disasters, are not inevitable.

Crisis communication has grown into a full-fledged research domain within the last decade, which does not only show by the growing number of papers in academic journals and conferences, but for instance also by international communication conferences, such as the International Crisis and Risk Communication Conference, held at the University of Central Florida since 2011, and by the establishment of a full crisis communication section within the European Communication Research and Education Association since 2015. Crisis communication is situated within organisational communication, aimed at corporate audiences, or stakeholders, such as shareholders, journalists, and legislators, and having a long-term perspective not directly aimed at generating profit (Van Riel and Fombrun, 2007), by which crisis communication differs from marketing communication and management communication. Like other subfields of the social sciences, crisis communication has its foundations in other behavioural sciences. Schwarz et al. (2016) refer to political science, management and economics, psychology, sociology, anthropology, and communication sciences

as disciplinary foundations of crisis communication. These different domains may represent the root of crisis communication research, they all present a wide angle on crisis communication research. Therefore, I have focused on the domains of crisis research, organisations and management, and communications, fields of study that leading crisis communication scholar W. Timothy Coombs identifies as allied fields in his research (Coombs, 2010b; Coombs, 2014). Moreover, Coombs' work on situational crisis communication theory has been the backbone of my PhD studies.

## Disciplinary environment of crises

Where issues and crisis management intersect and converge with risk and reputation is one of the most dynamic and challenging areas of management and professional communication (Jaques, 2014). Coombs (2010b) establishes the position of crisis communication within the larger venues of public relations and corporate communications, by pointing out the connections with risk communication, issues and risk management, reputation management, and disaster communication. Not only are issues management and crisis management core management disciplines, they are two of the most principal elements of organisational communications practice (Jaques, 2014). Together, they provide organisations with tools and processes to identify risks and issues early; take planned action to influence the course of those issues; respond effectively if issues develop into crises; and protect organisational reputation during and after a crisis (Jaques, 2014). Risk management differs from crisis management by focussing exclusively on the pre-crisis stage, by eliminating, reducing, or controlling pure risks (safety, hazards, ...), and to gain enhanced utility or benefit and avoid detriment from speculative risks (investment, HR, ...) (Frandsen and Johansen, 2017). Issue management, risk management, reputation management, and disaster management are therefore intertwined with crisis management. Figure 1 offers a schematic overview.





Figure 1: Crisis management and its disciplinary environment

Strauss and Jonkman (2017) define *issues management* as encompassing “the monitoring or scanning of the organizational environment in order to identify issues and trends, adapt to changes, and/or to decide for managerial or communicative actions that are aimed at creating mutual understanding with relevant stakeholders” (Strauss and Jonkman, 2017, p.35). Heath and Palenchar (2008) hint at the relationship between issues management and crisis management, as issues can create crises for organisations if the organisations do not manage the issue properly (Heath and Palenchar, 2008; Van Wijk, 2008). However, Regester and Larkin (2008) state that issues management is proactive in that it tries to identify possible changes and influence decisions relating to those changes before they have a negative effect on an organisation, whereas crisis management is a more reactive discipline dealing with a situation after it becomes public and affects the company (Regester and Larking, 2008, p. 42). Effective issues management is a form of crisis prevention (Coombs, 2014). Luoma-aho, Tirkkonen, and Vos (2013) take this further by concluding that by early issue identification, organisations “have a better chance of becoming one of the actors on stage, whereas slow reactions may lead to them having just a place in the audience” (Luoma-aho et al., 2013, p.248), referring to the strategic advantage an organisation has when perceiving a crisis first and taking the lead in the subsequent crisis communication (Fearn-Banks, 2016; Snoeiijers and Poels, 2017). Conversely, crises can also generate issues by focussing attention on a problem (Heath and Palenchar, 2008), one of the reasons entire industries can become concerned with a crisis (Coombs, 2010b).

In the same way as an issue, a risk can develop into a crisis. In the discipline of *risk management* and *risk communication*, a risk represents the potential to inflict harm or to cause loss, and threat is the quantified potential of a risk (Coombs, 2010b). A risk can cause a crisis, which is why crisis preparation itself is guided by risk assessments (Williams and Olaniran, 1998). Not only an actual risk may pose a threat, but also a perceived risk. Studies of risk perception show that there is very little correlation between the risks that experts know will harm people and the environment, and the risk that cause people to be concerned and upset (Jaques, 2014). Risk communication professionals therefore risk being perceived as untrustworthy or unconcerned when they violate communication norms or expectations of the publics they are working with even though the information may be correct and the actual environmental or health risk very low (Williams and Olaniran, 1998). Effective risk management can prevent crises by organisations identifying a risk and taking action to eliminate or reduce it (Coombs, 2014).

In *reputation management*, reputations are a critical resource and concern for organisations, representing how stakeholders perceive an organisation, based on how well the organisation meets certain expectations stakeholders have for that organisation (Coombs, 2010b). It is a vital, intangible resource that must be protected (Van Riel and Fombrun, 2007). Any crisis threatens an organisation's reputation, and effective crisis communication minimizes or helps to repair the damage an ongoing crisis inflicts on the organisation's reputation (Coombs, 2014). Therefore, crisis communication is a crucial tool for building and maintaining a favourable reputation (Coombs, 2010b). Social issues form the link between reputation management, issues management and crisis management, as "social issues may be part of the evaluative criteria stakeholders employ to judge reputations" (Coombs, 2010b, p. 59).

Another research domain related to crisis communication is *disaster management*, as mentioned earlier. Any event that cannot be handled at a local level is a disaster and disaster management needs coordination of multiple government agencies, posing a communication concern (Coombs, 2010b). In

disaster research, Quarantelli, as quoted by Perry (2018), has defined a disaster as a sudden-onset occasion that seriously disrupts the routines of collective units and causes the adoption of unplanned courses of action to adjust to the disruption, posing danger to valued social objects. Disaster communication is therefore a typical government responsibility. However, disasters can spawn crises for individual organisations, private or public, when stakeholders evaluate the disaster management as incompetent (Coombs, 2010b).

## Definitions of crises

Despite the obvious significance of crisis communication in corporate communication management, the concept of crisis does not have a leading role in management literature, from which crisis research stems (Roux-Dufort and Lalonde, 2013). This induces a lack of consensus around the definition of crises, which undermines the foundations of crisis management as a field (Kouzmin, 2008). Although the studies in this dissertation are confined to organisational crises, there are still many definitions of crises. One of the earliest is Hermann's (1963), who defines an organisational crisis as a *menace* to the most important values of an organisation, a situation in which there is *little time* to act and which has an element of *surprise* (p. 82). Some fifteen years later, Selbst (1978) refers to a crisis as "any action or failure to act that interferes with an (organisation's) ongoing functions, the acceptable attainment of its objectives, its viability or survival, or that has a *detrimental* personal effect as *perceived* by the majority of its employees, clients or constituents" (p. 844). Tjosvold (1984) takes over the notion of perception, in saying that a crisis occurs when decision makers perceive a *threat* to valuable interests of the organisation, doubt whether a reaction will protect those interests and believe that a *swift reaction* is needed (p. 130). In his crisis communication handbook, Fink (1986) adds some elements, when he defines a crisis as a situation that threatens to escalate in intensity, by which it attracts the *attention* of the media and political decision makers. That situation impedes the daily business of the organisation, *endangers the positive public image* of the organisation and its agents, and thus damages the organisation's

results. Mitroff, Shrivastava & Udwadia (1987) stress the *economic loss* and *reputation damage* for large organisations and the damage they can cause to people, environment, and social structures. In that sense, they adapt the interpretation of a crisis from a disaster management point of view. At the end of the nineties of the last century, crisis research evolves in a direction in which it still finds itself today to a considerable extent, resulting in publications in the domain of public relations and strategic communication. Benoit (1997) studies attacks and complaints leading to an organisational crisis and stakeholders holding an organisation responsible for a negatively perceived action, by which he confirms the *individual perceiving role* of stakeholders. Pearson & Clair (1998) consider the external and internal stakeholders' psyche, in defining a crisis as a hardly likely event having a high impact that critical stakeholders perceive as a personal and social threat to the viability of the organisation. To the already existing elements in a crisis definition, Mitroff (2001) adds the feature that it *cannot be contained* within the walls of an organisation. More recent authors keep to the former interpretations of crises, such as James, Wooten & Dushek (2011), who point out perceived urgency, impact on stakeholders and media attention and impact, and Ulmer, Sellnow & Seeger (2013), who refer to threats and opportunities for organisations in crisis. They join former authors (e.g. Keown & McMullan, 1997; Ryan, 1990) in that respect, but also in referring to the Chinese character for "crisis", supposedly carrying the meaning of "danger" and "opportunity". Although a popular image in presentations (Figure 2), this seems not to be a correct interpretation of *wéijī* (Mair, 2009). Finally, I would like to refer to Coombs (2014), who combines the definitions of crisis by his predecessors in his own, as "the perception of an unpredictable event that threatens important expectancies of stakeholders related to health, safety, environmental and economic issues, which can seriously impact an organization's performance and generate negative outcomes" (p. 3). He stresses that the perception of stakeholders determines the designation of an event as a crisis.

# 危機 危机

Figure 2: The traditional and the simplified Chinese word for "crisis", often misinterpreted

For my research, particularly from project 3 on and more specifically for elaborating a crisis perception scale, I retained the most common aspects of a crisis from the definitions in the literature: little time, threatened expectations, and media attention. I also incorporated an item on attributed responsibility of an organisation in a crisis situation, of which Benoit (1997) speaks explicitly, but which other authors discuss in the context of communication strategies. Some authors (Hermann, 1963; James et al., 2011; Pearson & Clair, 1998; Tjosvold, 1984; Ulmer et al., 2013) touch upon the insecurity during a crisis, which can be interpreted as a lack of information, especially in the early stage of a crisis (Sayegh, Anthony & Perrewé, 2004). The notion of an event turning into a crisis only when perceived as such is one of the key building stones of my PhD. A working definition of crises for the research that follows can be as follows:

*A crisis starts when a stakeholder sees his expectations of an organisation threatened; this fast-evolving situation on which very little information is available initially, can endanger the organisation's interests, modified by the related communication or the lack of it; this attracts the attention of other stakeholders and the media, dependent on the responsibility attributed to the organisation by the stakeholders and the success of the organisational communication.*

## Management issues with crises

To cope with a crisis in its initial stage, an organisation must be aware of the continuity of a crisis. Multiple authors have tried to conceive the phases of a crisis in a model. Fink (1986) sees a crisis as a disease striking an organisation in four stages: prodromal or symptomatic, acute, chronic, and finally healing. In the

first stage, a disease or a crisis can be cured or prevented. Mitroff (2001) describes five stages: signal detection, analysis and prevention, damage control, recovery and lessons learned, which is parallel to the classification by Fink (1986). Richardson (1994) proposes three stages, pre-crisis, crisis and post-crisis, a classification adopted by Coombs (2014). The pre-crisis phase, the stage on which this dissertation focuses, consists of signal detection, prevention, and crisis preparation. The initial stage of signal detection involves issues management, risk management and reputation management (Coombs, 2014). Goodman (2017) discusses the need for reputation, issues management, and crisis management in various crisis stages. Successfully managing those functions implies communication skills and strategic decision-making. Those decisions usually come from managers who rarely have a background in communication. Nevertheless, the place of communication professionals and managers within an organisation seems to be determinative for successful (crisis) communication (e.g. Donnellon, Gray, and Bougon, 1986; Tjosvold, 1984; Van Gorp and Pauwels, 2009). Smart & Vertinsky (1977) ascertain that, during a crisis, important decisions are taken by a small group of people, who must solve problems and mobilise means on a very short notice, inducing elevated levels of emotional and physical stress. Stress, uncertainty, limited time, and threats to the organisational goals can aggravate a crisis, making the decision process during crises vulnerable.

An organisation being able to adapt and cope with a crisis, according to Dutton & Ashford (1993), is successful partly by the process of allowing individuals to signal problems to higher management, to communicate about them and by that to influence higher management in their decisions. Tjosvold (1984) takes it even further by saying that managers typically are not aware of information needed to anticipate problems. Perception of a situation as a crisis, affects a decision maker's feelings, orientation, and success, which inhibits decision-making. Pearson & Clair (1998) also conclude that during a crisis, decisions are under pressure of a sense of lack of time and are coloured by cognitive limitations. Additionally, Mishra (1996) points out that decentralised decisions, clear

communication, and cooperation within the organisation and outside, can lead to a faster crisis solution, but that requires trust between higher management and the work floor. Fearn-Banks (2016) states that open communication should be a basic value in corporate culture and warns against CEO's not wanting to speak to the head of public relations, and employees fearing reprisals from superiors when signalling problems.

According to Marra (1999), the dominant coalition sets an organisation's strategy and determines the communication during a crisis. The right strategy leads to effective crisis management, the wrong strategy will worsen the situation. Excellent crisis communication cannot straighten out bad management. Therefore, Marra (1999) advises that public relations professionals shift their attention from crisis communication techniques to crisis strategy, implying a change of organisational culture and autonomy, an important condition for public relations professionals to access resources and information in a pre-crisis phase and thereafter. Guth (1995) advances a proactive public relations policy in public and private organisations to prevent and handle crises, which will be unsuccessful without a public relations head playing a key role in the decision process. Van Gorp & Pauwels (2009) recommend situating the communication function close to top management. Communication professionals need power and influence to be able to perform their job and the head of communication should be a member of the board of directors or a senior and high-ranking staff member. Grunig & Grunig (2000) place that person within the dominant coalition to steer strategic communication and stakeholder relations. These authors' excellence theory will be discussed further on.

Each year, Tench, Verčič, Zerfass, Moreno and Verhoeven (2017) publish the much-cited European Communication Monitor, the largest annual survey in professional communication in the world since 2007, providing a yearly state of affairs in communication studies and the communication profession. In their report, excellent communication departments (Grunig, 2013; cf. *infra*) have much autonomy and influence on organisational decisions and correspondingly add more to the success of their organisation than communication departments who



do not. That contribution to success stands out during difficulties and crises, a reason Zerfass et al. (2015) emphasize the importance of communication management being a strategic organisational function. Van Gorp and Pauwels (2009) studied communication managers in Belgian companies and put forward four principles of excellence for that function. Firstly, grouping communication functions within a distinct and autonomous communication department, managed by a communication manager. Secondly, the communication function should structurally be situated close to the organisation's top management, so that the communication manager participates in strategic decision processes: they need authority to fully exercise their function. Further, a communication manager should have a clear communication profile, having to take decisions in communication policy. Communication can only be an added value to an organisation when the function does not merely involves executing tasks. Lastly, within the communication department, diversity, especially in gender, is important. Few companies answer to all four of these principles. Communication managers do not often have a seat in the board of directors and a minority of communication managers hold a communication related degree. Recent research (e.g. Zerfass, Moreno, Tench, Verčič, and Verhoeven, 2017) does not seem to indicate any improvement.

To effectively manage a crisis to avoid reputation damage to the organisations, management should be aware of the pitfalls of organisational structure and culture described by the research above. Managers may well be at the steering wheel of an organisation, they may not be the right persons to communicate to avoid or manage an organisational crisis. Communication experts or public relations professionals seem to hold the competences for crisis communication, but they are often not situated at a strategical level within an organisation, making it difficult to influence organisational decision-making, while communication is a crucial function in crisis management. Different scholars have developed theories on crisis communication and organisations.



## Crisis communication models and theory

Crises generate high levels of uncertainty about what is happening and why, and what should be done about it; theory informs decisions and actions and helps build a more comprehensive understanding of crises: how they develop, what role they play and how they can be managed (Sellnow and Seeger, 2013). I will discuss the main theoretical frameworks that are germane to crisis communication in a pre-crisis phase.

Considering the disciplinary basis of crisis communication (cf. supra), and the focus of this dissertation on the pre-crisis phase, the domain of issues management provides a first conceptual framework for studying crisis communication. Bridges (2004) ties the subject of issues management to six theoretical frameworks: systems theory, social exchange theory, rhetorical analysis, issue life-cycle theory, legitimacy gap theory, and the powerful stakeholder theory. Systems and powerful stakeholder theories explain the organization's choice of issues on which to expend resources; legitimacy gap and issue life-cycle theories explain issue development; rhetorical analysis and social exchange theory present approaches to practicing issues management (Bridges, 2004). In *systems theory*, each organisation is a system of integrated interdependent parts, possibly stakeholders, each with the potential to affect the organisation in some way. The model supports the need for environmental scanning and other research to continually monitor the environment and a plan that permits the organization to respond to environmental cues and re-establish itself in a balanced state. This balanced state permits the organization to function with the most autonomy in its environment (Bridges, 2004, pp. 54-55). *Powerful stakeholder theory* could be considered an extension of systems theory, as it attempts to describe stakeholder roles in the organizational system, suggesting that public relations efforts and budget should focus on the most important (strategic) stakeholders. *Legitimacy gap theory* tells that issues arise from discrepancies between the organisation's behaviour and society's expectations of that organisation, which threatens its status as a legitimate

member of the business community (Bridges, 2004; Jaques, 2014, p. 26). *Issue life-cycle theory* discusses issues from the perspective of the process of a developing issue, beginning with a concern in society that a problem exists. If unresolved, the issue grows, will involve more stakeholders, but eventually will fade from public attention. *Rhetorical analysis* assumes that both words (or other symbolic communication) and events (or other corporate behaviours) have different meanings to different participants and that dialogue creates an understanding of the meanings various groups attach to events or other facts and eventually to proposed solutions to a contested issue. Finally, *social exchange theory* suggests a method of maintaining relationships with powerful stakeholders and of maintaining a positive corporate identity that can be exhibited when crisis communication is needed. It also suggests that long-term positive behaviour is needed to support short-term communication efforts (Bridges, 2004). In addition, Jaques (2014) discusses two other mass communication theories that have relevance to issues management: agenda-setting and framing. *Agenda-setting* involves the creation of a public agenda, built on what the public believes to be the most prominent issues or concerns, and the formation of a policy agenda, where government decision-makers respond to real or perceived public concerns. Internet has provided stakeholders and activists with powerful tools to push their priorities onto the public agenda (Jaques, 2014). Whereas agenda-setting is about a message being top-of-mind with an audience, *framing* is about getting that audience to look at the message from a specific viewpoint, focusing on some elements and excluding others in order to influence opinions.

Moving from issues management to crisis management and communication, Grunig and Hunt (1984) based their excellence theory on four models of public relations practices (Grunig and Grunig, 2000; Grunig, 2013). Those models are arranged in a spectrum, where model 1 is the least desirable and model 4 the most excellent. In model 1, the publicity model, public relations professionals are just interested in making their activities or products known, whether by truthful messages or not. In model 2, the public information model, organisations wish to

report information objectively and truthfully, by a one-way transfer of information from the organisation to the public, without much research or evaluation. Model 3, the two-way asymmetric or scientific persuasion model, implies that public relation practitioners use social theory and research to help persuade publics to accept the organisation's point of view, although the organisation will not change as a result of possible findings. Publics should adhere to the organisation's viewpoint. Model 4, the two-way symmetric or mutual understanding model, has public relations practitioners take on the role of intermediary between an organisation and its publics. The accent is on dialogue and the organisation or the publics may change as a result of communication. Research is used to communicate rather than to persuade. Public relations answering to this fourth model are considered to be excellent. The organisation knows what its stakeholders need, and stakeholders understand the organisation's motives and needs. During crises, organisations are forced to practice symmetrical communications with adversarial publics (Fearn-Banks, 2016). Although public relations practitioners aspire the fourth model of excellence, many organisations keep practicing inferior models. Social media have opened up many possibilities of two-way symmetrical practice (Fearn-Banks, 2016). Grunig's excellence theory has been the subject of further research and theory development (e.g. Tench et al., 2017; Van Gorp and Pauwels, 2009).

Fearn-Banks (2016) focuses on *apologia theory*, being an effort by an organisation to defend reputation and protect image after being accused of a misdeed. Apart from an actual apology, the theory includes denial (dissociation), explanation (persuasive account) and expressing sorrow. Apologia theory is one of the two theories Hearit has studied (Hearit, 1995; Hearit, 2004). He addresses two ethical dimensions of crisis communication: the manner of communication (an apology must be truthful, sincere, timely, and voluntary; it must address all the stakeholders in an appropriate context), and the content of communication (an apology must explicitly acknowledge wrongdoing, fully accept responsibility, express regret, identify with injured stakeholders, ask for forgiveness, seek reconciliation, fully disclose relevant information, provide an explanation, and

offer appropriate corrective action and compensation) (Hearit, 2004). Fearn-Banks (2016) brings the apologia theory down to five w's of apology: why, what, who, where and when. Her approach of apologia is finding an answer to each of the questions, which will probably differ between organisations and situations. Another aspect of Hearit's crisis communication theory building is *terminological control theory* (Hearit and Courtright, 2003), in which he states that "crises are terminological creations conceived by human agents and, consequently, are managed and resolved terminologically" (p. 87). He claims that crisis communication is the core of the crisis management process. In any crisis situation, it is important for the organisation in crisis to be able to control the terminology and thus to influence the interpretations and counter-interpretations used and produced by the stakeholders involved (Hearit and Courtright, 2003).

As opposed to the more normative approach of apologia theory, numerous case studies in the United States and the United Kingdom led Benoit to developing his *image repair theory* (Benoit, 1997), building on apologia theory. In that theory, maintaining a favourable reputation is the key goal of communication. A crisis is triggered by an attack in which the accused is held responsible for an action that is considered offensive by a salient audience. Whether an organisation is responsible or not, does not matter: perception is more important than reality (Benoit, 1997). Image repair theory focuses on crisis messaging strategies to respond to such attacks or perceptions: denial and evasion of responsibility, rejecting or reducing responsibility, reducing offensiveness of the act, corrective action, and finally mortification, which tries to restore an image by asking forgiveness. Applying this theory in crisis communication, and more specifically in a pre-crisis phase, Benoit (1997) stresses the importance of preparing crisis contingency plans in order to respond timely to an attack. Image repair theory has developed in many different directions since the initial research (Johansen and Frandsen, 2017), and it was a source of inspiration for Coombs' situational crisis communication theory (cf. infra).

Cancel, Cameron, Sallot, and Mitrook (1997), in their discussion on *contingency theory*, argue that the solution to an organisational problem will always depend

on a series of situational variables and cannot be generalised for all organisations. In that way, they are critical of Grunig's excellence theory (cf. supra) for being too simplistic to capture the complexity of public relations. Depending on the audiences and the situational variables or contingency factors, organisations take a stance between advocacy (strong defence) and accommodation (giving in). Cancel et al. (1997) identified different contingency factors, grouped in factors internal to the organisation or external to it, and in predisposing factors existing before the crisis, and situational contingency factors that influence a shift in stance towards stakeholders during a crisis. Contingency theory has hardly been developed further since the initial research (Johansen and Frandsen, 2017).

The mainstream theory of organisational crisis communication today, the Situational Crisis Communication Theory (SCCT), was the result of case studies in corporate organisations. This theory (Coombs, 2014), based on Weiner's attribution theory (Weiner, 1985), contains a description of response strategies to specific crises. An organisation can protect and repair its reputation through communication, and the crisis type can determine the proper response strategy. Coombs (2014) classified crises in three groups: victim crises, where the organisation has little or no responsibility; accidental crises, where the organisation bears part of the responsibility; and intentional crises, where the organisation could have prevented the crisis. Depending on the organisation's reputation, response strategies involve denying the crisis, diminishing it, or rebuilding the relationship with the stakeholders, combined with bolstering as secondary response strategies. These response strategies are often combined with others, such as "stealing thunder" (Arpan and Roskos-Ewoldsen, 2005), a strategy in which an organisation proactively diffuses news about a crisis, including negative news, to prevent others to bring it out and forcing the organisation in the defence. This technique of stealing thunder has proven to be successful in crisis communication (e.g. Claeys and Cauberghe, 2012).

The studies presented in this dissertation, have their theoretical basis in systems theory and powerful stakeholder theory, by assuming the need for environmental

scanning and the importance of stakeholders, as well as legitimacy gap theory, by considering threats to expectations. The issues life-cycle theory will be used in the empirical crisis scenarios. Rhetorical analysis does provide some basis for different interpretation of situations by different stakeholders, represented in the research questions from project 2 on. Grunig's excellence theory provides a more normative framework for studying the organisations involved in the different studies. Terminological control theory illustrates the importance of seizing the opportunity of communicating as early as possible and claiming the message. Through Coombs' situational crisis communication theory, specifically the study of crises in an early phase and perception having the upper hand over reality, there is an influence of Benoit's image repair theory and Hearit's apologia theory.

## Communication issues with crises

Much of the crisis communication literature focuses on reputation management and the content and form of organisational communication in line with crisis type, stakeholder groups and organisational reputation. These aspects are situated mainly in the crisis or post-crisis phase, whereas this dissertation centres on the pre-crisis phase and crisis perception. There are some aspects of communication that can be situated in the initial phase of a crisis.

Crisis communication is communication within a narrow time frame and without much initial information to rely on. The situation can rapidly change in any direction, fuelling uncertainty. This influences stakeholders, who feel themselves victim of the crisis, which decreases their information processing capacity, sometimes to a mere 20% (Coombs, 2014). That is why crisis communication demands swift, consistent, clear, and plain communication, considering stakeholder's emotions (Coombs & Holladay, 2005), which are, after all, situated on the most fundamental level of interpersonal communication. Not all professional profiles take that kind of communication to a good end. Marynissen, Pieters, Van Dorpe, van het Erve & Vergeer (2010) consider the lack of information during a crisis and the need of it among stakeholders. Figure 3 shows that the available information on an incident or crisis, is not sufficient at

first for management to be able to control the situation but is even far less sufficient to fulfil the stakeholders' needs for information. Not communicating will lead to an information vacuum, which someone will fill. The organisation can do that with correct information, but others can do that as well with rumours, opinions, grievances... In providing the stakeholders rapidly with sufficient information, the organisation will be able to take the lead of the crisis communication. That puts them in a proactive, trustworthy role, opposed to that of a reactive, defensive, and thereby less reliable source of information.

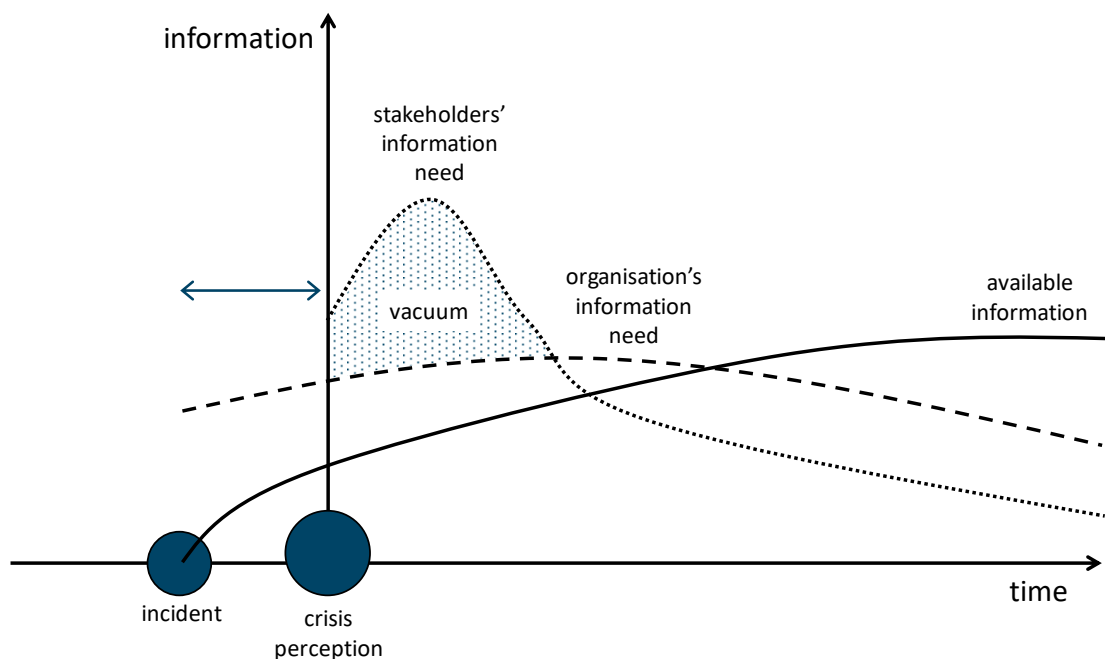


Figure 3: Needs and availability of information during a crisis (adapted from Marynissen et al., 2010)

Figure 3 shows that there is a time lapse between an incident and the moment that it is perceived as a crisis. The organisation can use that time to better prepare its communication and possibly demining the situation. Any stakeholder can perceive an event as a crisis, which is the reason an organisation had better not wait too long to communicate, to avoid being pushed into a defensive role. The self-disclosure strategy of stealing thunder (Arpan & Roskos-Ewoldsen, 2005) is one way to take the communication lead in a crisis, in which an organisation announces the crisis itself. By doing so, an organisation gains credibility and can frame that communication, which is extremely difficult when not being the first to communicate (Williams, Bourgeois & Croyle, 1993). Not



communicating gives the impression of an organisational cover-up, a perception that will be hard to counter.

Crisis communication is therefore not simply a variant of communication, not even a complex one. It is a policy instrument with which an organisation can strategically fight a crisis, and which calls for communication expertise. The earlier an organisation can communicate on a crisis, the higher the chances of success. That implies that an organisation perceives a crisis first, and therefore its needs the right people.

## Crisis perception

A crisis as the perception of an unpredictable event and the role of the first perceiver is a subject that has scarcely been studied in the crisis communication domain. Mitroff (2001) refers to warning signals an organisation can use to prevent a crisis. Earlier, Mitroff (1988) proposed a crisis communication model to detect signals of a crisis to come. Long before a crisis breaks out, there are signals pointing to an anomaly. Coombs (2001) calls it a crisis sensing mechanism, combining risk management, issues management and relationship management. Billings, Milburn & Schaalman (1980) mention an event that must be noticed, treated, and evaluated against normality before the organisation perceives it as a crisis.

In their research on organisations dealing with high-risk processes, Marynissen, Ladkin, Denyer, Snoeijers, and Van Achte (2013) examined the most relevant research in the domain of the risk perception. This introduction to crisis perception is largely based on the aforementioned research, as it was the base for my understanding of perception mechanisms in individual organisation members. Marynissen et al. (2013) state that perceptions are dynamic processes that lead to decisions and subsequent behaviour, and are largely based on individual and collective schemas, frames, or mental models and the way people try to fit new information into these existing schemas, frames, or mental models (Barr & Huff, 1997). When studying individual information perception and



interpretation, Weick's sense-making theory (Weick, 1969) is probably most cited. People attribute meaning to their own situation, based on previous experience and by creating a personal frame in which their actions make sense. The less adequate that sense-making is in a crisis situation, the higher the chance it will escalate. Actions taken during a crisis add sense to the situation, which will influence the crisis itself. This brings Weick (1969) to describe a delicate equilibrium between risky action leading to more sense and safe passivity, probably leading to more confusion. Marynissen et al. (2013) cite Donnellon, Gray & Bougon (1986), who also consider that individual perception and conclude that members of the same organisation perceive and interpret information in different ways. According to Weick (2005; p. 395), sense making is "a sprawling collection of ongoing interpretive actions", whereas Weick refers to both a process of interpretation and a process of taking action. The interpretation part refers to how individuals attempt to create order and make retrospective sense of the situations in which they find themselves, while the action part refers to individuals who are creating and sustaining images of a wider reality, in part to rationalize what they are doing (Marynissen et al., 2013). These notions of interpretation and action are also described by Donnellon and her colleagues as 'equifinal meanings' (Donnellon et al., 1986). Their research indicated that, although organisational members collectively act in the same way, each of them has a different understanding of the conveyed information. These different interpretations of a single message indicate a divide between the dissemination of information and the individual perception of that particular information (Marynissen et al., 2013).

Although this concept of equifinal meanings is partly based on Weick's theory of sense making, it differs on the level of taking action. According to Marynissen et al. (2013), Weick indicates a process in which individual action is taken based on retrospective sense making, while Donnellon emphasises that individual sense making results in collective action and similar behavioural implications. Weick and Donnellon's notion of interpretation of information is referring to 'interpretation in action', while for my research I seek to understand

'interpretation before action'. Marynissen et al. (2013) finally refer to Julian Orr (1996), who describes individual out-of-action perceptions in his ethnographic analysis of photocopier repair technicians. Although it was not Orr's primal intention to study interpretations and perceptions of given messages on an individual level, he observed how repair people received official messages and guidelines from management but perceived them in a different way than it was intended. It was through conversations with each other and with customers and based on expertise that these technicians developed individual interpretations of the received information (Marynissen et al., 2013).

Kiesler & Sproull (1982) analyse managers' perceptions, revealing that the mental image determining their decisions inhibits them to notice recent changes and thus possibly missing out essential information. On top of that, they are not inclined to adjust their views. That is confirmed by Smart & Vertinsky (1984), who show that during a crisis, managers create a reality for themselves and for their organisation, leading to differences in strategy among organisations but also among individuals. The individual perception of decision-makers affects the organisation's crisis strategy (Penrose, 2000). Pieters & Eeckman (2015) present ways to increase the probability of crisis perception by an organisation's personnel, being strategic communication, risk communication and organisational culture. Slovic (2000) points out the difference in perception between experts and non-experts in assessing risks, based on knowledge or on positive or negative connotations attached by an individual to a specific risk. Information can change those connotations. Tversky & Kahneman (1973) describe that phenomenon as affect heuristics. Information leading to an altered crisis perception is the subject of research by Baxter, Boet, Reid & Skidmore (2014), who conclude that yearly crisis simulations and exercises are effective in enhancing crisis recognition. Weick & Sutcliffe (2007) study high reliability organisations and observe that in those organisations, no link exists between knowledge and hierarchy and that experts should have a decisive role in particular decisions. They point out that early problem detection correlates with organisational culture, recommending a reporting culture and a just culture, in

which members of the organisation share errors and are not sanctioned for doing so. They argue for a flexible culture, which opposes a heavy, slow hierarchy by creating room for initiative and variation, and for a learning culture, improving individual capabilities and the exchange of information. Paraskevas & Altenay (2013) consider lessons learned from crises and sharing that information, to be a condition for successful signal detection and thus crisis perception. An organisation can be effective in its crisis perception depending on its capacity to analyse the environment and detect and share the relevant signals. They point out that no two organisations have the same view on crisis signal detection: some managers say it is everybody's responsibility, other would limit it to specific functions. Research of individual risk perception (Marynissen et al., 2013) demonstrates the importance of individual profiles (training, organisational department ...) on someone's perception of risks.

Apparently, individual crisis perceptions can have consequences for an organisation's crisis management. A person's profile, based on experience but also on study and training, determines how he or she perceives a crisis. To take advantage of that for crisis communication, an organisation must open to the individual contribution of experts in communication. A matter of increasing concern with public relations practitioners and communication experts, are social media (Zerfass et al., 2017).

## Crisis communication and social media

Crises create uncertainty, generating stress and discomfort for those involved, who will wish to reduce the amount of uncertainty by actively seeking information (Lachlan, Spence, Lin, Najarian, and Del Greco, 2016). Jin, Liu, and Austin (2011) suggest that people resort to online information during crises (Jin, Liu, & Austin, 2011). Social media provide a powerful platform for people seeking such information (Lachlan et al., 2016). Kaplan and Haenlein (2010) define social media as “a group of internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of User Generated Content” (p. 61). In recent years, the use of social media

platforms and applications has gone through an explosive increase, providing new challenges and opportunities for organisations to communicate and engage with their stakeholders (Cornelissen, 2014). Nowadays, people share an enormous amount of data through social media platforms, which they collect, disseminate, report, and comment (Imran, Meier, and Boersma, 2017). In the context of communication excellence and the position of communication professionals in organisations, social media provide another opportunity, examined by Strauss and Jonkman (2017), who point out that the empowerment of practitioners through online monitoring practices in times of crises can be considered as a further step toward the positioning of communication professionals within the dominant coalition.

The challenges and opportunities that social media present, are summarized by Jaques (2014), indicating that issues can escalate much faster but may be over more quickly, that multiple platforms increase the potential impact on the organisation, that stakeholders may more easily link a current issue to another, older one, but also that there are better opportunities for more and earlier participation, reaching stakeholders quickly and easily (Jaques, 2014, p. 41). Social media may enhance crisis communication, according to Wendling, Radisch, and Jacobszone (2013). They can improve situational awareness. Information can circulate quickly among actors and is immediately available. Social media are accessible, and they can provide data that are geographically or temporally traceable. This is especially interesting in disaster management. Data from social media provide a unique source of information that can potentially aid situational awareness (Vieweg, Hughes, Starbird, and Palen, 2010). Situational awareness is crucial for those responding to a crisis as it informs decision-making and subsequent crisis management activities (Watson and Rodrigues, 2017). Roshan, Warren, and Carr (2016) call attention to the benefits of social media, the reason for which organisations use social media for different purposes such as marketing, engaging with stakeholders and responding to their requests, receiving feedback about their products and services with fast speed and at a low cost and finding innovative ideas.

However, organisations seem to be afraid of social media, dreading the possibility that citizens or journalists are the first to tell about a crisis triggering event, posting unpleasant pictures and comments, but organisations also risk triggering a crisis themselves on social media through misuse or lack of competence (Frandsen and Johansen, 2017). Evidence shows that social media should be of interest to organisational crisis communication, because of their interactive character, outreach, and accessibility (Jin et al., 2014; Schultz et al., 2011). However, organisations may have very little understanding of crisis communication in a social media context, which is of concern for crisis managers (Roshan et al., 2016). On social media, stakeholders can share information and comments about organisations at high speed, while organisations have less control over what people say about them. This has increased organisations' vulnerability and consequently, the frequency and severity of business crises (Roshan et al., 2016). Organisations that deliberately do not use social media during a crisis may be taken as disorganized by the public or even sending a signal of disinterest or disdain (Wendling et al., 2013). In today's complex environment, organizations have to understand and respond to stakeholders' rapidly shifting values, rising expectations, and demands for public consultation (Regeester and Larkin, 2008). According to Pace, Balboni, and Gistri (2017), social media audiences actively elaborate and interpret online content provided by organisations and individuals, in a manner that user-generated content will become part of the content surrounding a crisis; stakeholders may amplify and extend a crisis. Additionally, the message that the organisation wants to disseminate may never arrive, as Shi, Kapucu, Zhu, Guo, and Haupt (2017) found. In their research, the level of interaction between government users and other users through social media is extremely low and divergence occurred between personal and official nodes in the context of risk and crisis perception. As another challenge for crisis communication using social media, Coombs introduces the concept of paracrisis (Coombs, and Holladay, 2012), which has been under study by various researchers (e.g. Lim, 2017; Roh, 2017). It is a situation without a critical event, but in which the stakeholder's communication mimics that of a 'real' crisis, exposing the organisation to reputation and other

damage. A critical voice that starts spreading with sufficient momentum and outreach, can lead to serious consequences for an organisation (Frandsen and Johansen, 2017). Managing a paracrisis only needs stakeholder management and communication. Although a paracrisis is not considered a crisis that requires the full activation of a crisis management team, it may, if improperly handled, escalate into a crisis (Veil, Petrun, and Roberts, 2012). Social media increase the visibility and number of paracrises (Coombs, 2014). One instance of a paracrisis is described by Wan, Koh, Ong, and Pang (2015) who study parody social media accounts to mock organisations, such as the parody Twitter account @BPGlobalPR in response of the insensitive public comments by BP's CEO Tony Hayward, following the Deep Horizon disaster.

Pfeffer, Zorbach and Carley (2014) describe the phenomenon of online *shitstorms*. Organisations that use social media are a highly beneficial environment for word-of-mouth propagation of ideas and products, and this has increasingly made them a focus of marketing communications. However, as a reaction to questionable statements or activities by the organisation, social media users can create huge waves of outrage within just a few hours. These so-called *online firestorms* pose new challenges for marketing communications. Pfeffer et al. (2014) state that a company that is well connected in the social media sphere and that has established a diverse array of fan groups and channels for direct dialog with its customers is far more crisis-proof. In the case of an attack on its reputation, the company can remain calm and can instantly reach and activate its loyal customers and fans to defend its image before further damage is done.

Coombs (2014) regards the emergence of internet and social media as an evolutionary, rather than a revolutionary step in crisis communication. The main thing that has changed is how the information is collected and the time that an organisation has to detect a crisis and act. Coombs discusses social media in the framework of the three stages of crises, of which the precrisis is of most importance to my study. Although social media provide an opportunity for finding warning signals generated by stakeholders, the challenge is wading through the vast amounts of information and identifying a possible crisis emerging (Coombs,

2014). Whereas social media can provide valuable user-generated content that can enhance effective crisis management, there are many challenges when it comes to processing the data and making it exploitable for crisis management (Imran et al., 2017). People are not always able to handle the massive amounts of data in a timely and qualitative way. Therefore, automatic processing techniques have been developed that are capable of processing data at a high rate while maintaining an acceptable quality (e.g. Imran et al., 2017; Salfinger, Retschitzegger, Schwinger and Pröll, 2016). Many studies have focused on the use of ICT and social media before, during, or after crises, and they can be identified as ‘crisis informatics research’ (Reuter, Hughes, and Kaufhold, 2018).

Mapping the use of social media in corporate communication in Europe, Zerfass, A., Moreno, Á., Tench, R., Verčič, D., & Verhoeven, P. (2017) ascertain that, in the past decade, social media have become the most important channel to address stakeholders and audiences, although the traditional media relations with journalists remain important (Tench, Verčič, Zerfass, Moreno, and Verhoeven, 2017). This is in line with literature stating that new and social media technology should complement, not replace, traditional channels (e.g. Ledford, 2012; Schultz, Utz, and Göritz, 2011).

As it is widely recognised that social media have an important impact on crisis management, it has become a vibrant and quickly growing field of research and interest (Frandsen and Johansen, 2017). To establish a framework for crisis communication and the use of social media, researchers have even established a social-mediated crisis communication model (SMCC), which has been tested over the recent years (Austin, and Jin, 2017; Jin, Liu, and Austin, 2014; Liu, Jin, and Austin, 2013). Among their conclusions, is the finding that traditional media seems more credible than social media for crisis information. Face-to-face communication is used mostly, followed by television broadcasts, text messaging, telephone, and social media. Austin, Liu, and Jin (2012) conclude that traditional media should be used by organisations in combination with a deliberate approach to social media (p. 203). However, Valentini, Romenti and Kruckeberg (2017) conclude that more research is needed in relation to crisis awareness and



organisational crisis preparedness in the framework of social media. Earlier, Valentini (2015) noted that social media measurement research cannot yet provide concrete answers about the added value contributed by social media to securing organizations' objectives. That has been confirmed by Spence, Lachlan, and Rainear (2016), who assert that methods and measures for data collection through social media in crisis situations are unstructured, untested, and there is little agreement on the best means to achieve research goals. Roshan et al. (2016) conclude that, given the fast pace of social media development and appropriation by organisations and stakeholders, there is clearly a need for far more research attention to organisational crisis communication through social media.

## Gaps in crisis communication research

One of the leading theories in crisis communication is Situational Crisis Communication Theory (Coombs, 2007). Coombs defines a crisis as the perception of an unpredictable event that threatens important expectancies of stakeholders related to health, safety, environmental and economic issues, and which can seriously impact an organization's performance and generate negative outcomes (Coombs, 2014, p.3). It was also Coombs who called attention to the fact that crisis prevention is the starting point of crisis management and crisis communication and that crisis prevention has not received much public attention (Coombs, 2012). Coombs (2010a) affirms the particular need of more research on crisis sensing, a domain in which the practice outpaces the theory (Coombs, 2007b). Another researcher, the Australian Tony Jaques (2010), refers to the extensive literature and the well-developed framework for crisis response and post-crisis strategy, and to the absence of such studies for pre-crisis stages and crisis prevention, a viewpoint shared by Taylor (2010), who believes that crisis communication is a research field that should move beyond its preference for studying organizational tactics and strategies after a crisis has occurred, notably towards an understanding of how and why crises are allowed to foment in an organisation. Sisco (2012) observes that many researchers have suggested



organisational crisis strategies that are mostly limited to post-event analyses in a specific instance.

My PhD research therefore attempts to contribute to more insights into processes taking place during the initial stage of an emerging crisis, with a focus on crisis perception in order to prevent a crisis from breaking out. Sisco (2012) touches upon the for-profit profile of almost all case studies in organisational crisis communication. However, those organisations are dependent on their publics who have higher expectations for them than for most corporate organisations. Non-profit organisations are shaped by the wants and needs of their external environments, which makes them especially susceptible in a crisis (Sisco, 2012). As a result, the cases in my research predominantly have a non-profit profile. The importance of social media in crisis communication, as summarised by Valentini et al. (2017), has led to incorporating social media in three out of four research projects in this PhD.

The centrepiece of my research derives from Coombs' definition of a crisis (Coombs, 2007) i.e. that an incident evolves into a crisis when someone perceives it as such. By pursuing good practices in communication (e.g. Grunig, 2013), an organisation can be the first to perceive a crisis, which yields advantages for organisational crisis communication in having more time to gather information and to communicate proactively, or as Coombs (2010a) puts it, early crisis identification permits time for analysis and strategizing. This study focuses on the scarcely researched viewpoint of members of an organisation during a pre-crisis phase, more particularly the possible influence of a personal profile on someone's perception or awareness of a situation as a crisis and the way in which this can prompt the organisation to take action. Therefore, the general research question for this dissertation is:

*Is there a difference in how people perceive a crisis from within their own organisation during a pre-crisis phase?*

## Approach and organisation of the dissertation

By focusing on the initial phase of a crisis in a multidisciplinary approach, my research can be considered innovative. Many insights originated from my own hands-on experience in a large government organisation, which I assimilated by the scientific method of literature review, research methodology development and analysis. This dissertation brings forth a comprehensive definition of a crisis, fitting the issues presenting themselves from the very start of a crisis cycle. The studies yield a tested model for measuring crisis perception in different stages, as well as insights on human factors in early crisis perception, a subject that has hardly been studied.

This dissertation relates the journey through academic scholarship and presents the results of my research projects in the form of published articles and peer-reviewed conference papers. The itinerary is marked by four research projects, which are shortly framed in different chapters. These chapters have been arranged following the logical steps of scientific research: explore, define, analyse, determine, and conclude. *Exploring* means to demarcate the research domain, carry out an extended literature study, gather subject-area background information, set out the theoretical background for the study, and review similar research. *Defining* signifies working out a methodology and research approach, as well as operationally describing key concepts involved. *Analysing* conveys the stage in which the methodology is adapted, as well as the research approach, and findings are analysed in terms of the research approach. By *determining*, the researcher discusses the analysis in terms of the literature. By *concluding* I will look back on the PhD research and process, and discuss implications that may not have been discussed in the papers. In that sense, the distinct articles combined in this work, will focus on each of those research steps, to draw a picture of the step-by-step progression of my PhD.

*Project 1: The impact of social media type, source, and information on student responses towards a university crisis*

This study allowed me to do a first literature study of the crisis communication field, and specifically to take a closer look at the Situational Crisis Communication Theory (Coombs, 2007), and it provided the opportunity for me to get acquainted with experimental and quantitative methods (Field and Hole, 2002), a discipline that was somewhat of a mystery for me at the time.

Based on Coombs' Situational Crisis Communication Theory, this study explored the effect of university related crisis messages on the secondary communication (sharing, telling) of a population of students from that university, and the possible variance caused by message source, content, and channel. The study showed that, just as any non-profit organisation, universities have a special interest in the relationship with their beneficiary stakeholders. The nature of that organisation-stakeholder (university-student) relationship lies in the importance of maintaining a positive reputation. For non-profit organisations, reputation is one of the most important, intangible assets, as they rely on external funding. Adversely, an organisation's reputation is very vulnerable to damage, especially in crises where stakeholders, and thus students, are involved.

Social media, such as Facebook or Twitter, form an excellent platform for universities to communicate and maintain a trustworthy relationship with their students. Especially in times of crises, social media allow for direct and fast communication to stakeholders. Academic research involving crisis communication and the use of social media was relatively new at the time. We arrived at interesting conclusions on crisis messages on social media and how users share them, influenced by the source of the information, the kind of information and the platform on which the crisis message it was sent.

This first exploratory project provided the theoretical and methodological basis for a second study, in which the focus was on the perception of a crisis by different people.

## *Project 2: Crisis perception from within an organisation following a social media crisis message*

This study looks at how a crisis is perceived from within an organisation, taking into consideration the perceiver's commitment towards the organisation and the impact of the social media message, as well as the perceiver's function within the organisation. This was my second project, and it took form during a master's research class, in which undergraduate students worked together on distinct parts of a research project, to get to know the tricks of the trade. Their work on my research offered some interesting perspectives, although most of the findings and data were not suitable for processing. I could, however, let them experiment with my ideas to see whether those ideas would work. In that respect, I made a first draft of a crisis perception scale based on crisis communication theory and issues management, two subjects that I taught that year in the communication management course of the University of Antwerp. In the methodological setup, the population was recruited from for-profit organisations, complemented with communication specialists from a professional network. Following a crisis scenario, participants had to answer questions that measured their perception of the crisis situation presented. For measuring crisis perception, there were few existing verified scales, which did not fit our setup, a reason for which we constructed our own measurements based on Coombs' definition of a crisis (Coombs, 2007) and criteria for issues management (Van Tulder and Van der Zwart, 2005). Those scales were pre-tested among the students in the research class. The crisis simulation was still instrumentalised by a rather simple description of a situation, as in project 1. For the analysis of the results, a combination of univariate and multivariate analysis of variance (ANOVA, MANOVA) was adopted. The results showed that commitment to the organisation touched by the crisis and social media cues (high or low impact in the online community) do not yield an effect on someone's perception of a crisis, but a person's function within the organisation has a clear effect.

Having enlarged the theoretical basis on crisis communication and having refined my research method to measure perception on the basis of a scenario, the third project aimed at a larger study for more robust results.

*Project 3: Factors that influence organisational crisis perception from an internal stakeholder's point of view*

For the third research project, I set up a survey study within a large organisation to be able to work with more respondents within a homogeneous population. By choosing such an organisation, I wanted to rule out organisation-related disturbing variables among the respondents. The case I selected was Belgian Defence, a population easily accessible from my professional position. This resulted in the participation of more than 5000 organisation members, providing a very robust sample to test a crisis perception scale, a further development from project 2 which integrates the scales of issue perception in the crisis scenario. I started from the premise that few researchers had focused on the strategic importance of early crisis detection by an organisation and of a subsequent proactive crisis communication. Even fewer have considered the question if organisations put the right people in the right place for this. Managers, on the one hand, can take decisions to initiate crisis communication. On the other hand, they seem to be reluctant to do so or may not wish to see the problem, as discussed in project 2. Communication professionals may have a better perception of a crisis and of how to (re)act on a communication level but are rarely well placed in the organisation to have a substantial impact on decisions.

I studied the influence of individual organisation members' personal profiles on their perception of an imminent crisis for that organisation. The study included a comprehensive definition of a crisis and a crisis perception scale, which in a scenario-driven survey study helped to establish that someone's study background, position within the hierarchy and crisis training and experience, have an influence on that person's crisis perception. An organisation can put those findings to use in its personnel policy to improve its crisis communication by moving leading communication functions to a strategic level and

decentralising others, and by recruiting, training, and promoting personnel based on their communication competence as well. By doing so, an organisation can improve its crisis communication and thus safeguard its reputation or even improve it.

One of the surprising effects in this project, was that different language groups had a consistently different perception of the scenario crisis. It was no hypothesis, so we did not elaborate on those results. Therefore, in this chapter, I will briefly touch upon cultural issues in crisis communication. In the last project, however, this cultural effect failed to be reproduced.

#### *Project 4: A crisis communication exercise simulation: individual profiles having an influence on organisational crisis perception*

For the last study, I wanted to further test the crisis perception scale, broaden the personality traits from project 3, and keep an eye out for cultural differences. This study investigated the pre-crisis phase in which an organisational crisis has not yet reached the critical level of being perceived by an organisation's stakeholders, but which staff members from that organisation possibly perceive as threatening. Each individual has a different perception and therefore an organisation needs to know which profiles have a better perception of an impending crisis, in order to put the right people in the right places. The study was performed in various agencies from the Belgian federal government. Using a crisis exercise simulation, a crisis perception scale and personality indicators, this study demonstrates that a person's academic training, notably in communication related topics, a person's position within the organisation and previous crisis experience are significant indicators of someone's crisis perception ability, as well as typical personality indicators such as organisational commitment, risk behaviour and regulatory focus. These findings substantiated the results of project 3 and validated the crisis perception scale used. On top of that, correlations between crisis perception and organisational commitment, risk behaviour and promotion focus were found, as well as correlations with cultural variance within the population sample.

## Project 1: crisis communication and social media

**explore**, *define, analyse, determine, and conclude*

With the first project, I was able to demarcate the research domain of this study and the ones to follow. More general theory and issues concerning crisis communication, were discussed in the introduction of this dissertation. This first paper includes a literature study of the research communication domain, and other areas involved. As it is a paper exploring theory and methodology, it must be regarded as a basis from which I started, rather than the foundations of my further research.





## #universitycrisis: the impact of social media type, source, and information on student responses towards a university crisis

This article has been published in *Social Science Computer Review* in 2014 and is referred to as Snoeijers, E. M., Poels, K., & Nicolay, C. (2014).

### Abstract

Universities have every reason to avoid their reputation being damaged by mismanaged crises, but moreover, universities have the moral duty to protect their students from harm by communicating. Social media have evolved into the fastest and most direct means to communicate with student populations. In this study, we experimentally tested the use of Twitter and Facebook as crisis communication media at a university and further observed the effects of the communication source (university or dean) and the crisis information (instructing or adapting) on secondary communication by the students (e.g. sharing the message and leaving a reaction). The role of the dean as an information source seemed to incite students more to act by secondary communication. We also found some counter-intuitive effects, particularly regarding type of crisis information communicated on Facebook or Twitter, by the dean or the university.

*Keyword list:* crisis communication, social media, secondary communication, crisis response, information source, instructing information, adapting information

### Introduction

Just as any non-profit organisation, universities have a special interest in the relationship with their beneficiary stakeholders (e.g. Macedo & Pinho, 2006). The student population, one of the beneficiary groups, is a university's main stakeholder (Mainardes, Alves & Raposo, 2010). The nature of that organisation-stakeholder (university-student) relationship lies in the importance of maintaining a positive reputation, a reputation being "a perceptual representation of a company's past actions and prospects that describes the firm's overall appeal to all of its key constituents when compared to other leading

rivals" (Fombrun, 1996, p. 72). For non-profit organisations, reputation is one of the most important, intangible assets, as they rely on external funding. Moreover, in the case of universities, a loyal and stable student population is crucial to continue their operations. Adversely, an organisation's reputation is very vulnerable to damage, especially in crises where stakeholders, and thus students, are involved. One of the most accepted definitions of an organisational crisis is "the perception of an unpredictable event that threatens important expectancies of stakeholders and can seriously impact an organisation's performance and generate negative outcomes" (Coombs, 2007a, pp. 2-3). The risk of those crises damaging an organisation's reputation is the reason that professionals and researchers have been considering *crisis communication*. For universities, these crises can take the form of a campus terrorist threat, extreme violence (e.g. shootings), fraud, disease spreading, etc. Social media, such as Facebook or Twitter, form an excellent platform for universities to communicate and maintain a trustworthy relationship with their students (e.g. Dabner, 2012). Especially in times of crises, social media allow for direct and fast communication to stakeholders (Liu & Kim, 2011; Utz, Schultz & Glocka, 2013). Since every organisation, including universities, hold responsibility towards their stakeholders, they are morally obliged to protect them in the best ways possible (e.g. by supplying honest information, emotional and material support) (Coombs, 2007b).

Academic research involving crisis communication and the use of social media is relatively new, due to the rather recent emergence of social media itself. This paper aims to contribute to this important and rapidly evolving line of research. We study how universities can make use of social media when confronted with a crisis. More concretely, by using an experimental design with a specific scenario about a food contamination crisis at our resident university, we investigate how social media messages during a university crisis can instigate student responses, such as word-of-mouth communication about the incident. We take into account a range of factors that, based on crisis communication and social media literature, can have an impact on these student responses. These factors are the type of

social media used (Facebook or Twitter), the source that sends the social message (the university dean or the university itself), and the type of crisis information that is provided (instructing information or adapting, supportive information). For each factor, we make specific predictions. We further test how the different factors interact with each other in influencing student responses. In other words, how does a Facebook message in which the university dean is compassionate about the victims of the crisis situation lead to different responses compared to a message on Twitter by the university account providing instructions about how to avoid the bacteria from being spread around campus?

Although maintaining a positive reputation is the ultimate goal of all public relation activities, including crisis communication (Fombrun, 1996), this was not the main dependent variable of the current study. Effective crisis communication starts with honest and transparent communication with stakeholders, with the priority being that they are protected in the most optimal way (Coombs, 2007b). The current study is situated in this phase of the crisis communication path. If organisations, such as universities, know how to bridge this phase and how to get stakeholders involved in a positive way, this will indirectly benefit their reputation in the end.

## Literature Review

### *Crisis communication*

The mainstream theory of organisational crisis communication at this moment, the Situational Crisis Communication Theory (SCCT) (Coombs, 2004), was the result of case studies in corporate organisations. This theory, based on Weiner's attribution theory (Coombs, 2007a), contains a description of response strategies to specific crises. An organisation can protect and repair its reputation through communication, and the crisis type can determine the proper response strategy. Coombs classified crises in three groups: victim crises, where the organisation has little or no responsibility, such as natural disasters or terrorism; accidental crises, where the organisation bears part of the responsibility, such as technical errors; and intentional crises, where the organisation could have prevented the

crisis, such as fraud cases. Depending on the organisation's reputation, response strategies involve denying the crisis, diminishing it or rebuilding the relationship with the stakeholders, combined with bolstering as secondary response strategies. These response strategies are often combined with others, such as "stealing thunder" (Arpan & Roskos-Ewoldsen, 2005), a strategy in which an organisation proactively diffuses news about a crisis, including negative news, in order to prevent others to bring it out and forcing the organisation in the defence. This technique has proven to be successful in crisis communication (e.g. Claeys & Cauberghe, 2012).

### *Crisis communication by universities*

Although research in organisational crisis communication has grown in the recent years (e.g. Heath, 2006, Coombs, 2007b, Lee, Woeste & Heath, 2007, Ulmer, Sellnow & Seeger, 2007), current studies mainly focus on cases involving corporate communication of profit organisations. The body of research devoted to crisis communication rarely addresses one of the largest areas of public relations, the public sector (Sisco, 2012). Nevertheless, researchers confirm that SCCT is applicable to the non-profit sector (Sisco, 2012), such as universities.

Some researchers have concentrated specifically on a university public. Clarke & Chess (2006) looked into students' compliance with risk communication after bio-terrorist threats and found that risk communication remains an important element of an effective response to emergencies. Surgeonor (2009) concluded in his research on hand hygiene among students, that university residences present unique challenges for crisis management teams to mitigate the spread of infections. Finally, the university scandal case study of Varma (2011) supports some of the best practices such as maintaining honesty and openness in communications and having a clear policy. Varma (2011) examined the crisis response strategies of Louisiana State University after its women's head basketball coach resigned amid charges of inappropriate conduct with former basketball players. The university tried to create a win-win situation for the coach and itself. However, the lack of transparency and openness in the initial stages proved to be a setback (Varma 2011).

When announcing a crisis, it is the ethical duty of an organisation to protect its stakeholders by supplying information, rather than prioritizing its reputation (Coombs, 2007b). Due to the relationship with its students, this is especially relevant for universities.

### *The emergence of social media*

As social media have changed the way people interact with one another and with organisations (e.g. Qualman, 2012), it is obvious that they play an increasing role in organisations and stakeholders managing crisis communication. Social media inform stakeholders more subjectively, but also more frequently and faster than traditional media. Communicating through social media shows that organisations want to reach the stakeholders fast and efficiently (Utz et al., 2013).

Effective crisis communication includes identifying stakeholders on social media and entering in discussion with them (Gainey, 2010). Social media present opportunities for organisations, such as the absence of journalistic gatekeepers that we find in the press media, by which an organisation can tell its own account of a crisis without extra bias (Jin, Lui & Austin, 2011). Organisations, however, must be aware that in social media, there is little control of the content in the response. The spread of false or incomplete information may also form a risk. Particularly because social media users often do not distinguish between facts and rumours (Freberg, 2012) and stakeholders make use of online resources to find and share information that the organisations are unable or unwilling to share. In other words, it is utmost important that organisations know how to communicate a crisis through social media, taking into account its opportunities and pitfalls. Organisations such as universities have little choice in using social media for their communication with its stakeholders, as it is a growing medium of information among younger publics (Pempek, Yermolayeva & Calvert, 2009).

Research in crisis communication through social media has increased, but these media evolve so fast that scientific gaps keep emerging (e.g. Utz et al., 2013). Coombs (2008) stated that the practice of crisis communication is ahead of

research in terms of social media. There are now numerous research papers on the subject (e.g. Palen, Vieweg, Liu & Hughes, 2009, Kerkhof, Beugels, Utz & Beukeboom, 2011, Dabner, 2012, Utz et al. 2013), but they often consist of case studies. Cases are snapshots of an organisation's reactions at a certain moment in time, but do not necessarily imply predictability for other cases (Fediuk, Coombs & Botero, 2010). Experimental designs may provide an answer to the lack of research revealing important dependent variables and causal relations. Research by Jin et al. (2011) supports an emerging causal model, the Social Mediated Crisis Communication Model, which focuses on influential social media creators, followers and inactives. The model distinguishes between crisis origin (internal/external to the organisation resulting in attribution of responsibility), crisis type (cf. SCCT), the organisation's infrastructure (centralised or not), the message content (instructing and adapting information, Coombs, 2007a), message form (online/offline media) and message strategy (cf. SCCT) to explain different perceptions of the crisis message by the intended public.

To date, the impact of different (social) media types on the effects of crisis response strategies remains understudied. Claeys & Cauberghe (2012) suggest that stakeholders could react differently on crisis messages spread through social media. Coombs & Holladay (2009) studied the impact of print and broadcast media, but theories such as SCCT (Coombs, 2007b) do not address how different media (traditional media, social media or offline word-of-mouth communication) can affect publics' crisis communication behaviours (Liu, Jin & Austin, 2013). Schultz, Utz & Göritz (2011) have experimentally tested the effects of crisis communication via social media in comparison to traditional media. Their results indicated that the medium matters more than the message. A differentiation between different social media types (e.g. Facebook vs. Twitter), however, does not figure in crisis communication research.

Moreover, an important aspect of social mediated crisis communication is the *secondary crisis communication*, which is the action of sharing or forwarding the organisation's crisis communication (Utz et al. 2013). Schultz et al. (2011) used it as a dependent variable in a study on crisis communication via traditional and

social media. In that study, they also discuss the considerable impact of (online) word-of-mouth on an organisation's reputation. Zhao, Wang, Wei and Liang (2013) focus on leaving reactions on social media as secondary crisis communication, but they analyse the impact of those comments on the stakeholder's perception of the reputation of the organisation.

Smith, Coyle, Lightfoot & Scott (2007) observe that word-of-mouth provides advantages to both senders and receivers: for the former to help others and for the latter it reduces decision-making time and risk, as receivers usually perceive friends as unbiased sources of information. Kaplan & Haenlein (2011) further state that electronic word-of-mouth has a higher diffusion speed for new pieces of information and it can reach a much larger group of other recipients.

## Research question and hypotheses

The focus of our study is on the secondary crisis communication as a reaction to the organisation's communication, without directly measuring any change in the organisation's reputation, as this would mean that multiple universities should be studied, multiplying, amongst other things, possible disturbing variables. The ethical duty of the organisation (university) to inform victims (students) as presented by Coombs (2007b), has been fulfilled in our setting, leaving secondary crisis communication as the main dependent variable.

Based on the literature and previous research, we have chosen three variables possibly having an effect on that evaluation: social media type, source and information. This leads to the more general research question:

What is the effect of source, social media type and information of a crisis message through social media on students' secondary crisis communication?

### *Effects of social media type*

In the current study, we compared two specific applications, Facebook and Twitter, representing, in that order, the two most used platforms for social media in the region of Flanders and worldwide (VRM, 2012). Kaplan & Haenlein (2010) categorise social media based on the one hand on the closely interrelated concepts



of media richness and social presence, and on the other hand on the related concepts of self-presentation and self-disclosure. Social presence is influenced by the intimacy (interpersonal vs. mediated) and immediacy (asynchronous vs. synchronous) of the medium, whereas media richness by the amount of information a medium allows to be transmitted in a given time interval, influencing ambiguity and uncertainty (Kaplan & Haenlein 2010). Twitter scores low in social presence/media richness whereas Facebook only scores medium in that category, mainly due to the immediacy factor, in that Facebook can function indirect with a time lapse. Self-presentation states that people have the desire to control the impressions other people form of them, while self-disclosure is the conscious or unconscious revelation of personal information that is consistent with the image one would like to give. Self-presentation, according to Wang & Stefanone (2013) is achieved or performed through mobility, observation, and communication with other social actors. In Kaplan & Haenlein (2010), Twitter and Facebook both score high in self presentation/self disclosure. However, Facebook includes more options for self-disclosure (e.g. pictures, interests) and may therefore outperform Twitter in terms of self-disclosure. This is confirmed by Kietzmann, Hermkens, McCarthy & Silvestre, (2011), who found that by real-time status updates, Twitter's focus is on latest questions and users getting involved in the issues, not in personal relationships, whereas Facebook is based on revealing one's identity by sharing information and presenting oneself.

Some argue that communication through Facebook leads to better crisis communication (e.g. Utz et al., 2012), whereas Jin et al. (2011) propose that organisations prefer Twitter to that end. In the scope of the current study, we expect that, due to the specific nature of these two social media, they will differently influence secondary crisis communication. Twitter being fast in engaging people leads more to quickly passing the message, whereas Facebook, being rich and personal, leads more to reacting to the crisis message. Our first hypotheses will therefore be:

**H1a:** Facebook will lead to more message reactions than Twitter.

**H1b:** Twitter will lead to more message sharing than Facebook.



### *Effects of source*

Being a social medium where people interact, the source of the crisis message has to be an important variable. In the case of universities, crisis communication via social media can be spread by the university itself or by important persons such as the dean. Turk, Jin, Stewart, Kim & Hipple (2012) point to further research on the direct impact of a CEO in crisis communication. Good practice has shown a link between reputation and public communication by a CEO. Stakeholders react more positively to organisations with a visible CEO during crises; Ronald Alsop (in Turk et al., 2012) even assigns half of the reputation of an organisation to its CEO. Moreover, stakeholders evaluate CEO's who are active on social media more positive, regarding them as smarter, more ambitious and more straightforward (Freberg, Graham, McGaughey, Freberg, 2011).

The university dean, acting as a CEO, personalises the organisation and may have a more comforting effect on the stakeholder group in this experiment, the students. In addition, communication by the dean can also have an extra alerting effect, indicating that the crisis has to be taken seriously. Due to this personalisation and alerting effect, we expect crisis messages communicated by the dean, as CEO of the university, to lead to more secondary crisis communication, compared to similar messages communicated by the impersonal account of the university. The next hypothesis is:

**H2:** Crisis messages on social media by the dean will lead to more secondary crisis communication than the same social media messages by the university.

### *Effects of crisis information*

As mentioned before, when confronted with a crisis, an organisation should protect its stakeholders and their environment by supplying adequate information (Coombs 2007b). Crisis literature distinguishes between instructing and adapting information (Coombs, 2007b). *Instructing information* tells stakeholders what they should do to protect themselves from threats following the crisis and *adapting information* will help the stakeholders to cope with the

crisis by telling them which actions the organisation will take to prevent future crises but also shows concern for the victims (Coombs, 2007b). These two types of information can be categorised as informational/rational (instructing) opposed to compassion/emotional (adapting) (Moon & Rhee, 2012).

In the current study, using an accidental crisis at a university, we expect the type of crisis communication spread through social media will affect secondary crisis communication by the students. Since for instructing information it is important that all stakeholders involved get informed in order to be able to protect themselves, we expect that this type of information will be more likely to be shared both online and offline (by word-of-mouth) than adapting information. The latter type, however, involving compassion and precautions undertaken, will more likely lead to reactions (e.g. equally expressing compassion, thanking, ventilating). As such, the following hypothesis is:

**H3a:** A crisis message on social media with instructing information will lead to more message sharing, compared to an adapting social media message.

**H3b:** A crisis message on social media with adapting information will lead to more message reactions, compared to an instructive social media message.

### *Interaction effects*

Jin et al. (2011) indicated that little research has taken place on the interaction of form, medium and source influencing the stakeholder's perception of the crisis message. In the current study, we predict important interaction effects between these three factors on secondary crisis communication.

As discussed above, Facebook and Twitter differ in the former being more personal and emotional and the latter being faster in involving people. Furthermore, adapting crisis information deals with compassion, whereas instructing crisis information includes protective measures in order to avoid or minimize the crisis induced harm. Adapting information may thus be better suited on a personal, emotional medium, whereas instructive information bodes

well by a medium quick in spreading the message. This leads to the following hypothesis.

**H4a:** An adapting message will lead to more secondary crisis communication when communicated through Facebook, compared to the same message on Twitter.

**H4b:** An instructing message will lead to more secondary crisis communication when communicated through Twitter, compared to the same message on Facebook.

Liu et al. (2013) found that social media seem to trigger more positive communicative behaviours over the blogosphere, such as posting positive blog posts, commenting on others' blogs, and tweeting positively about the crises, regardless of crisis information source. However, they did not directly compare the different types of social media (see *infra*). We expect an interaction between source and social media type. The speed of Twitter and its focus on sharing information should lead to the organisation as primary source of crisis information. Relation -centred Facebook seems to need a more human voice, such as the university's dean.

**H5a:** A crisis message by the dean on Facebook will lead to more secondary crisis communication, compared to the same message on Twitter.

**H5b:** A crisis message by the university on Twitter will lead to more secondary crisis communication, compared to the same message on Facebook.

CEOs engaging in (online) crisis communication are evaluated more positively and straightforward, while people tend to listen more to organisations when it comes to crisis messages. The latter aspect plays a decisive role in instructing information, while adapting information asks for a positive and straightforward approach (Freberg et al., 2011).

**H6a:** Adapting crisis information by the dean will lead to more secondary crisis communication, compared to the same crisis information by the university.

**H6b:** Instructing crisis information by the university will lead to more secondary crisis communication, compared to the same crisis information by the dean.

Finally, when taking all three factors (social media type, source and crisis information) and their specific nature into account (cf. *infra*), we expect the best communication “fit” and thus most efficient in instigating secondary crisis communication, will be the use of Facebook and adapting information when the source is the dean and Twitter and instructing information when the source is the university.

**H7a:** When the source is the dean, adapting information on Facebook will lead to more secondary crisis communication, compared to similar instructing information on Twitter.

**H7b:** When the source is the university, instructing information on Twitter will lead to more secondary crisis communication, compared to similar adapting information on Facebook.

## Method

In the current study, we applied stealing thunder as a primary response strategy in the setting of an accidental crisis, in which the event is considered unintentional or uncontrollable by the organization, but in which the stakeholders attribute part of the responsibility to the organisation (Coombs, 2007b).

We set up an online experiment in the form of a scenario study. By performing an experiment, we were able to limit the setting to just those variables put forward in our hypotheses, in contrast with the many case studies found in the literature. This design will allow the study of causal effects that will be of particular relevance for the theoretical and practical implications of our study. The scenario

first described a crisis stemming from food contamination at the university restaurant. We subsequently presented participants with a social media message about the crisis in which we manipulated the three factors for which we had hypotheses (social media type, source, and crisis information). We present further details below.

### *Participants and design*

The experiment had a 2 (medium type: Facebook vs. Twitter) x 2 (source: University vs. Dean) x 2 (crisis information: instructing vs. adapting) between-subjects design. Four hundred and seven undergraduate students from our resident university participated. We discarded participants that failed to complete all relevant measures from our final data set (n=71). The final data set contained 336 participants (65.8% female). Their median age was 22 years old and 80.2% was 25 years or younger.

### *Procedure*

We invited participants to take part in the study through their university email address. In that email, we inserted the link to the online scenario and a questionnaire. Based on their birth month, a system randomly assigned the participants to one of the eight conditions created based on the three experimental factors. They first got the request to read the hypothetical crisis scenario and to imagine as vividly as possible that this situation would take place. At the same time, to avoid confusion or any misuse, it was stressed that the situation was fictitious and hypothetical. We kept the crisis constant across all conditions, a technical error accidental crisis (Coombs, 2007b), the reason for which we expect emotional response and the attribution of responsibility not to differ in the different conditions. After reading about the crisis situation participants were presented with one of the eight social media messages that served as the main stimulus material and were then asked to fill out a list of questions regarding the scenario, crisis emotions, perceived responsibility, and secondary crisis communication (see Measures). It took about 10 minutes to complete the experiment.

## *Stimulus material*

The crisis scenario was set up as follows:

*“There were incidents of Salmonella Enteridis infection among students at our resident university. Contamination occurred Tuesday 12 March during lunch at the student restaurant on the city campus. Students were taken ill after having vol-au-vent and or cress salad. The source of the infection is been identified in contaminated chicken meat that was insufficiently heated. By cross contamination via the kitchen working top the cress got contaminated as well. So far, 27 infected persons have been diagnosed, 3 of which have been taken to hospital due to dehydration. Anyone having had vol-au-vent or cress salad for lunch on 12th March, could possibly fall ill. The infection transmits by physical human contact; therefore very strict hand hygiene should be applied after each lavatory visit. Roughly 12 to 72 hours after contamination patients suffer from fever, abdominal cramp and diarrhoea. People should pay attention to serious complications.”*

There were eight variations of the social media message, depending on the three experimental factors under study. First, as a manipulation of “social media type”, the social media message was sent through Facebook or through Twitter. Second, to manipulate “source”, the social media message was sent by our resident university itself or by the dean of the university. Third, to manipulate the crisis information, the message was adapting or instructing.

We developed the stimulus material in cooperation with the officers of the Communications Department of the university who got personal approval of the dean. Further, to ascertain a realistic scenario, we had the information in the crisis scenario checked and approved by a medical doctor.

## *Measures*

Given the hypothetical nature of the scenario, we checked whether participants thought the crisis was realistic (single item, 7-point Likert-scale) and whether they were able to imagine that the situation would take place (single item, 7-point Likert-scale). Since the crisis situation was kept constant (see Procedure)

and we did not want the crisis perception to vary between conditions, we included control variables related to crisis emotions (3 attribution independent emotions, *Cronbach's alpha* = .77, 3 attribution dependent emotions, *Cronbach's alpha* = .75, after Jin et al., 2011) and the perceived responsibility (internal versus external, *Cronbach's alpha* = .87, after Coombs and Holladay, 2009). To measure secondary crisis communication, our main dependent variables, we used three single item variables (5-point scales) (after Schultz et al., 2011) that measured how likely the student would: 1) leave a message, 2) share the message with other people via social media, and 3) tell friends about the incident. The first secondary crisis communication variable implies message reactions and the latter two imply message sharing, as used in our hypotheses. Finally, we measured socio-demographics (sex, age) and social media use (especially Facebook and Twitter).

## Results

### *Scenario check and equality of the conditions*

Results show that on average, participants found the hypothetical crisis, across conditions, realistic ( $M=5.17$ ,  $SD=1.17$ ) and easy to imagine ( $M=5.26$ ,  $SD=1.27$ ). One-sample t-tests confirm that these mean values differ significantly and in the intended direction from the “neutral” midpoint of the Likert-scale ( $t$ -values  $> 74.75$ ,  $p$ -values  $<.001$ ). Further, there was no difference in how realistic or easy to imagine the situation was perceived across the eight conditions ( $F(7,328)<1.12$ , NS). As intended, the eight conditions did also not differ significantly in the crisis emotions experienced or the perceived responsibility of the university.

Finally, all eight conditions were equal in terms of social media use (Facebook and Twitter) ( $Chi^2_{Facebook}=40.77$ , NS,  $Chi^2_{Twitter}=29.14$ , NS), sex ( $Chi^2=3.71$ , NS) and age ( $F(7,326)=0.96$ , NS).

### *Hypotheses testing*

We ran a set of ANOVA's with the three experimental factors and all interactions as independent variables and one of the secondary crisis communication

variables (sharing through social media, telling friends about the incident, and leaving a reaction) as dependent variables. This resulted in three ANOVA's. We report results in the order of the hypotheses.

H	independent variables	dependent variable	prediction	result
1a	media type (F vs. T)	message reactions	T < F	F < T *
1b	media type (F vs. T)	message sharing	F < T	unconfirmed
2	source (D vs. U)	message sharing	U < D	U < D
		message reactions	U < D	unconfirmed
3a	information (A vs. I)	message sharing	A < I	unconfirmed
3b	information (A vs. I)	message reactions	I < A	unconfirmed
4	information x media type (A vs. I) x (F vs. T)	secondary crisis communication	IT < AF	IF < AT *
5	source x media type (D vs. U) x (F vs. T)	secondary crisis communication	UT < DF	UF < DF *
6	information x source (A vs. I) x (D vs. U)	secondary crisis communication	IU < AD	unconfirmed
7	media type x source x information (F vs. T) x (D vs. U) x (A vs. I)	secondary crisis communication	IUT < ADF	IDT < ADT * IUF < AUF *

\* inverse or unexpected effect

variables: Facebook (F), Twitter (T), dean (D), university (U), instructing (I), adapting (A)

Table 1: Research results by hypothesis

Results reveal that students are more inclined to leave a message when communicated through Twitter ( $M= 2.18$ ,  $SD=0.91$ ) compared to Facebook ( $M= 2.01$ ,  $SD=0.89$ ). This effect was marginally significant ( $F(7,328)=2.48$ ,  $p=.08$ ) and indicates the opposite of what was predicted in H1a. We found no support for H1b stating that Twitter would lead to more sharing of the crisis message compared to Facebook ( $F's<.66$ ).

In line with H2, the source factor had a significant effect for both sharing variables. Concretely, sharing the message through social media ( $F(7,335)=4.09$ ,  $p=.04$ ) and talking with friends about the message ( $F(7,328)=5.51$ ,  $p=.02$ ), differed according to the source that communicated the crisis message. Students were more likely to share the message when it was sent by the dean ( $M= 2.82$ ,  $SD=1.27$ ) compared to the university ( $M= 2.54$ ,  $SD=1.2$ ). Similarly, they would talk more with friends about the incident when the message was sent by the dean



( $M=4.15$ ,  $SD=0.86$ ) compared to the university ( $M= 3.94$ ,  $SD=1.03$ ). Leaving a reaction did not depend on the source factor. In sum, H2 was partially supported.

H3a, stating that instructing information would lead to more sharing than adapting information and H3b, stating adapting information would lead to more message reactions, were not supported by our data (all  $F$ 's < 2.02).

Concerning H4, results only revealed a significant interaction effect between crisis information and social media type on telling friends about the incident ( $F(7,328)=4.11$ ,  $p=.04$ ). The direction of these results was, however, not in line with our prediction. For Facebook, results show no difference in telling friends about the incident according to crisis information being instructing versus adapting. When communicating via Twitter, students were more likely ( $p<.05$ ) to tell friends about the incident when adapting ( $M=4.22$ ,  $SD=0.81$ ) rather than instructing information was used ( $M=3.95$ ,  $SD=1.02$ ). H4 was not supported.

The interaction source x social media type did only appear to be significant for the secondary crisis communication variable about leaving a reaction ( $F(7,328)=4.29$ ,  $p=.04$ ). In line with H5, a message of the dean on Facebook ( $M=2.16$ ,  $SD=0.85$ ) leads to more reactions compared to the same message by the university account ( $M=1.85$ ,  $SD=0.9$ ). However, no difference was found for Twitter. This provides only partial support for H5.

Crisis information and source did not show any interaction effects with regard to the secondary crisis communication variables (all  $F$ 's < 2.37), thus indicating no support for H6.

Finally, the three-way interaction between source, social media type and crisis information was (marginally) significant for both sharing the message through social media ( $F(7,328)=3.59$ ,  $p=.06$ ) and talking with friends about the message ( $F(7,328)=3.52$ ,  $p=.06$ ). Further inspection of the interaction patterns revealed that, when the source is the dean, there was a significant two-way interaction ( $F(3,159)=9.16$ ,  $p=.003$ ) for telling friends about the incident. Concretely, when the dean communicates through Twitter, adapting information ( $M=4.48$ ,  $SD=0.57$ ) leads to significantly more ( $p<.05$ ) telling friends about it than

instructing information ( $M=3.88$ ,  $SD=0.99$ ). When the dean communicates through Facebook, there was no significant difference according to the type of crisis information. Conversely, when the source is the university, there was a (marginally) significant two-way interaction ( $F(3,169)=3.37$ ,  $p=.07$ ) on sharing the message through social media. When the university communicates the crisis through Facebook, the information is more likely to be shared ( $p<.05$ ) when it is adapting ( $M=2.77$ ,  $SD=1.17$ ) rather than instructing ( $M=2.18$ ,  $SD=1.11$ ). When the university communicates through Twitter, there was no significant difference according to the type of crisis information. These results do not provide support for H7. Nevertheless, they do show an interesting pattern that deserves further discussion.

## Discussion and limitations

We have made several hypotheses based on our literature review, but we were only able to confirm but a few of them. The results, however, presented us with some interesting observations.

Of our first assumption, results indicated the opposite, which is that students are more inclined to leave a message when communicated through Twitter compared to Facebook. We could explain this by the nature of the typical content on Twitter, being short messages, which focus on incoming issues that users will want to follow and apparently comment on. This finding supports Jin et al. (2011) in their statement that organisations prefer Twitter for crisis communication. It is not in line with what we expected from other literature, though. Self-presentation seems not to have so strong an effect as expected by Wang & Stefanone (2013) and Kietzmann et al. (2011), and the assumption that Facebook leads to better crisis communication (e.g. Utz et al., 2012) was not supported by this experiment.

Furthermore, students were more likely to share the message or talk to friends about the incident when it was sent by the dean compared to the university. This result confirms the findings of Freberg et al. (2011) and Turk et al. (2012), of the important communication role of someone in a CEO position.

When communicating via Twitter, students were more likely to tell friends about the incident when adapting rather than instructing information was used. This seems to contradict the use of social media as described by Kietzmann et al. (2011) and Kaplan & Haenlein (2010). Adapting information is more related to emotions, which we expect to find on Facebook and to a much lesser extent on Twitter. The surprising effect of these emotional messages, caused by the message being at odds with the users' expectations, can cause a viral spreading of the message, though ('see what the university tweeted out of the ordinary'), a phenomenon that Peters, Covello and McCallum (1997) also encountered in their experiment. In our literature review, a partial explanation can be the effect that publics will make use of social media to find support or give vent to their emotions (Jin et al., 2011).

A message of the dean on Facebook leads to more reactions compared to the same message by the university account. This confirms what we might expect from Facebook, that a human face will have greater effect than an anonymous account, in line with the CEO's role in communication (Turk et al., 2012, Freberg et al., 2011).

When the dean communicates through Twitter, adapting information leads to significantly more telling friends about it than instructing information. Here again, the surprising effect of finding emotional content on Twitter might have had an effect. The fact that adapting information is shared more, can be attributed to the nature of the sender, the dean, possibly emotion being more easily projected on a human being. We found a similar and a different effect in that, when the university communicates the crisis through Facebook, the information is more likely to be shared when it is adapting rather than instructing. On the one hand, the same surprise effect might play a role in receiving atypical information (from the university) on Facebook, while on the other hand, the stakeholders again seem to be more receptive for adapting information. Moon & Rhee (2012) describe the effect of adapting information having an effect on emotions depending on the responsibility stakeholders attribute to the organisation, but those variables have been constant in our

study. In an experiment, Coombs and Holladay (2009) have found no difference in reactions to compensation or sympathy, while other empathy studies focus more on security and emergency management rather than organisational (crisis) communication.

That leaves us with most of our hypotheses being unconfirmed.

### *Theoretical implications*

In spite of that, our study does show some interesting results. It is clear that researchers do not agree on the preferred use of a specific social media platform for crisis communication. Our research being one of the first to compare two different platforms, we could not sufficiently predict effects based on previous research. Partly because relatively little research has been performed on the subject, but also because other effects apparently play a role. Further research is needed, and models of crisis communication seem to have a limited life span or remain incomplete as long as media keep evolving at the current pace at which science seems to keep lagging behind. In addition, most of the counterintuitive effects that we encountered include a surprise effect and emotions, mechanisms that we associate with social psychology and interpersonal communication, implying that more interdisciplinary research may be the way to progress in this domain. We discuss this in detail in the section on further research.

### *Practical implications*

Non-profit organisations can, to a certain extent, apply the proven and tested strategies in organisational crisis communication, such as stealing thunder, transparency, honesty and empathy. The CEO, or someone from a similar level, plays an important role in communicating about the crisis. When using social media for this purpose, secondary or even tertiary effects that have not been documented sufficiently can play a role. Research has not yet been able to present an all-inclusive model to predict stakeholders' behaviour and possible reputation damage. Our study, which confirms only part of former research, indicates that Twitter is a preferable platform for crisis communication when it comes to secondary communication.

## *Limitations*

A scenario study, as we used here, inevitably comes with limitations. It is impossible to include all relevant factors in one single scenario. For example, we limited ourselves to only assessing the stakeholder's intentions to share the information online or to tell a friend offline. A recent study also looks at how such online comments can be integrated into the process of communication management, influencing public reactions to organisational crisis discourse (Zhao et al., 2013), which we did not take further into account. The fact that we confined our scenario to our resident university, implies a very specific context that may not be applicable in all organisations. We have, for example, not taken into account nor measured the previous reputation of the university or the dean, which has proven to be a critical element in reputation management during crises (e.g. Coombs, 2007b). Doing so, however, would have meant that the study included multiple organisations or universities, which would have multiplied possible disturbing inter-organisational variables (different cultures, the dean's personality, ...).

## **Conclusion and further research**

We assume that, although the research and literature in the domain of crisis communication through social media keeps adding new insights, the nature and the evolution speed of social media makes that we are continually playing catch up, exactly as Coombs stated in 2008. Many secondary or even tertiary effects have not or barely been researched. As a result, our hypotheses could not be embedded in a solid body of empirical research. Many aspects of even the mere usage of social media remain poorly documented (Sun & Wu, 2012). Nevertheless, the results from our study show interesting and often counterintuitive effects that can be tackled and corroborated in future studies.

First, we have chosen not to compare crisis response strategies, as they imply a complex consideration of specific characteristics of each crisis (Claeys & Cauberghe, 2012). By applying "stealing thunder" in our scenario (Arpan & Roskos-Ewoldsen, 2005), we avoided this choice. In future research, different

types of crises should be applied in order to have a better insight in the interrelationship of those factors.

Emotion or empathy is a strong content element in crisis communication, a factor that we kept constant in our scenarios. Claeys & Cauberghe (2012) conclude that an organisation should use an emotional frame when stealing thunder. That will prevent damage to the organisation's reputation and stakeholders will perceive the organisation as more trustworthy. Empathy in crisis communication, especially when dealing with social media, is to our opinion a variable that needs further research. In addition, further study into emotion driven communication factors, such as verbal (textual elements) or nonverbal cues (how the message sounds or how the messenger looks like), may add more insight into the mechanisms of crisis communication by social media (Walther, Loh & Granka, 2005).

In this study, we only focussed on secondary crisis communication. Although this seems strongly related with the impact on an organisation's reputation, we did not directly measure this effect. Future studies can look at the direct impact on reputation.

Finally, we set up a case where a university and its stakeholders are faced with a crisis in the form of a food related problem. University crises regularly show on current affairs, mostly being victim crises, when a shooting took place or another event in which the non-profit organisation bears little responsibility. It sadly does happen and non-profit organisations, being unable to deploy a massive public relations effort, had better be prepared. Moreover, social media have proven to play an important role in these victim crises as well (e.g. Palen et al., 2009). For the study of university crises and the use of social media in crises more specifically, future research could focus more on case studies to boost experimental research to explain the complex effects of socially mediated crisis communication.

Without question, crisis communication through social media is a domain that needs more research, much of which is taking place right now. A group of

researchers (e.g. Jin et al., 2011, Liu et al., 2013) are focussing on the development of a social-mediated crisis communication model by experimental research, which could provide more insight in the interaction between social media and crisis communication. The current study also contributes to the scarce literature on crisis communication through social media, especially for non-profit organisations such as universities and can serve as a starting point for future studies.

## References

- Arpan, L. M., & Roskos-Ewoldsen, D. R. (2005). Stealing thunder: Analysis of the effects of proactive disclosure of crisis information. *Public Relations Review*, *31*, 425-433.
- Claeys, A.-S., & Cauberghe, V. (2012). Crisis response and crisis timing strategies, two sides of the same coin. *Public Relations Review*, *38*, 83-88.
- Clarke, C. E., & Chess, C. (2006). False alarms, real challenges - One university's communication response to the 2001 anthrax crisis. *Biodefense Strategy, Practice, and Science*, *4* (1), 74-83.
- Coombs, W. T. (2004). Impact of past crises on current crisis communication: Insights from Situational Crisis Communication Theory. *Journal of Business Communications*, *41*, 265–289.
- Coombs, W. T. (2007a). *Ongoing crisis communication: Planning, managing and responding*. Thousand Oaks, CA: Sage.
- Coombs, W. T. (2007b). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, *10*, 163–176.
- Coombs, W. T. (2008). *Crisis communication and social media. Essential Knowledge Project*. Retrieved from [http://www.instituteforpr.org/essential\\_knowledge/detail/crisis\\_communication\\_and\\_social\\_media](http://www.instituteforpr.org/essential_knowledge/detail/crisis_communication_and_social_media).

Coombs, W. T. (2010). Pursuing evidence-based crisis communication. In T. W. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 301-318). West Sussex, United Kingdom: Wiley-Blackwell.

Coombs, W. T., & Holladay, S. J. (2009). Further explorations of post-crisis communication: Effects of media and response strategies on perceptions and intentions. *Public Relations Review*, *35*, 1-6.

Coombs, W. T., & Holladay, S. J. (2012). Amazon.com's Orwellian nightmare: Exploring apology in an online environment. *Journal of Communication Management*, *16* (3), 280-295.

Dabner, N. (2012). 'Breaking Ground' in the use of social media: A case study of a university earthquake response to inform educational design with Facebook. *Internet and Higher Education*, *15*, 69-78.

Fediuk, T. A., Coombs, W. T., Botero, I. C. (2010). Exploring crisis from a receiver perspective: Understanding stakeholder reactions during crisis events. In T. W. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 301-318). West Sussex, United Kingdom: Wiley-Blackwell.

Fombrun, C. (1996). *Reputation: Realizing value from the corporate image*. Boston, MA: Harvard Business School Press.

Freberg, K. (2012). Intention to comply with crisis messages communicated via social media. *Public Relations Review*, *38*, 416-421.

Freberg, K., Graham, K., McGaughey, K., Freberg, L. A. (2011). Who are the social media influencers? A study of public perceptions of personality. *Public Relations Review*, *37*, 90-92.

Gainey, B. S. (2010). Educational crisis management practices tentatively embrace the new media. In T. W. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 301-318). West Sussex, United Kingdom: Wiley-Blackwell.



Heath, R. (2006). Best practices in crisis communication: Evolution of practice through research. *Journal of Applied Communication Research*, 34 (3), 245-248.

Jin, Y., & Cameron, G. (2007). The effects of threat type and duration on public relations practitioner's cognitive, affective, and conative responses in crisis situations. *Journal of Public Relations Research*, 19, 255–281.

Jin, Y., Liu, B. F., Austin, L. L. (2011). Examining the role of social media in effective crisis management: The effects of crisis origin, information form, and source on publics' crisis responses. *Communication Research*. doi: 10.1177/0093650211423918

Kaplan, A.M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53, 59-68.

Kaplan, A.M., & Haenlein, M. (2011). Two hearts in three-quarter time: How to waltz the social media/viral marketing dance. *Business Horizons*, 54, 253-263.

Kerkhof, P., Beugels, D., Utz, S., Beukeboom, C. J. (2011-05-25). Crisis PR in Social Media: An Experimental Study of the Effects of Organizational Crisis Responses on Facebook. *Paper presented at the annual meeting of the International Communication Association, TBA, Boston, MA*. Retrieved 2013-07-22 from [http://citation.allacademic.com/meta/p491855\\_index.html](http://citation.allacademic.com/meta/p491855_index.html)

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

Lee, J., Woeste, J. H., Heath, R. L. (2007). Getting ready for crises: Strategic excellence. *Public Relations Review*, 33, 334-336.

Liu, B. F., Jin, Y., Austin, L. L. (2013). The tendency to tell: Understanding publics' communicative responses to crisis information form and source. *Journal of Public Relations Research*, 25, 51-67.

Liu, B. F., & Kim, S. (2011). How organizations framed the 2009 H1N1 pandemic via social and traditional media: Implications for U.S. health communicators. *Public Relations Review, 37*, 233-244.

Macedo, I. M., & Pinho, J. C. (2006). The relationship between resource dependence and market orientation: The specific case of non-profit organisations. *European Journal of Marketing, 40*, 533-553.

Mainardes, E. W., Alves, H., Raposo, M. (2010). An exploratory research on the stakeholders of a university. *Journal of Management and Strategy, 1*, 76-88.

Moon, B. B., & Rhee, Y. (2012). Message strategies and forgiveness during crises: Effects of causal attributions and apology appeal types on forgiveness. *Journalism & Mass Communication Quarterly, 89* (4), 677-694.

Palen, L., Vieweg, S., Liu S. B., Hughes, A. L. (2009). Crisis in a networked world: Features of computer-mediated communication in the April 16, 2007, Virginia Tech event. *Social Science Computer Review, 27* (4), 467-480.

Pempek, T. A., Yermolayeva, Y. A., Calvert, S. L. (2009). College students' social networking experiences on Facebook. *Journal of Applied Developmental Psychology, 30*, 227-238.

Peters, R. G., Covello, V. T., McCallum, D. B. (1997). The determinants of trust and credibility in environmental risk communication: An empirical study. *Risk Analysis, 17*, 43-54.

Qualman, E. (2012). *Socialnomics: How social media transforms the way we live and do business* (2nd ed.). Hoboken, NJ: Wiley.

Schultz, F., Utz, S., Göritz, A. (2011). Is the medium the message? Perceptions of and reactions to crisis communication via twitter, blogs and traditional media. *Public Relations Review, 37*, 20-27.

Sisco, H. F. (2012). Nonprofit in crisis: An examination of the applicability of situational crisis communication theory. *Journal of Public Relations Research, 24*, 1-17.

Smith, T., Coyle, J. R., Lightfoot, E. & Scott, A. (2007). Reconsidering models of influence: The relationship between consumer social networks and word-of-mouth effectiveness. *Journal of Advertising Research*, 47, 387-397.

Sun, T., & Wu, G. (2012). Traits, predictors, and consequences of Facebook self-presentation. *Social Science Computer Review*, 30, 419-433.

Surgeoner, B. V., Chapman, B. J., Powell, D. A. (2009). University students' hand hygiene practice during a gastrointestinal outbreak in residences: What they say they do and what they actually do. *Journal of Environmental Health*, 72 (2), 24-28.

Turk, J. V., Jin, Y., Stewart, S., Kim, J., Hipple, J. R. (2012). Examining the interplay of an organization's prior reputation, CEO's visibility, and immediate response to a crisis. *Public Relations Review*, 38, 574-583.

Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2007). *Effective crisis communication: Moving from crisis to opportunity*. Thousand Oaks, CA: Sage.

Utz, S., Schultz, F., Glocka, S. (2013). Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster. *Public Relations Review*, 39, 40-46.

Varma, T. M. (2011). Crisis communication in higher education: The use of “negotiation” as a strategy to manage crisis. *Public Relations Review*, 37, 373-375.

VRM Vlaamse Regulator voor de media (2012). Mediaconcentratie in Vlaanderen. Rapport 2012. D/2012/3241/327. Brussels: Flemish Government.

Walther, J. B., Loh, T., Granka, L. (2005). Let me count the ways - The interchange of verbal and nonverbal cues in computer-mediated and face-to-face affinity. *Journal of Language and Social Psychology*, 24, 36-65.

Wang, S. S., & Stefanone, M. A. (2013). Showing off? Human mobility and the interplay of traits, self-disclosure, and Facebook check-ins. *Social Science Computer Review*, 31, 437-457.

Zhao, D., Wang, F., Wei, J., Liang, L. (2013). Public reaction to information release for crisis discourse by organization: Integration of online comments. *International Journal of Information Management*, 33, 485-495.

## Project 2: crisis perception

*explore, **define**, analyse, determine, and conclude*

In the first project, I explored the research domains of crises, in the frame of management and communication. The literature study formed the basis for all the following projects, each time updated with the latest research. The first paper led to a better understanding of the effect of social media content, source, and platform on stakeholders' behaviour. But what is the effect or impact of social media messages, and how about other, internal stakeholders, especially from the viewpoint of crisis prevention?

In this second project, I narrowed down crisis communication to crisis perception (Coombs, 2007) from within an organization. A more elaborate discussion of crisis perception is presented in the introduction. This second project focuses my research methodology by using a scenario and a way of measuring crisis perception, paving the way for my further research approach, as a basis for project 3.



## Crisis perception from within an organisation following a social media crisis message.

This article was peer reviewed, discussed and presented in the Organisational Communication Division and in the Public Relations Division of the 65th International Communication Association Annual Conference, 21-25 May, San Juan, Puerto Rico, and is referred to as Snoeijers, 2015. It is currently under review for *Journal of Contingencies and Crisis Management*.

### Abstract

This study looks at how a crisis is perceived from within an organisation, taking into consideration the perceiver's commitment towards the organisation and the impact of the social media message, as well as the perceiver's function within the organisation. Differences in crisis perception, issues perception and willingness to act were explored in a scenario study using a 2x2 between-subjects design. The results show that the individual professional profile, a communication-related function, and a function in management, play a primary role in perception and willingness to act. Communication professionals tend to score higher on the scales than others, even when confronted with a low-impact social media message, but also managers show higher scores in specific conditions, i.e. when they do not have a communication function. The findings from this study contribute to a better understanding of human factors in crisis perception from within an organisation, and the results suggest that the role of individual organisation members needs further investigation.

### Introduction

Crisis situations may and will occur to all organisations, and much research is available from the management literature, especially in the form of case studies of for-profit organisations, as bad crisis management, including communication, could severely harm an organisation's reputation, resulting in economic damage. Therefore, it is important to know how to try to take control of the volatile situation that a crisis represents. One of the novel factors in crisis

communication dynamics, or at least in the last decade, is the vast increase of social media influence by and on stakeholders of the organisation (e.g. Jaques, 2014). The research question for my doctoral research project is: *what is the influence of stakeholder (social media) communication on the crisis perception of an organisation and what is the effect of individual profiles within the organisation on that perception?* In this particular study, I focus on the research question: *what is the effect of commitment and social media cues, as well as professional function, on crisis perception and willingness to act?* This study involves crisis perception, as in identifying an ongoing event as a possible organisational crisis, from within an organisation.

By examining research on crisis communication, individual perception and crises, organisational function and social media, we make hypotheses and test those with existing and self-constructed scales of perception and willingness to act, an experimental scenario-driven questionnaire, and a sample from different organisations. This study contributes to the theory of crisis communication and crisis management, by a better understanding of influencing factors of crisis perception from within an organisation during a crisis.

## Theoretical background

Since more than a decade, crisis communication no longer seems to be an exotic research domain and theories such as Coombs' Situational Crisis Communication Theory (Coombs, 2007) are well validated and have delivered empirical evidence, and are still being tested for recent developments. The most important one of those novel developments are social media. Research and literature in the domain of crisis communication through social media keeps adding new insights. A group of researchers (Jin, Liu and Austin, 2014) are focussing on the development of a social-mediated crisis communication model by experimental research, which could provide more insight in the interaction between social media and crisis communication. The nature and the evolution speed of social media, however, makes that we keep playing catch-up (Coombs, 2008). The question that emerges the most in the aftermath of an organisational crisis is:



why didn't we see it coming? That implies that the signs to perceive a situation possibly developing into a crisis were there and that the organisation should have acted earlier (Hindmoor and McConnell, 2013). To perceive such signs, organisations must organise themselves to put structure and staff in place to do as such.

### *Crisis communication*

The mainstream theory of organisational crisis communication at this moment, Coombs' Situational Crisis Communication Theory (Coombs, 2007), was the result of case studies in corporate organisations. One of the most accepted definitions nowadays of an organisational crisis is put forward by Coombs: "the perception of an unpredictable event that threatens important expectancies of stakeholders and can seriously impact an organisation's performance and generate negative outcomes" (Coombs, 2007, pp. 2-3). From this definition, we can deduce that one of the variables that surely play a key role in organisational crisis communication research, is the very perception of a situation as a crisis by the organisation or its members. Additionally, Coombs' theory contains a description of response strategies to specific crises. An organisation can protect and repair its reputation through communication, and the crisis type can determine the proper response strategy. Coombs classified crises in three groups: victim crises, where the organisation has little or no responsibility, such as natural disasters or terrorism; accidental crises, where the organisation bears part of the responsibility, such as technical errors; and intentional crises, where the organisation could have prevented the crisis, such as fraud cases. Depending on the organisation's reputation, response strategies involve denying the crisis, diminishing it, or rebuilding the relationship with the stakeholders, combined with bolstering as secondary response strategies. These response strategies are often combined with others, such as "stealing thunder" (Arpan and Roskos-Ewoldsen, 2005), a strategy in which an organisation proactively diffuses news about a crisis, including negative news, to prevent others to bring it out and forcing the organisation in the defence. The technique of stealing thunder has

proven to be successful in crisis communication (e.g. Claeys and Cauberghe, 2012).

### *Crisis perception*

Crisis perception by the organisation or its internal stakeholders is an issue when it comes to early crisis detection and proactive communication by an organisation (Staw, Sandelands and Dutton, 1981). A threat may result in restriction of information processing, such as narrowing in the field of attention, a simplification in information codes, or a reduction in the number of channels used. Second, when a threat occurs, there may be a constriction in control, such that power and influence can become more concentrated or placed in higher levels of hierarchy (Staw et al., 1981). Specifically, large hierarchical companies and government organisations seem to experience problems with that, as the information flow within a company can be too long for a proactive or even a quick reactive response, particularly when the communication function is not part of the executive board (e.g. Liu, Horsley and Levenshus, 2010). Especially in a media or new media driven society, the challenge for an organisation is to perceive a crisis more quickly than its stakeholders do (Gonzalez-Herrero and Smith, 2008). Therefore, there is a need to understand the crisis perception or the lack of it by the stakeholders.

An organisational crisis can be perceived by the organisation itself or by its stakeholders. In being the first to perceive a situation as a crisis, an organisation will have a strategic advantage in time (more information will become available) and in initiative (proactive vs. reactive communication) (Arpan and Roskos-Ewoldsen, 2005). When an organisation has not perceived a crisis situation, but their stakeholders have, an expectation gap will occur, and stakeholders will lose confidence (Coombs, 2007). Crisis detection is therefore an essential part of crisis perception and organisational crisis communication.

Mitroff (1988) proposed a crisis communication model to detect signals of a crisis to come, including five mechanisms: signal detection, preparation/prevention, inclusion/damage control, repair and lessons learned. He found that long before a

crisis breaks out, there are signals pointing to an anomaly. Those signals can be information generated by disturbances or malfunctions and can have an internal or an external source (Mitroff, 1988). Coombs (2001) calls his system for detecting such signals a crisis sensing mechanism, combining risk management, issues management and relationship management in a radar mechanism to capture information on a potential crisis. Van Tulder and Van der Zwart (2005) put forward four attributes of an issue: social controversies awaiting settlement; about which expectation gaps arise; that result in controversies; and that can have a positive or negative impact on the organization and/or its reputation.

In their study, Paraskevas and Altenay (2013) point out the importance of the difference between relevant and irrelevant signals. This may lead to a true alarm, where a signal is interpreted and rightly labelled as a threat, or irrelevant information can be discarded. A wrong interpretation of signals can lead to type 2 errors, in which a threat is discarded, or to type 1 errors (false positives), when irrelevant information is interpreted as a threat. However, because of the uncertainty and scarce information involved in crisis situations (Sayegh, Anthony and Perrewé, 2004), one can never be sure whether a situation could evolve into a crisis. Another aspect of Paraskevas' and Altenay's study (2013), is their finding that no two organisations have the same view on crisis signal detection: some managers say it is everybody's responsibility, other would limit it to specific functions within the organisation. The specific functions that I will focus on in my study are managers and communication professionals (Gonzalez-Herrero and Smith, 2008; Staw et al., 1981).

De Villa and Rajwani (2013) concluded in their study that the strategy that managers apply during crisis situations depends on their perception of that crisis. They call this the 'mirror trap' because these strategies do not always have the best outcome. As we find in the literature, perceptions are dynamic processes that lead to decisions and subsequent behaviour, and are largely based on individual and collective schemas, frames, or mental models and the way people try to fit new information into these existing schemas, frames, or mental models (Barr and Huff, 1997). De Villa and Rajwani (2013) call this 'perceptual

relativity'. Some managers, for instance, see a crisis as an opportunity, while others see it as a threat. 'Environmental uncertainty' on the other hand, refers to the difficulties managers encounter when predicting the variables in the environment that can have a possible impact on the organisation.

Employees play a vital role in crisis communication, as crises create uncertainty and frustration (Johansen, Aggerholm and Frandsen, 2012; Walaski, 2013). Therefore, it is essential that employees are kept informed when a crisis breaks out. This entails some positive effects. Employees, when better informed, will be able to better judge a risk and by doing so, prevent a crisis. Furthermore, a culture of open communication leads to more commitment to the company among the employees. They feel involved and trust the organisation in which they work. This is essential for effective and successful crisis communication.

Crisis perception from within the organisation has a key role in crisis management. Penrose (2000) studied the effects of perceptions of threats and opportunities emerging from a crisis on crisis planning. He states that every crisis presents opportunities, and this positive interpretation or perception leads to a greater variety of solutions, resulting in proactive planning. A negative perception of threats leads to panic and the organisation will have the tendency to close on itself, and by doing so limiting the useful information flow to manage a crisis effectively. Threats should be identified, as well as opportunities. This balanced perception will decrease uncertainty and lead to a faster and more effective crisis response.

### *Communication function*

Moreno, Zerfass, Tench, Verčič, and Verhoeven (2009) point out the importance of excellent organisational communication and the fundamental role of communication professionals to bring about an excellent communication department. Their profile and professional experience give them a different view on the organisation. Van Gorp and Pauwels (2009) based their perception of communication managers in Belgian companies on Moreno et al. (2009), and put forward four principles of excellence for that function. Firstly, grouping

communication functions within a distinct and autonomous communication department, managed by a communication manager. Secondly, the communication function should structurally be situated close to the organisation's top management, so that the communication manager participates in strategic decision processes: they need authority to fully exercise their function. Further, a communication manager should have a clear communication profile, having to take decisions in communication policy. Communication can only be an added value to an organisation when the function does not merely involve executing tasks. Lastly, within the communication department, diversity, especially in gender, is important. Few companies answer to all four of these principles. Communication managers do not often have a seat in the board of directors and a minority of communication managers hold a communication related degree. In the current research, we limit ourselves to the function, rather than including a person's academic background.

### *Social media*

One important source of information when it comes to issues management, are social media. As social media have changed the way people interact with one another and with organisations, it is obvious that they play an increasing role in organisations and stakeholders managing crisis communication, especially when it comes to crisis signal detection. Social media inform stakeholders more subjectively, but also more frequent and faster than traditional media.

Research in crisis communication through social media has increased, but these media evolve so fast that scientific gaps keep emerging. Coombs (2008) stated that the practice of crisis communication is ahead of research in terms of social media. Current research papers often consist of case studies. Cases are snapshots of an organisation's reactions at a certain moment in time, but do not necessarily imply predictability for other cases (Fediuk, Coombs and Botero, 2010). Experimental designs may provide an answer to the lack of research revealing important dependent variables and causal relations. Research by Jin et al. (2011) supports an emerging causal model, the Social Mediated Crisis Communication

Model, which focuses on influential social media creators, followers and inactives. The model distinguishes between crisis origin (internal/external to the organisation resulting in attribution of responsibility), crisis type (cf. SCCT), the organisation's infrastructure (centralised or not), the message content (instructing and adapting information, Coombs, 2007), message form (online/offline media) and message strategy (cf. SCCT) to explain different perceptions of the crisis message by the intended public.

To date, the impact of different media types on the effects of crisis response strategies remains understudied. Claeys and Cauberghe (2012) suggest that stakeholders could react differently on crisis messages spread through social media. Coombs and Holladay (2009) studied the impact of print and broadcast media, but theories such as SCCT do not address how different media (traditional media, social media or offline word-of-mouth communication) can affect publics' crisis communication behaviours (Liu, Jin and Austin, 2013). Schultz, Utz and Göritz (2011) have experimentally tested the effects of crisis communication via social media in comparison to traditional media. Their results indicated that the medium matters more than the message, i.e. although people talk more about newspaper articles, tweets had the most positive effect on secondary crisis communication (sharing) and reactions. Also, twitter users share information via different channels.

From a source of information point of view, Kavanaugh, Fox, Sheetz, Yang, Li, Shoemaker and Xie (2012) came to the conclusion that government agencies should make more use of social media, not only to communicate fast and fight rumours, but also to improve the relationship between government and citizens, because population segments that were difficult to reach, can now be targeted more easily. The same research indicated that most individuals share crisis messages and would use social media to indicate that they are safe. Muralidharan, Rasmussen, Patterson, and Shin (2011) have studied social media messages through Twitter and Facebook during a disaster. One of their findings is that non-profit organisations often use social media messages with positive emotions to encourage emergency workers, whereas Waters, Burnett, Lamm, and

Lucas (2009) point out the use of disclosure tactics by NGO's, by which they would advocate for their organizations and causes, with increased openness and transparency.

Communication theory lags the utilization of Internet channels, including social media, (Coombs and Holladay, 2012) and organisations have very little understanding of crisis communication in a social media context, which is of concern for crisis managers (Roshan, Warren, and Carr, 2016). The use of social media as a source for crisis signal detection is a field in which hardly any research has been performed. Little is known about how organizations screen their environment in practice (Strauss and Jonkman, 2017). Vieweg, Hughes, Starbird, and Palen (2010) point out the importance of social media (Twitter) monitoring during disasters, to enhance situational awareness for emergency workers, whereas Jaques points out the significant role that social media can have for issues management, specifically in the scanning, monitoring, and tracking of issues (Jaques, 2014, p. 39). It is a fact that information travels fast through social media and many people can be reached in little time (Freberg, Palenchar and Veil, 2013). Furthermore, a study by Hermida, Fletcher, Korell and Logan (2012) came to the conclusion that social network platforms are an increasing important source of information and news for individuals and organisations. Their results suggest that a growing number of social media platform users get their information primarily from their peers. An organisation will therefore want to tap into this fast-flowing information source to stay in touch with what goes on outside the organisation. And this is no one-way traffic. Stakeholders can also more easily provide the organisation with information, which can prove difficult through other media (Larsson and Ågerfalk, 2013). Jin, Liu and Austin (2014) state that organizations no longer have a choice about whether to integrate social media into crisis management; the only choice is how to do so.



## Research question and hypotheses

An incident becomes a crisis when it is perceived as such. An organisation has a strategic advantage by being the first to perceive a crisis. That organisational perception is instrumentalized by people having a function within the organisation. Each individual has his or her own perception of reality, implying differences between professional profiles in aptitude to perceive a crisis. The emergence of new communication channels and techniques may have an influence on those differences, as well as a person's commitment (cf. *infra*) to the organisation in crisis. Therefore, the research question for this study is:

*what is the effect of commitment, professional function, and social media cues on crisis perception and willingness to act within an organisation?*

The dependent variable 'crisis perception' is derived from Coombs' definition of a crisis (Coombs, 2007) and the study of Billings, Milburn and Schaalman (1980). The second dependent variable 'willingness to act' is closely related to the first dependent variable, but it was necessary to also check whether participants, next to perceiving a crisis, would have the intention of taking action. After all, a divergent perception is not necessarily similar to an adapted (risk averse) behaviour (Marynissen, Ladkin, Denyer, Snoeijers and Van Achte, 2013). Within the research question, the following independent variables can be identified.

**Commitment:** Ahluwalia, Burnkrant and Unnava (2000) studied the effect of negative publicity on consumers, with commitment as a moderating variable, showing that customers with a high commitment towards a specific brand will withstand negative information and vice versa. The studies by Benabou (2013), but also by Mishra (1996) indicate that 'company blindness' could play a role when a crisis breaks out in another company in the same branch of activities or in the own organisation. Collier and Esteban (2007) refer to three forms of commitment in an organizational context: affective, normative and continuance commitment. In our study, we use the concept of affective commitment, which is based on personal identification and value congruence with the organisation (Collier and Esteban, 2007). The scenario provides a situation in which the



respondent's organisation is immediately involved or another organisation from within the same activity branch. That may lead to a different crisis perception/willingness to act, especially by management. Combined with the study of de Villa and Rajwani (2013) on perceptions by management in an organisation, this results in the independent variable of commitment, having two conditions: high and low. This leads to the first hypothesis:

*H1: A situation in which a person feels highly committed towards an organisation, will lead to a better perception of a crisis and to more willingness to act compared to a situation in which a person feels low commitment.*

**Function in the organisation:** this moderating variable was not found in the literature as such, but derives partly from de Villa's and Rajwani's research (2013), as well as from Van Gorp and Pauwels' (2009). The conditions that were taken into account were that the respondent is a communication or public relations professional or not, and that the respondent is a member of management or not. We derived a second hypothesis:

*H2a: Someone occupying a communication-related function will have a better perception of a crisis and will show more willingness to act compared to organisation members with no communication-related function.*

*H2b: A member of management will have a lower perception of a crisis and will show less willingness to act compared to organisation members not belonging to management.*

**Social media cues:** with this independent variable, we will measure the effect of an event that has a lot or little attention on a social media platform (many likes and retweets, as opposed to few) and may therefore carry the potential in it to blow a situation up so that it could become a crisis (Coombs and Holladay, 2012; Hermida et al., 2012). That leads to the final hypotheses:

*H3a: Social media cues that get more online attention, will cause organisation members to have a better perception of the respective situation as a crisis and be more willing to act compared to when the social media cues get less attention.*

Because of their function and professional training, we may safely assume that in the same circumstances:

*H3b: Communication professionals will have an even better perception of social media cues compared to non-communication staff and will be more willing to act.*

## Research design

We set up an online experimental study with a 2x2 between-subjects design in the form of a scenario study involving an accidental crisis (Coombs, 2007), in which we manipulated social media cues (many likes and retweets or few) and commitment, by having the crisis present itself in the respondent's own organisation or in another one in the same branch of industry (i.e., fashion and clothing) (Mishra, 1996). We presented each participant with one of four crisis scenarios in which the two variables were manipulated. The actual function of the participant in her or his own organisation, occupying a communication function or not, and having a higher management position or not, were quasi-experimental factors.

### *Participants and procedure*

For the questionnaire, participants were recruited from Belgian companies and public services. They were identified through professional networks (e.g. LinkedIn) and a communication professionals' network. The experiment yielded 133 respondents, 96 of which completed the questionnaire, 28% only partially. 58% were men, 32% women. The average age was 45 (SD=10.793). 34% had a communication function, 66% did not, while 47% belonged to management and 43% did not.

Each participant was contacted by email, containing a link to an online questionnaire, which took about 5 minutes to complete. The first part of the questionnaire consisted of personal questions, age, gender, function in their organisation (self-reporting free field, cf. Van Gorp and Pauwels, 2009) and an indication with which professional branch their function is mostly associated (communication, general management, 4 others and a free field). The free text answers would later be recoded in communication-related or not and higher management or not. Next, participants were presented with a scenario describing an accidental crisis situation, without mentioning the word crisis to avoid bias (see Table 2). They were randomly assigned to one of four conditions, in which commitment and social media cues varied.

<b>descriptive scenario</b>	The clothing tissue from Blanchefleur Textiles has been found to contain chemicals. These facts surfaced after an undercover investigation by Greenpeace. They claim that they have found harmful substances that may pose a health risk, involving amine dyes.
<b>additional tweet</b>	Greenpeace: “Chemicals found in Blanchefleur brand, possibly posing health risks. #warning #shareyouropinion #healthissues”
<b>condition 1</b>	You work for Blanchefleur in your current function. The tweet is shared 137 times.
<b>condition 2</b>	You work for Rouge Ecarlat, a competitor, in your current function. The tweet is shared 137 times.
<b>condition 3</b>	You work for Blanchefleur in your current function. The tweet is shared 3 times.
<b>condition 4</b>	You work for Rouge Ecarlat, a competitor, in your current function. The tweet is shared 3 times.

Table 2: Stimuli in 2\*2 conditions

To avoid confusion or any misuse, it was stressed that the situation is fictitious and hypothetical. Given the hypothetical nature of the scenario, we checked whether participants thought the crisis was realistic and whether they were able to imagine that the situation would actually take place. This reality check resulted in 76% of the participants considering the situation (very) realistic, as opposed to 6,8% who thought that the situation was unrealistic (on a five-point Likert scale,  $M=2.05$ ,  $SD=0.97$ ,  $p<0.001$ ).

### *Measurements*

All measurements were performed by means of five-point Likert items (Dawes, 2008). The first measurement was a commitment check, to verify whether the scenario-induced commitment had a real effect on the respondents. By using a slightly altered version of the Personal Involvement Inventory (Zaichkowsky, 1994). That scale, though slightly altered, proved to be valid, Cronbach's  $\alpha=0.88$ . For all conditions, the commitment test resulted in a significant and large enough effect,  $F(3, 100)=4.29, p=0.007, \eta_p^2=0.11$  (Table 3).

How do you feel about this message, from the viewpoint of your current function with Blanche fleur / Rouge Ecarlat? Please mark the corresponding dots.	
important	unimportant
boring	interesting
attractive	unattractive
relevant	irrelevant
meaningful	meaningless
worthless	valuable
concerned	unconcerned
useless	necessary

Table 3: Adapted from Personal Involvement Inventory (Zaichkowsky, 1994)

Crisis perception was measured by a combination of two measurement scales, one based on the definition of crisis by Coombs (2007) and on items from his Situation Crisis Communication Theory (Table 4), and the other on the different criteria of an issue (Van Tulder and Van der Zwart, 2005) (Table 5). The crisis and issues scale scored very high on reliability, crisis Cronbach's  $\alpha=0.97$ , and issues Cronbach's  $\alpha=0.97$ , results that will be discussed further below.

After reading this message, how would you assess the situation for Blancheffleur. from the viewpoint of your current function at Blancheffleur / Rouge Ecarlat? Mark the corresponding dots (not agree – agree).
This event is unpredictable.
This event poses a threat for the stakeholders' expectations.
This event has an important impact on the performance of the company Blancheffleur.
This event causes negative effects.
This event stands out.
There is little information on this situation.
The situation changes quickly.
The direction in which the situation will evolve is unknown.

**Table 4: Crisis perception scale items**

After reading this message, how would you assess the situation for Blancheffleur. from the viewpoint of your current function at Blancheffleur / Rouge Ecarlat? Mark the corresponding dots (not agree – agree).
This event is newsworthy.
Blancheffleur's situation will generate proponents and opponents.
Blancheffleur's situation is the subject of public debate.
Blancheffleur's situation will become the topic of conversation with broad audiences through the media.
An expectation gap has appeared between the stakeholders and the organisation.
Blancheffleur's situation is controversial.
Blancheffleur's situation is a news tide with a short peak that will quickly ebb away.
Blancheffleur's situation may have an impact on the organisation and/or its reputation.

**Table 5: Issue perception scale items**

A new scale to measure for one's willingness to act was developed from Coombs Situational Crisis Communication Theory (Coombs, 2007, response strategies), enhanced with typical strategies commonly known from the clothing and fashion branch (Table 6).

After reading this tweet and keeping in mind that you (do not) work at Blanche fleur, which action do you think that Blanche fleur should take? Mark the corresponding dot (not agree – agree)
We/They could organise a press conference.
We/They could offer a financial compensation.
We/They could react through social media.
We/They could call back the clothing concerned.
We/They could offer a compensation by a voucher.
We/They shouldn't react.
We/They could offer a voucher and a financial compensation.
We/They could react through our/their website.

Table 6: Willingness-to-act items

The overall scale composed of crisis perception, issues perception and willingness to act, had a reliability score of Cronbach's  $\alpha=0.98$ , which is extremely high. A principal factor analysis was conducted on the 24 items with oblique rotation. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis,  $KMO=.96$ , which falls into the range of marvellous according to Hutcheson and Sofroniu (1999), and all KMO values for individual items were greater than .83, which is well above the acceptable limit of .5 (Field, 2009). An initial analysis was run to obtain eigenvalues for each factor in the data. Three factors had eigenvalues over Kaiser's criterion of 1 and in combination already explained 80.72% of the variance. The scree plot showed no inflexions and the items clustered into 2 factors, namely crisis/issue perception, and willingness to act.

## Results

For testing the hypotheses, we performed a series of univariate and multivariate analysis of variance. We carried out the tests with a 0.95 confidence interval. For representing the effect size, we used partial eta squared (Field, 2009).

There were 58 respondents (44%) occupying a management position, as opposed to 75 who did not. 39% of the respondents ( $N=52$ ) held a communication function, while 81 did not. Of the managers, less than 8% were in a communication

function, while less than 7% of the communication functions were at management level, which is furthermore illustrated by a more than moderately negative correlation, Pearson’s  $r=-0.58$ ,  $p<0.001$ .

The four different conditions (high commitment and low media cue; low commitment and high media cue; high commitment and low media cue; and low commitment and low media cue) did not have any significant effect on the respondents’ perception of crises or issues, or on their willingness to act (respectively,  $p=0.37$ ,  $p=0.94$ ,  $p=0.51$ ). The independent variables of commitment and social media cues, did not have a significant effect either. However, the quasi-experimental factors of function, whether or not in a management or a communication function, did give significant results in the ANOVA (Table 7).

function	crisis perception	issue perception	willingness to act
communication	$F(1, 94)=5.39$ , $\eta_p^2=0.04^*$	$F(1, 94)=4.79$ , $\eta_p^2=0.05^*$	$F(1, 94)=3.86$ , $\eta_p^2=0.04$ , $p=0.052$
management	$F(1, 94)=3.79$ , $\eta_p^2=0.04$ , $p=0.056$	$F(1, 94)=4.86$ , $\eta_p^2=0.05^*$	$F(1, 94)=3.61$ , $\eta_p^2=0.04$ , $p=0.060$
*. Correlation is significant at the 0.05 level (2-tailed).			
Effect sizes thresholds are 0.01 (small), 0.06 (medium) and 0.14 (large).			

Table 7: Significant ANOVA results

Although respondents, whether or not in a communication or a management function, did not have a significant higher willingness to act, respondents with a communication function in conditions 3 and 4, which held a low number of retweets, did have a significant and near to medium sized higher willingness to act,  $F(1, 131)=6.51$ ,  $p=0.012$ ,  $\eta_p^2=0.05$ .

When checking for interaction effects from the independent variables commitment and the quasi-experimental factors of function, we found that, when commitment is high, managers with a communication function have a lower score on crisis and issue perception, and on willingness to act, and people in a communication function having no management position, have a better perception of crises and issues, and show a higher willingness to act. The analysis gave the following results for crisis perception,  $F(1, 129)=5.01$ ,  $p=0.027$ ,  $\eta_p^2=0.04$ ;

for issue perception,  $F(1, 129)=6.49$ ,  $p=0.012$ ,  $\eta_p^2=0.05$ ; and for willingness to act,  $F(1, 129)=6.09$ ,  $p=0.015$ ,  $\eta_p^2=0.05$ , showing a significant and close to medium-sized effect, illustrated by Table 8.

<b>function</b>	<b>no communication</b>	<b>communication</b>
<b>not in management</b>	low	high
<b>in management</b>	high	low

Table 8: Interaction effects on crisis and issue perception, and willingness to act, when commitment is high

A similar interaction effect occurred for the independent variable of social media cues, that showed that managers with a communication function, when confronted with a high number of social media cues, consider an issue less threatening than managers with no communication function, and communication professionals see an issue more as a problem if they are not in management,  $F(1,129)=4.53$ ,  $p=0.035$ ,  $\eta_p^2=0.03$ .

## Discussion

The first hypothesis, that high commitment to an organisation leads to a better perception of crises and issues, and a higher willingness to act, can only be partially confirmed, because of an interaction effect with function. That interaction effect corroborates, to a limited extent, the two instances of the second hypothesis, in which someone in a communication function will have a better perception of crises and issues, and more willingness to act, than someone in a different function, and in which someone in a management position will have a lower perception and less willingness to act, than someone in a different position, keeping in mind the interaction effect (cf. *infra*). The third hypothesis, a high number of shares and retweets (social media cues) leading to a better perception and more willingness to act, is only valid for as far as it concerns someone in a communication-related function and only for willingness to act, a finding that is discussed within its context below.



If any result stands out in our study, it would be the fact that one's function has an influence on one's perception of a crisis, more than someone's commitment or the social media cues that one would perceive. An interesting observation, because until today, most crisis communication research, specifically experimental research, has focused on the crisis message and the means by which it is disseminated. People in a communication function have a better perception of crises and issues than people who do not have a communication-related function, and people in a management position have a better perception of issues than those who are at a different organisational level. When confronted with a social media message that has a small number of shares or retweets, communication professionals were more willing to take action than others. That may be due to the situation of most communication professionals in organisations (Moreno et al., 2009), who have a fairly limited view of the organisation and focus on the communication opportunities, while managers, for instance, have a helicopter view of the organisation and its interests, but especially during crises that information does not trickle down to the communication department (Staw et al., 1981). That seems to be corroborated by the interaction effect in which managers having a communication function will have a lower perception of a crisis and issues, and show a lower willingness to act when they are highly committed to their organisation, than managers who do not have a communication function. It also goes that staff in a communication-related function have a better perception of crises and issues, and show more willingness to act, when they do not have a management position. It almost seems as if a communication related function and a position in management, are two roles that are mutually exclusive if you want to have the most of it during a crisis situation. That happens to correspond with theories on management (e.g. De Villa and Rajwani, 2013), but also on communication function (Moreno et al., 2009). Van Gorp and Pauwels (2009) used the term *encroachment* to indicate that managers without a communication background often occupy communication management functions, but those functions are often considered very low on the strategic scale, i.e. not a priority for the board of directors. In that way, the above-mentioned interaction effect can be explained by assuming that communication managers

may not be communication specialists and could be regarded by their hierarchy as lesser managers, which may cause them to get less strategic information about the organisation. This phenomenon in which communication specialists can play an important role, should be further investigated.

### *Limitations and further research*

Although the sample consisted of merely enough respondents for each of the four conditions, the results were clear. To develop the situation perception scales and to investigate the role of commitment, social media, and function within an organisation during a crisis further, larger samples may be appropriate. The observation that respondents were recruited from different organisations and that we could therefore have been measuring for difference between organisations and not so much between individuals, cannot be substantiated in our data. Therefore, in future research samples could be taken from within the same organisation or similar organisations to avoid that possibly disturbing variable. The sample size and the number of management and communication functions within, may lead to a dichotomy between the two, while that was not part of the set-up of the study. From our literature review, it sometimes transpires that there may be dichotomy, but that was certainly not something that we assumed, and the results were tested against someone having a function or not, and not against someone having a communication function or a management position.

The scales for crisis perception, issues perception and willingness to act, yielded very high reliability indications, which may point to a lack of variation in the items (Field, 2009). The high Cronbach's  $\alpha$  made us suspect that not all items generated significant variation, and the factor analysis seemed to confirm our assumption. Future development of a crisis perception scale should aim for less but more varied items and perform a factor analysis to fine-tune the scale.

## Conclusion

In this study, we performed an experiment to measure the effect of a person's professional commitment towards an organisation, and the effect of social media

cues during a crisis situation involving one organisation, adding function as a moderating variable. The results showed that not so much do commitment and social media cues yield an effect, but a person's function within the organisation has a clear effect. A communication function may lead to a better perception of crises and issues, and a management position could boost a person's perception of organisational issues. In the context of a crisis, a communication and a management role seem to play an important part, which needs to be investigated further. In that way, this study contributes to the theory of crisis communication and crisis management, by a better understanding of influencing factors of crisis perception from within an organisation during a crisis.

## References

- Ahluwalia, R., Burnkrant, R. E., & Unnava, H. R. (2000). Consumer response to negative publicity: The moderating role of commitment. *Journal of Marketing Research*, *37*, 203-214.
- Arpan, L. M., & Roskos-Ewoldsen, D. R. (2005). Stealing thunder: Analysis of the effects of proactive disclosure of crisis information. *Public Relations Review*, *31*, 425-433.
- Barr, P. S., & Huff, A. S. (1997). Seeing isn't Believing: Understanding Diversity in the Timing of Strategic Response. *Journal of Management Studies*, *34*, 337-370.
- Benabou R. (2013). Groupthink: Collective Delusions in Organizations and Markets. *Review of Economic Studies*, *80*, 429-462.
- Billings, R. S., Milburn, T. W., & Schaalman, M. L. (1980). A Model of Crisis Perception - A Theoretical and Empirical Analysis. *Administrative Science Quarterly*, *25*, 300-316.
- Claeys, A.-S., & Cauberghe, V. (2012). Crisis response and crisis timing strategies, two sides of the same coin. *Public Relations Review*, *38*, 83-88.

Collier, J., & Esteban, R. (2007). Corporate social responsibility and employee commitment. *Business ethics: A European review*, 16(1), 19-33.

Coombs, W. T. (2001). Teaching the crisis management/communication course. *Public Relations Review*, 27, 89-101.

Coombs, W. T. (2007). *Ongoing crisis communication: Planning, managing and responding*. Thousand Oaks, CA: Sage.

Coombs, W. T. (2008). Crisis communication and social media. Retrieved 11 April 2014 from <http://www.instituteforpr.org/topics/crisis-communication-and-social-media/>.

Coombs, W. T., & Holladay, S. J. (2009). Further explorations of post-crisis communication: Effects of media and response strategies on perceptions and intentions. *Public Relations Review*, 35, 1-6.

Coombs, W. T., & Holladay, J. S. (2012). The paracrisis: The challenges created by publicly managing crisis prevention. *Public Relations Review*, 38(3), 408-415.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used? *International Journal of Market Research*, 50, 61-77.

de Villa M., Rajwani T. (2013). The mirror trap. Do managerial perceptions influence organizational responses to crises? *Academia-Revista Latinoamericana de Administración*, 26, 170-188.

Fediuk, T. A., Coombs, W. T., Botero, I. C. (2010). Exploring crisis from a receiver perspective: Understanding stakeholder reactions during crisis events. In T. W. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 301-318). West Sussex, United Kingdom: Wiley-Blackwell.

Field, A. (2009). *Discovering statistics using SPSS*. Thousand Oaks, CA: Sage publications.

Freberg, K., Palenchar, M. J., & Veil, S. R. (2013). Managing and sharing H1N1 crisis information using social media bookmarking services. *Public Relations Review, 39*, 178-184.

Gonzalez-Herrero, A., & Smith, S. (2008). Crisis communications management on the web: how internet-based technologies are changing the way public relations professionals handle business crises. *Journal of Contingencies and Crisis Management, 16*(3), 143-153.

Hermida, A., Fletcher, F., Korell, D., & Logan, D. (2012). Share, Like, Recommend. Decoding the social media news consumer. *Journalism Studies, 13*, 815-824.

Hindmoor, A., & McConnell, A. (2013). Why Didn't They See it Coming? Warning, Signs, Acceptable Risks and the Global Financial Crisis. *Political Studies, 61*, 543.

Hutcheson, G. D., & Sofroniou, N. (1999). *The multivariate social scientist: Introductory statistics using generalized linear models*. Thousand Oaks, CA: Sage.

Jaques, T. (2014). *Issues and crisis management: Exploring issues, crises, risk and reputation*. Victoria, Australia: Oxford University Press.

Jin, Y., Liu, B. F., Austin, L. L. (2014). Examining the role of social media in effective crisis management: The effects of crisis origin, information form, and source on publics' crisis responses. *Communication Research, 41*, 74-94.

Johansen, W.-., Aggerholm, H., & Frandsen, F. (2012). Entering new territory: A study of internal crisis management and crisis communication in organizations. *Public Relations Review, 38*, 10.

Kavanaugh, A. L., Fox, E. A., Sheetz, S. D., Yang, S., Li, L. T., Shoemaker, D. J., & Xie, L. (2012). Social media use by government: From the routine to the critical. *Government Information Quarterly, 29*, 480-491.

- Larsson, A. O., & Ågerfalk, P. (2013). Snowing, freezing...tweeting? Organizational Twitter use during crisis. *First Monday*, 18, 9.
- Liu, B. F., Horsley, J. S., & Levenshus, A. B. (2010). Government and corporate communication practices: do the differences matter?. *Journal of Applied Communication Research*, 38(2), 189-213.
- Liu, B. F., Jin, Y., & Austin, L. L. (2013). The tendency to tell: Understanding publics' communicative responses to crisis information form and source. *Journal of Public Relations Research*, 25(1), 51-67.
- Marynissen, H., Ladkin, D., Denyer, D., Snoeijers, E., Van Achte, T. (2013). The Role of Individual Risk Perception in an Organization Managing High Risks. *Third Annual International Conference on Engaged Management Scholarship, Atlanta, Georgia.*
- Mishra, A. (1996), "Organizational responses to crisis: the centrality of trust". In: Kramer, R., Tyler, T. (Eds), *Trust in Organizations: Frontiers of Theory and Research* (pp.261-87). Thousand Oaks, CA: Sage.
- Mitroff, I. I. (1988). Crisis management: cutting through the confusion. *Sloan Management Review*, 29, 15-20.
- Moreno, Á., Zerfass, A., Tench, R., Verčič, D., & Verhoeven, P. (2009). European Communication Monitor: Current developments, issues and tendencies of the professional practice of public relations in Europe. *Public Relations Review*, 35(1), 79-82.
- Muralidharan, S., Rasmussen, L., Patterson, D., & Shin, J. H. (2011). Hope for Haiti: An analysis of Facebook and Twitter usage during the earthquake relief efforts. *Public Relations Review*, 37(2), 175-177.
- Paraskevas, A., & Altinay, L. (2013). Signal detection as the first line of defence in tourism crisis management. *Tourism Management*, 34, 158-171.

Penrose, J. M. (2000). The role of perception in crisis planning. *Public Relations Review*, *26*, 155-171.

Roshan, M., Warren, M., & Carr, R. (2016). Understanding the use of social media by organisations for crisis communication. *Computers in Human Behavior*, *63*, 350-361.

Sayegh, L., Anthony, W. P., & Perrewé, P. L. (2004). Managerial decision-making under crisis: The role of emotion in an intuitive decision process. *Human Resource Management Review*, *14*(2), 179-199.

Schultz, F., Utz, S., Göritz, A. (2011). Is the medium the message? Perceptions of and reactions to crisis communication via twitter, blogs and traditional media. *Public Relations Review*, *37*, 20-27.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative science quarterly*, *501-524*.

Strauß, N., & Jonkman, J. (2017). The benefit of issues management: anticipating crises in the digital age. *Journal of Communication Management*, *21*(1), 34-50.

Van Tulder, R., & Van Der Zwart, A. (2005). *International business-society management: Linking corporate responsibility and globalization*. London: Routledge.

Van Gorp, B., & Pauwels, L. (2009). De communicatiefunctie in Belgische organisaties. Hoe excellent is deze ingevuld? . *Tijdschrift voor Communicatiewetenschap*, *37*, 64-77.

Vieweg, S., Hughes, A. L., Starbird, K., & Palen, L. (2010, April). Microblogging during two natural hazards events: what twitter may contribute to situational awareness. In *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 1079-1088). ACM.

Walaski, P. (2013). Social Media Powerful Tools for SH&E Professionals. *Professional Safety*, 58, 10.

Waters, R. D., Burnett, E., Lamm, A., & Lucas, J. (2009). Engaging stakeholders through social networking: How nonprofit organizations are using Facebook. *Public relations review*, 35(2), 102-106.

Zaichkowsky, J. L. (1994). The Personal Involvement Inventory – Reduction, Revision and Application to Advertising. *Journal of Advertising*, 23, 59-70.



## Project 3: human factors in crisis perception

*explore, define, **analyse**, determine, and conclude*

The second project showed that the perception of crises by internal stakeholders depends on one's function within the organisation, be it a hierarchically defined management function, or a content related communication function. Specialisation in communication possibly played a role (Van Gorp and Pauwels, 2009), and therefore I included that factor. Social media cues did not have an effect, and therefore I did not resume the variable in the next research. After the experiment in the second project, there was a need for a larger and more homogeneous sample, and for a more precise scale for crisis perception.

The focus of the second project had already narrowed to crisis perception, and from the study results, I kept the significance of the organisational function to further uncover the research on crisis and human perception, and adjacent domains, such as organisational issues in a crisis frame.

One of the main developments in this third project was the elaboration of a more reduced and precise scale of crisis perception, based on a self-constructed definition of crises, derived from the most influential scholars in the crisis management domain and pre-tested within the same population as the study's population sample. The willingness to act from the second project, proved less interesting to develop further, while the issue perception measurement was integrated in a crisis scenario in four stages, an experimental research approach that is hardly ever used, but which is common ground in crisis exercises. The analysis of variance in this case, had to be adapted to a repeated-measures design, producing a particular output which needs to be interpreted with care. Therefore, separate (M)ANOVA's were performed to look deeper into some effects. The repeated-measures design is more often used in clinical medication test designs, which brings us back to the basics of crisis management, having derived some of its principles from medicine (e.g. Fink, 1986).



## Factors that influence organisational crisis perception from an internal stakeholder's point of view.

This article was published in *Public Relations Review* in 2017 and is referred to as Snoeijers and Poels, 2017.

### Abstract

This paper starts from the premise that a crisis is a perception and that one of the best ways to conquer a crisis is not to allow it to develop in the first place. By detecting or perceiving a crisis before other stakeholders do, an organisation can prevent or mitigate a crisis. Few studies have considered the question of whether organisations put the right people in the right places to be able to see a crisis coming. Within an organisation, managers are usually well placed to take decisions to initiate crisis communication, but they seem to be reluctant to do so or may not wish to see an impending crisis. Communication professionals should have a better perception of a crisis, but they rarely find themselves in a position to have a substantial impact on the management decision to communicate during a crisis. In this paper, we study crisis perception by individuals in a large governmental organisation during various stages of an unfolding crisis and compare perception scores to individual profiles based on study background, professional situation and crisis experience. This study involves a large-scale scenario-driven survey with 'crisis perception' as the main dependent variable. The results of this specific case indicate that an academic communication degree, a high hierarchical position in the organisation and crisis experience are positively related to an augmented perception of an impending organisational crisis.

### Keywords

crisis communication; crisis perception; situational awareness; organisational crisis; strategic communication; public relations

## Introduction

An incident evolves into a crisis when someone perceives it as such. This understanding arises from the definition of a crisis by Coombs (2014): “a crisis is a perception of an unpredictable event that threatens important expectancies of stakeholders related to health, safety, environmental and economic issues, and which can seriously impact an organization’s performance and generate negative outcomes” (p. 3). We can furthermore deduce from this definition that, as long as no one perceives a situation as a crisis, there is no crisis at hand. Following good practices in communication, when an organisation is the first to perceive an impending crisis, it has the advantage of having more time to gather information and to communicate proactively through organisational crisis communication (Coombs, 2014; Williams, Bourgeois & Croyle, 1993). The perception of a possible crisis occurs through individual staff members, and thus it is in the interest of an organisation to have the right people in the right places. Therefore, this study focuses on the rarely researched viewpoints of individual members of an organisation during a pre-crisis phase. A person’s profile may have an influence on his or her individual perception or awareness of a situation as a crisis. The research question of this study is as follows: how does the individual profile of a member of an organisation relate to crisis perception from within that same organisation? Based on the literature, we derived several hypotheses delineating the role of individual profiles in (pre-)crisis perceptions. We will test these assumptions in the context of a large governmental organisation through a large-scale survey that includes different scenarios in an unfolding crisis situation.

The contribution of this research to the profession of public relations and crisis communication is a better understanding of how organisations can gain strategically valuable time by perceiving a crisis early and by choosing the right people to do so. To contribute to public relations and crisis communication theory, this research uncovers some of the dynamics in play during a pre-crisis phase, a crucial moment in a developing crisis and an aspect that has not been fully researched.

## Theoretical framework

### *Conceptualizing organisational crises*

To be able to conceptualize and afterwards measure crisis perception by individual members from within an organisation, a concise and clear working definition of a crisis is indispensable. Based on the most cited authors in the crisis communication literature, we constructed a working definition of a crisis for this research (Benoit, 1997; Coombs, 2014; Fink, 1986; Hermann, 1963; James, Wooten & Dushek, 2011; Mitroff, 2001; Mitroff, Shrivastava & Udwadia, 1987; Pearson & Clair, 1998; Tjosvold, 1984; Ulmer, Sellnow & Seeger, 2013):

*A crisis starts to evolve when a stakeholder perceives that an organisation can no longer meet his or her expectations. Initially, very little information is available on the ongoing situation, which may impede the decision to communicate and can endanger the organisation's interests. A crisis attracts the attention of other stakeholders and of the media, depending on the responsibility attributed to the organisation by the stakeholders and on the organisational communication, which may amplify or play down the crisis.*

A more visual approach to the concept of crisis perception can be found in Marynissen, Pieters, Van Dorpe, van het Erve and Vergeer (2010), who studied the need for information during an organisational crisis. Figure 4 shows that at first the available information on an incident evoking a crisis is not sufficient to allow management to take fully informed decisions to solve the crisis. The initial information is even less sufficient to fulfil the stakeholders' needs for it. However, not communicating will lead to an information vacuum. The organisation should fill that vacuum with its own information; others, however, may fill it with rumours, opinions, grievances, etc.

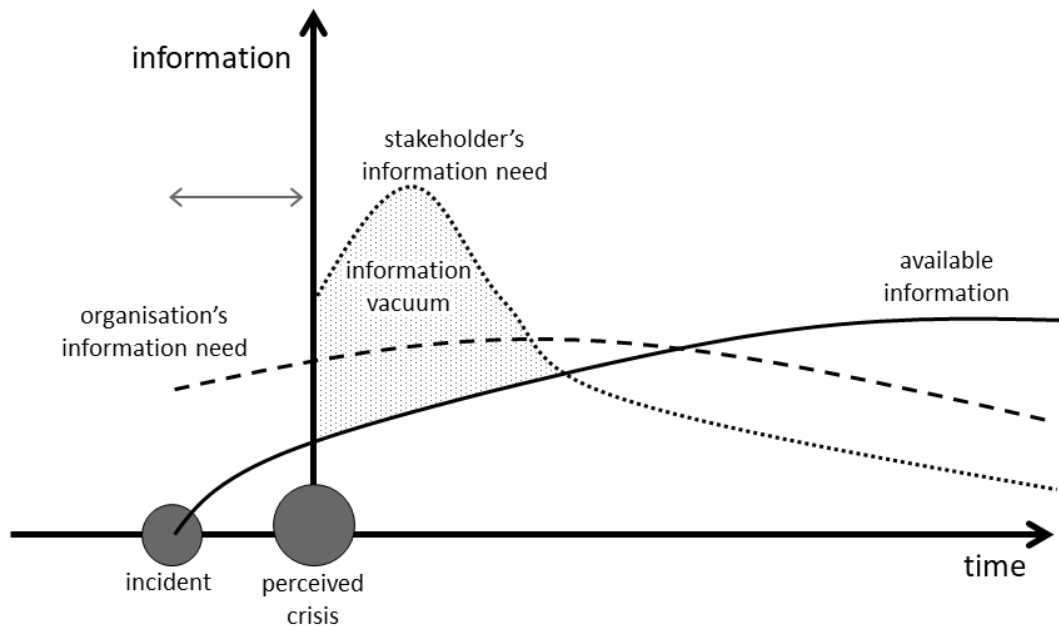


Figure 4: Needs and availability of information during a crisis (adapted from Marynissen et al., 2010)

Figure 4 shows a time lapse (double-pointed arrow) between an incident and the moment when someone perceives it as a crisis. The organisation can use that time to better prepare its communication and for potentially mitigating the situation. Any stakeholder can perceive an event as a crisis, which is the reason an organisation had better not wait too long to communicate, to avoid having to take up a defensive role. The self-disclosure strategy of stealing thunder (Arpan & Roskos-Ewoldsen, 2005), in which an organisation announces the crisis itself, is one way to take the communication lead in a crisis. By doing so, an organisation gains credibility and can frame that communication, which becomes much more difficult to do when they are not the first to communicate (Williams et al., 1993).

Considering the above and the role of communication during a crisis, as made explicit in our working definition, crisis communication is therefore a strategic policy instrument which calls for communication expertise, as we will further demonstrate. The earlier an organisation can communicate about a crisis, the higher the chances of success, if the communication is in line with what

stakeholders expect. Early communication does imply, however, that an organisation perceives a crisis first. But as perception occurs through staff members, the organisation depends on them. Theories on management and risk show us that individual profiles determine people's perceptions (e.g. Slovic, 2000). It is thus of the utmost importance to gain insights into crisis perception from within an organisation.

### *Crisis perception*

In studies of a crisis as the perception of an event, the role of the first perceiver, as explained above, is a subject that crisis communication scholars have rarely considered. In one of the first studies to tackle this, Billings, Milburn & Schaalman (1980) mention that an event must be noticed, treated and evaluated against normality before the organisation perceives it as a crisis. Penrose (2000) later suggests that the individual perceptions of decision-makers affect an organisation's crisis strategy. Paraskevas & Altenay (2013) consider lessons learned from crises and suggest that individuals must share their perceptions for there to be successful signal detection and thus crisis perception. An organisation's effectiveness in its crisis perception depends on its capacity to analyse the environment and detect and share the relevant signals. Pieters & Eeckman (2015) stress the role of members of an organisation by presenting ways to increase the probability that an organization's personnel will perceive a crisis, such as by strategic communication, risk communication and organisational culture.

A person's perceptions are dynamic processes that lead to decisions and changes in behaviour based on individual and collective schemes or mental models (Barr & Huff, 1997). Weick's sense-making theory is the most cited in studies of individual information perception and interpretation. It suggests that people attribute meaning to their own situation based on previous experience and by creating a personal frame in which their actions make sense (Weick, 1969). The less adequate that sense-making in a crisis is, the higher the chance that the crisis will escalate. Actions taken during a crisis add sense to the situation, which

will influence the crisis itself. That brings Weick (1969) to describe a delicate equilibrium between risky action leading to more sense on the one hand, and safe passivity that will probably lead to more confusion on the other. Donnellon, Gray & Bougon (1986) also examine aspects of individual perception and conclude that members of the same organisation perceive and interpret information in diverse ways. Research on individual risk perception (Marynissen, Ladkin, Denyer, Snoeijers & Van Achte, 2013) demonstrates the importance of individual profiles (training history, place in the organisation, etc.) in determining one's perception of risks. As this research shows that people who have experienced a crisis are more sensitive to risks, we assume that they are also more sensitive to emerging crises. Therefore, we can make a first hypothesis:

Hypothesis 1: an organisation member with experience in communication-related crises will perceive an organisational crisis more quickly than members without such experience will.

To cope with a crisis, an organisation must be aware of its continuity. Fink (1986), Mitroff (2001), Richardson (1994) and Coombs (2014) propose different crisis stages. The pre-crisis phase, the stage on which this study focuses, consists of signal detection, prevention and crisis preparation. The initial stage of signal detection involves issues management, risk management and reputation management (Coombs, 2014). Successfully managing those functions implies communication skills and strategic decision-making. Such decisions usually come from managers, who rarely have a background in communication. Nevertheless, the place of communication professionals and managers within an organisation seems to be determinative for successful (crisis) communication (e.g. Zerfass, Verčič, Verhoeven, Moreno & Tench, 2015). Smart & Vertinsky (1977) ascertain that, during a crisis, important decisions are taken by a small group of people, who must solve problems and mobilise means on very short notice, which induces elevated levels of emotional and physical stress. Stress, uncertainty, limited time, and threats to the organisational goals can aggravate a crisis, making the decision process during crises vulnerable. We can therefore ask ourselves whether decision-makers in strategic management are able to prioritize



communication in such situations, and whether communication professionals find themselves at the right level to be able to put their skills to effective use, given the delicate equilibrium during crisis situations (Weick, 1969). Would communication professionals perceive a crisis more accurately than non-communication managers would?

The management and business literature contains some studies on the role of managers and experts during crises. Kiessler & Sproull (1982) analyse managers' perceptions and reveal that the mental image determining their decisions inhibits them from noticing recent changes and thus may cause them to miss important information. On top of that, they are not inclined to adjust their views. Smart & Vertinsky (1984) confirm this and show that during a crisis, managers create a reality for themselves and for their organisation, leading to differences not only in strategy among organisations but also among individuals. Additionally, organisations that are able to adapt and cope with a crisis, according to Dutton & Ashford (1993), are successful partly because they allow individuals to signal problems to higher management, to communicate about them and in this way to influence higher management's decisions. Tjosvold (1984) suggests that managers are not typically aware of the information needed to anticipate problems. The perception of a situation as a possible crisis affects a decision-maker's feelings, orientation and success, thus inhibiting decision-making. That is because crisis-induced stress makes decision makers cognitively rigid. They are preoccupied with the threatened loss, frantically search for a way out of the dilemma, and impulsively accept a solution that offer immediate relief (Tjosvold, 1984). Pearson & Clair (1998) furthermore conclude that during a crisis, decisions are taken under the pressure of a sense of lack of time and are coloured by cognitive limitations. These findings lead to our hypothesis on managers' crisis perception:

Hypothesis 2: an organisation member in a high-level function will perceive an organisational crisis less quickly than members in lower-level functions will.

Not only can the hierarchical level someone holds within an organisation influence one's perception of a situation, but the contents of the job can as well (e.g. Donnellon et al., 1986). Some functions have a more external orientation (e.g. public relations, marketing), which leads us to another hypothesis on communication-related functions:

Hypothesis 3: an organisation member in a communication-related function will perceive an organisational crisis more quickly than members in another function will.

Slovic (2000) points out that the difference in perception between experts and non-experts is that experts assess risks based on knowledge of positive or negative connotations attached to a specific risk, whereas non-experts do not. Information or knowledge can change such connotations. Tversky & Kahneman (1973) call this phenomenon 'affect heuristics'. According to Marra (1999), the dominant coalition sets an organisation's strategy and determines how to communicate (or not) during a crisis. The right strategy leads to effective crisis management; the wrong strategy will worsen the situation. Excellent crisis communication cannot straighten out bad management. Therefore, Marra (1999) advises that public relations professionals shift their attention from crisis communication techniques to crisis strategy, implying a change of organisational culture and autonomy, an important condition for public relations professionals to access resources and information in a pre-crisis phase and thereafter. Guth (1995) suggests advancing a proactive public relations policy in public and private organisations to prevent and handle crises, which will be unsuccessful without a public relations head playing a key role in the decision process. Van Gorp & Pauwels (2009) recommend situating the communication function close to top management. Communication professionals need power and influence to be able to perform their job, and the head of communication should be a member of the board of directors or a senior and high-ranking staff member. Grunig & Grunig (2000) recommend placing that person within the dominant coalition to steer strategic communication and stakeholder relations. Each year, Zerfass et al. (2015) publish the much-cited European Communication Monitor, which provides

the state of affairs in communication studies and the profession. In their report, excellent communication departments have much autonomy and influence on organisational decisions and correspondingly add more to the success of their organisations than communication departments that do not. That contribution to success stands out during difficulties and crises, a reason Zerfass et al. (2015) emphasize the importance of communication management as a strategic organisational function.

Considering the above research, we can make an assumption about staff with communication-related degrees:

Hypothesis 4: organisation members with a communication-related education will perceive an organisational crisis more quickly than members with another educational background will.

The focus of this study on organisational crisis communication is the brief time during the pre-crisis phase before anyone perceives a crisis, more particularly the stage of signal detection (Coombs, 2014). Management decisions involving communication are crucial in this stage. An organisation with the ability to perceive a crisis itself through its staff members (crisis perception) has a strategic advantage. Such an organization has additional time to gather information and, more importantly, to communicate proactively in order to gain control of communication. Therefore, an organisation must have the resources and people to be able to perceive a crisis more quickly than other stakeholders can. Research shows that individual perception depends on an individual's profile and experience.

## Method

To meet the study's objective, we designed a scenario-based survey containing an unfolding crisis scenario and a measurement of crisis perception for different profiles. We administered this survey to members of a large governmental organisation, the Belgian National Defence department.

### *Case selection*

Examples of organisations that have struggled with communication during crisis situations are British Petrol during the Deepwater Horizon environmental disaster (e.g. Coombs, 2014; Harlow, Brantley and Harlow, 2011) and, more recently, Volkswagen in regard to Dieselgate (e.g. Zhang, Marita, Veijalainen, Wang, & Kotkov, 2016). Similar communication challenges have been well studied and documented throughout the years, but often with the focus on for-profit organisations. The reason for this could be that the possible damage to a company's reputation involves direct economic loss. The body of research devoted to crisis communication rarely addresses one of the largest areas of public relations, the public sector (Sisco, 2012). For public organisations, however, it is important to handle a crisis professionally and thus adopt effective crisis communication (Horsley & Barker, 2002), as they are accountable to their main stakeholders, the public and political decision-makers. To avoid cuts in funding, personnel or other resources, it is in their interest to protect their reputation and safeguard the public's and politicians' confidence in them.

We performed our survey at Belgian National Defence, an organisation with a relatively important population (N=31,000) within the same organisational context, limiting the possible distracting variables. The organisation's policy and its members' profiles are well documented, allowing us to categorise participants precisely by educational background and function profile. The organisation has been recruiting academic and professional specialists for over 15 years, some of whom have a background in communication. The organisational hierarchy is strong, which makes it easier to determine an individual's position. Finally, the particularity of the military makes it likely that many individuals have experienced a crisis in their careers.

Moreover, for National Defence, communication during an organisational crisis is an important part of corporate communication. It has many stakeholders, each with their respective expectations, such as personnel, unions, politicians, other defence organisations such as NATO and Eurocorps, and most importantly public

opinion, which influences every other stakeholder. The organisation is aware of this and includes crisis communication in its corporate policy documents. But communication during crises involves speed, clarity and empathy (Coombs, 2014). The image of the Belgian National Defence in the public opinion, that of *la grande muette*, the big mute, makes one suspect that the organisation has some issues with crisis communication. This not only makes this organisation an ideal case for studying crisis perception and communication; this study can also yield specific recommendations.

### *Scenario-based survey*

To measure crisis perception based on a person's profile, this study applies a scenario-based large-scale survey with repeated measures of crisis perception as the dependent variable; and with elements from respondents' personal and professional profiles as independent variables.

All users of the organisation's e-mail domain and those with access to the intranet received a link to the survey. The survey was programmed in Qualtrics in Dutch and in French, the native languages of the members of the organisation. There was an initial response rate of 18%, with a 60% dropout rate, which leaves 2179 respondents having completed the questionnaire, representing 7% of the total population. The respondents who completed the survey can be broken down into men ( $N=1909$ ) and women ( $N=270$ ); Dutch-speaking ( $N=1349$ ) and French-speaking ( $N=916$ ); and soldiers ( $N=239$ ), non-commissioned officers ( $N=1015$ ) and officers ( $N=925$ ).

We presented the respondents with an initial situation, after which they would receive four updates (stages) of the situation, each time followed by a measure of their crisis perception. To increase validity, the order of questions on perception was varied through intra-subject randomisation. The gradual building up of the scenario in four chronological parts (see Table 9) is partly based on issues management (Van Wijk, 2008), which is a crucial element of the pre-crisis stage (Coombs, 2014). First an issue is introduced, then it grows and in the third stage it reaches maturity (Van Wijk, 2008). In the last stage, respondents are faced

with the organisation's unwillingness to communicate on the matter. The multiple-stage scenario also simulates how information slowly becomes available. In the literature, some authors (Hermann, 1963; James et al., 2011; Pearson & Clair, 1998; Tjosvold, 1984; Ulmer et al., 2013) touch upon the potential for insecurity during a crisis, which we have interpreted as a lack of information, especially in the early stage of a crisis (Sayegh, Anthony & Perrewé, 2004). The scenario is loosely based on the fires in workshops in Lahore and Karachi on 11 September 2012 and the collapse of a workshop in Bangladesh on 24 April 2013. Brands such as Benetton, Mango, Walmart and Disney suffered reputation damage during these events. Wieland & Handfield (2013) conducted an analysis of these cases and concluded that companies should make the whole chain of suppliers as transparent as possible.

Initial stage	<i>Soon, the Belgian military will get new combat outfits. The first samples have been delivered and the Minister of Defence and the Chief of Defence will present those to the press and the public next week. For the new outfits, Defence has a contract with the foreign company Fibratex.</i>
Stage 1	<i>At home, you are watching the evening news and there is an item on a fire in a textile workshop in Pakistan in which many have died, especially children. Images show desperate parents, crying women and children's bodies being carried out of the ruins. The coverage mentions that the manager of the workshop has disappeared and that many big brands have had their clothing made in countries like Pakistan, where they are not very fussy about social rights and security.</i>
Stage 2	<i>Defence's Material Resources department has checked the contract with Fibratex and there seems to be nothing wrong. They do, however, contact the company to verify whether they subcontract abroad, specifically in Pakistan, which is not forbidden in the contract. Fibratex confirms that the Belgian uniforms are partly produced in Pakistan, but the firm has no direct connection with the afflicted workshop. This information is passed through to the military hierarchy. Apart from that, Fedustria (the Belgian Federation for the textile industry) announces in the media that the system of subcontracting in Pakistan is obscure and that there is no way to know who is producing what for whom.</i>
Stage 3	<i>A reporter for "De Morgen / Le Soir" (quality newspapers in Belgium) has been in Pakistan and investigated the workshop where the fire struck and so many were killed. In an interview with one of the employees, it turns out that the workshop was producing for the European market, with important orders from Belgium. The reporter announces on the paper's website that he will dig deeper and will write a complete story for the weekend edition, the day after tomorrow.</i>
Stage 4	<i>In a confidential internal communication, the Defence staff announce that there is absolutely no proof that the new outfits have been produced in the Pakistani workshop, that it is important that Defence show a positive image to the public and that they will carry on with the presentation of the uniforms next week. The chiefs of staff do not want to communicate rashly.</i>

Table 9: Scenario stages

Since there is no validated measure for crisis perception, we composed our own scale for the purpose of this study. Billings et al. (1980) used a model to measure crisis perception, but in a very different context of emergency planning and the stakeholder's ability to cope. In their scale, they used crisis terminology, which was not compatible with measuring individual perception of a crisis because we attempted to avoid unveiling the crisis aspect. Billings et al. (1980) and Jackson & Dutton (1988) base the attributes in their scale on previous research and their own experience. We applied the same approach. Our scale contains 12 items in four attributes to which a control item is added (see Table 10). The respondent must agree or disagree with statements that articulate each item on a 5-point scale (Dawes, 2008). The four dimensions were derived from our literature review (see Theoretical Framework). The first dimension is *time* (Coombs, 2014; Hermann, 1963; Pearson et al., 1998; Tjosvold, 1984). One of the items relates to stealing thunder (Arpan et al., 2005), which is strongly based on sense of time but also of willingness to act. The second dimension is *media attention*, which Fink (1986), Benoit (1997) and Mitroff (2001) also mention. Media attention

increases time pressure and the probability that stakeholders will take action. The third dimension refers to those stakeholders and their *expectations*, which nearly all authors mention. The fourth dimension of attributed responsibility, or *involvement*, is derived from Benoit (1997), who mentions it explicitly. Other authors also discuss it in the context of communication strategies.

time1	<i>Before communicating, Defence has to wait until the situation is totally clear.</i>
time2	<i>In this case, it is important to quickly bring out a minimum of information, rather than to wait to have more complete information.</i>
time3	<i>In this situation, Defence has little time to take action.</i>
time4	<i>Defence has to take the time to analyse the situation and should not be ruled by time pressure.</i>
media1	<i>Defence's spokesperson should be ready to make a statement to the press.</i>
media2	<i>The media will not pay any attention to Defence in this case.</i>
media3	<i>There will be political questions for Defence following this situation.</i>
expect1	<i>I expect my family and friends to ask me questions about this because I work for Defence.</i>
expect2	<i>As a Defence employee, I have a bad feeling about how the organisation is handling this case.</i>
expect3	<i>This situation is a threat to Defence's reputation.</i>
involve1	<i>This situation does not concern Defence.</i>
involve2	<i>It is possible that Defence is involved in this case.</i>

Table 10: Crisis perception attributes and items

The final part of the survey comprised elements that make up the respondent's profile. Van Gorp & Pauwels (2009) scan the formal function title in their research on the communication function in organisations for explicit communication terminology. We applied the same method to recode the independent variables of area of study and organisational function, including communication-related terms from the social sciences, marketing and journalism. A similar interpretation of these variables is found in Tench, Zerfass, Verhoeven, Verčič, Moreno & Okay (2013). All respondents were asked to provide details on their personal profiles, an element that is found in most studies of this nature. Specific to Defence is that the respondents can be classified according to professional speciality (military, technical and operational) and additional competences (management skills).

To test the criterion validity (Field & Hole, 2003) of the crisis perception construct, we performed a pilot test on 30 subjects from within the Belgian Defence population, who were asked not to participate in the actual survey. The



questionnaire was refined using the participants' comments. To test the factorial validity of the crisis perception construct, we performed a principal axis factor analysis with oblique rotation for each of the 12 crisis perception items and for each of the four stages of the crisis scenario. The Kaiser-Meyer-Olkin-measure for each stage in the scenario was 0.89 and three times 0.85, which Hutcheson & Sofroniou (1999) label as meritorious. Nearly all measures of sampling adequacy of individual items are higher than 0.8, well above the acceptable limit of 0.5 (Field, 2013). Although items *time1* and *time4* have values higher than 0.5, they are considerably lower than the others are. A factor analysis without these items shows no meaningful differences to the first measure, so they were kept in the model. The structure matrix of the factor analysis showed that the attribute *time* made up a different factor with limited correlation to other items, although still significant ( $> 0.3$ ). *Time* also shows a lower reliability (Cronbach's  $\alpha < 0.7$ ) in comparison to the other attributes. This could be the result of *time* being more subjective to each respondent than expected. The overall reliability of the crisis perception measure is high (Cronbach's  $\alpha = 0.80$  for stage 1, 0.81 for stage 2 and 0.83 for stages 3 and 4). The reliability of the complete measure does not increase with or without the attribute *time*, so we kept it in. The measure used for this study thus seems to be valid and reliable.

## Results

Of the 2179 respondents, 124 (7%) had an academic communication studies background, 34 (1.6%) individuals had a communication-related professional function, 269 (12.3%) persons belonged to higher management, 963 (44.2%) indicated that they had experienced a crisis situation involving communication and 170 (7.8%) had attended more than 2 weeks' worth of courses on crisis management.

We verified the hypotheses by analysing the data with different repeated-measures ANOVAs with the independent variables as between-subjects factors and the various levels of the scenarios as within-subjects factors. All tests were carried out with a confidence interval of 0.95. Because many subgroups based on

profile were of unequal size, we used Cohen’s  $d$  to measure for effect size (Field, 2013).

A test of within-subjects effects showed that the crisis scenario had an influence on the respondents’ crisis perception,  $F(1.88, 4254.54)=936.34$ ,  $p<0.001$ ,  $\eta_p^2=0.293$ . When testing for the scenario’s credibility with the respondents, the distribution seems favourable ( $N=2179$ , mean 3.06, median 4 on a scale of 5 (*very credible*)). However, the scenario’s credibility score shows a significant connection with the score for crisis perception, but only for the first two stages,  $p=0.013$ ,  $d=0.11$  and  $p<0.001$ ,  $d=0.16$ . An interaction analysis nevertheless gives proof of no significant influence on the analysis of the crisis perception model and the other independent variables.

overview independent variables	F-value	significance	effect size stage 1	effect size stage 2	effect size stage 3	effect size stage 4
communication studies	$F(1, 2263)=11.72$	$p=0.001$	$d=0.20$	$d=0.30$	$d=0.29$	$d=0.35$
higher diploma	$F(1, 2175)=5.24$	$p=0.02$			$d=0,13$	$d=0,19$
communication course	$F(1, 2263)=1.36$	$p=0.243$	-	-	-	-
communication function	$F(1, 2263)=1.10$	$p=0.295$	-	-	-	-
crisis course	$F(1, 2263)=12.71$	$p<0.001$	$d=0.27$	$d=0.28$	$d=0.23$	$d=0.23$
crisis experience	$F(1,2177)=4.96$	$p=0.026$	$d=0.06$	$d=0.10$	$d=0.11$	$d=0.07$
higher management	$F(1, 2177)=7.95$	$p=0.005$	$d=0.17$	-	$d=0.13$	$d=0.20$
officer’s rank	$F(1, 2177)=8.56$	$p=0.005$			$d=0.17$	$d=0.23$

Table 11: Overview of main statistical outcome for hypotheses

As appears from the separate repeated-measures ANOVA’s with different between-subjects factors, some independent variables are not significantly related to crisis perception (see Table 11). That is the case for *communication function* amongst other variables, posing a problem for our third hypothesis. In this study, no difference in crisis perception can be established between military and non-military personnel. A result that stands out is a significant and rather substantial relation between crisis perception and (higher) level of communication studies. Respondents who had academic training in a communication-related field had a higher score on crisis perception ( $M=2.55$ ,  $SD=.65$  in measure 4) compared to respondents without a background in

communication studies ( $M=2.77$ ,  $SD=.61$ )<sup>1</sup>, which is a confirmation of our fourth hypothesis. Respondents indicating that they had additional crisis management training perceived a crisis more highly ( $M=2.74$ ,  $SD=.66$  in measure 2) and quickly than others did ( $M=2.92$ ,  $SD=.63$ ); and people who had previous experience with crises (within a communication context) also scored significantly higher on crisis perception ( $M=2.72$ ,  $SD=.62$  in measure 4 versus  $M=2.79$ ,  $SD=.61$ ), though the effect size is very small. That confirms our first hypothesis. The hierarchical level at which someone functions is a small but significant predictor of crisis perception. Especially respondents at a higher level tend to have higher crisis perception ( $M=2.65$ ,  $SD=.65$  in measure 4) compared to respondents at a lower level ( $M=2.77$ ,  $SD=.61$ ), which contradicts our second hypothesis. Related to that (medium correlation between *officer's rank* and *higher management*,  $r=0.38$ ,  $p<0.001$ ), there is a marginally significant relation between rank and crisis perception, which becomes clearer when the data are divided into officers and others: higher-ranked personnel perceive a crisis earlier and more highly ( $M=2.67$ ,  $SD=.62$  in measure 4) than others ( $M=2.82$ ,  $SD=.61$ ). In this respect, there are also correlations between rank and diploma (highly correlated when comparing officers and those holding at least an undergraduate degree,  $r=0.72$ ,  $p<0.001$ ) and between management position and diploma (medium correlation,  $r=0.32$ ,  $p<0.001$ ). Breaking down diploma in a communication degree or not, we find an extremely low correlation with higher management,  $r=0.06$ ,  $p=0.003$ , which may indicate that, in this organisation, personnel members holding an academic communication degree rarely occupy high positions in management.

## Discussion

An organisation member's individual profile does have an influence on that person's perception of a situation as a crisis for that organisation.

The first hypothesis, that those with a crisis experience will perceive a crisis earlier than others, is confirmed in this study. In particular, additional crisis

---

<sup>1</sup> Due to the setup of the research, a low numerical score indicates a high crisis perception and vice-versa.

training has an effect on crisis perception. This confirms Weick's sense-making theory (Weick, 1969) and extends the findings of Marynissen et al. (2013) from risk to crisis perception. This finding is also in line with those of Baxter, Boet, Reid & Skidmore (2014), who conclude that yearly crisis simulations and exercises are effective in enhancing crisis recognition. Crisis experience did prove to be in relation with crisis perception, but it could be that the respondents assumed that "crises" included military operational crises, which most of the operational staff would have encountered. This may have influenced the results for that variable in a negative way, but it is in line with what we found in the literature.

The second hypothesis involving hierarchical position could not be confirmed: quite the contrary. The literature seemed to point out that managers are bad crisis predictors due to organisational culture (e.g. Kiessler & Sproull, 1982; Smart & Vertinsky, 1984; Tjosvold, 1984). In this study, however, members of higher management and officers had higher crisis perception scores than others. We have several possible explanations for this finding. First, there may be a difference between the managers described in the literature, who often work in for-profit organisations, and the military manager-officers in the current study. The fact that military are used to dealing with crises, although not in the corporate sense, could have made them more sensitive. The correlation between higher management and crisis experience is not remarkable, however ( $r=0.075$ ,  $p<0.001$ ). A second possible explanation is the fact that we asked the respondents to give their personal opinions when answering the questions. We may therefore have received their personal opinions as opposed to what they would actually do within the context of their professional position. A high-ranking member of the organisation would have access to more information and have a more strategic view of things, thus he or she might have a keen perception of the environment. Restrictions resulting from the organisational structure or culture could lead to behaviour that is more reticent in spotting a crisis and being willing to act. Additionally, Fowler, Kling & Larson (2007) show that managers have a stronger belief than other members of personnel that their organisation is well prepared for a crisis, and government organisation managers exhibit an even stronger

belief than those in other organisations, which may have led them to have higher scores in our study.

The third hypothesis that personnel in communication-related functions show a higher crisis perception remains unconfirmed, although studies such as Donnellon et al. (1986) seem to point in the opposite direction. We can attribute this finding to the observation that organisational communication does not seem to be considered a strategic function for Defence, where communication is often discouraged instead of encouraged to the point that it is better for the career of the individual personnel member not to communicate. This may lead communication staff to apply self-censorship, which may be related to the psychological self-fulfilling prophecy, especially because the organisational communication policy has led to a heavily centralised communication structure with many levels of control and sanctions. We have found arguments for this from Weick & Sutcliffe (2007), who observe that no link exists between knowledge and hierarchy and that experts should have a decisive role in particular decisions. They point out that early problem detection correlates with organisational culture, and they recommend a reporting culture and a just culture, in which members of the organisation share errors and are not sanctioned for doing so. They also argue for a flexible culture which opposes a heavy, slow hierarchy by creating room for initiative and variation, and for a learning culture which improves individual capabilities and the exchange of information. As for the centralisation of the communication function, Mishra (1996) points out that decentralised decisions, clear communication and cooperation within the organisation and outside can lead to a faster crisis solution, but that such policies require trust between higher management and the work floor. Molleda (2009) recommends a repartition of communication functions to centralised and decentralised levels, according to the contents and the audience. Seeger, Sellnow & Ulmer (2012) also point out the relationship between a centralised decision structure and the sensitivity of an organisation to a crisis. Additionally, and in relation to the first hypothesis, Van Gorp et al. (2009) mention that encroachment in Belgian organisations means that few

communication managers carry a communication-related degree, resulting in less expertise at the decision-making level. Their findings seem to be confirmed by our sample, in which only 35% of respondents with a communication function had a communication-related degree (N=12). On the whole, only 10% of those with a communication degree (N=124) occupied a communication-related post. In this study, we found that the reluctance to perceive a crisis seems to occur with communication staff members rather than with managers, as we expected in our second hypothesis.

The fourth hypothesis that people with a communication-related study background will perceive a crisis more quickly than others was confirmed. Studies such as Guth (1995), Marra (1999), Grunig & Grunig (2000) and Zerfass et al. (2015) had already stressed the importance of trained specialists on strategic levels in an organisation. In addition to that, Morreale & Pearson (2008) pointed out the importance of a communication-related education to improve organisational processes and handle current issues. An additional communication course does not lead to the same observation, implying that an academic communication-related study is different from a communication course of at least two weeks, apart from the obvious difference in duration. These findings also seem to imply that, following insights from the literature (e.g. Slovic, 2000) crisis communication expertise is more related to academic training than to other types of training or experience on the job, at least in this organisation. Individual crisis perceptions may have consequences for an organisation's crisis management. A person's profile, based on experience but also on study and training, determines how he or she perceives a crisis. Therefore, an organisation should be open to the individual contributions of experts in communication so that it can attempt to be the first perceiver of a possible impending crisis before it erupts.

Practically, this research points to various issues in crisis communication management. Firstly, in the domain of strategic communication and crisis management, our findings can be applied when earmarking staff members with communication expertise. Specialists should be recruited based on their academic credentials and should be able to move to high-level management functions

within their speciality. The Belgian National Defence's spokesperson and main communication advisor, for instance, is not a highly ranked officer and does not belong to the dominant coalition. This dominant coalition are senior decision makers within an organisation, who determine strategy and communication during a crisis (Marra, 1999). The function of director-general of the communication department has never been filled by anyone with a communication degree or even professional experience in a communication-related field. An organisation that wants to train its members in-house should be aware that there is a difference between a communication degree and additional training. The organisation we studied educates most of its officers in the Royal Military Academy, but organisational and corporate communication did not figure in the academic master's curriculum until recently, when the results of this study became available. Reilly (2008) stresses the importance of communication as one of the most important aspects of personnel management and development. She advises to train organisation members in communication, crisis management and media management to increase personnel's and the organisation's resilience to stress and crises. Therefore, an organisation should also lift its communication function to a strategic level and fill it with communication specialists – a viewpoint shared by Grunig (2013) and Zerfass et al. (2015). Placing non-communication specialists in key communication functions should be avoided (Van Gorp et al., 2009).

Recruiting personnel based on crisis experience does not seem very realistic. However, an organisation like Belgian National Defence can perfectly incorporate crisis communication exercises in the exercises that are planned throughout the year. These exercises are excellent for putting theory into practice (Aertsen, Jaspert & Van Gorp, 2013), and they influence personnel's perception of risks and undoubtedly also of crises, as illustrated by the study of Baxter et al. (2014).

Additionally, there is the issue of the potential detriments to individuals responding as if a situation is a crisis when it is not, a concern uttered amongst others by managers when discussing the results of this study. In these times of fast and uncontrolled communication, it is very difficult to make out whether a



situation will evolve into a crisis or not, especially when little information is available (e.g. Wendling, Radisch & Jacobzone, 2013). When an organisation communicates proactively before a crisis has been perceived by others, chances are that a crisis may never occur (e.g. Guth, 1995). No one will know whether the crisis would never have occurred or whether it was averted by the crisis communication.

From a theoretical point of view, this study provides an original approach to crisis communication research, namely that from within an organisation in the early stages of crisis development, individual members of an organisation have proven to have different perceptions of the situation depending on their professional and personal profiles. Placing individuals with higher crisis perception in the right positions may provide more time for an organisation to prepare and carry out its communication in case of a crisis, which is strategically important. This has implications for organisational policy in HR (recruitment and training) and in communication. New theoretical insights will come from future research ensuing from this study.

### *Limitations and further research*

Every research has its limitations, and we did not take into account certain factors, either on purpose or with hindsight. Firstly, the conclusions of this research are valid for one particular organisation. It is an advantage to work within a homogeneous environment, but the results are difficult to generalise. The sample is very robust, however, and quantitatively, the results are large enough to allow more general conclusions. Benchmarking with other Defence departments, government or private organisations could support the data and our findings. Secondly, not all researchers are fond of scenario-based designs, in which we measure for intentions rather than actions. In this study, however, circumstances were optimised for a realistic estimate of people's perceptions, which was largely successful, based on the feedback. An even more realistic setting would be a real-time crisis management exercise incorporating communication aspects, an approach we will be implementing in the next step of



our research. Thirdly, the crisis scenario contained an element of management not wishing to communicate, notably in stage 4. In a military context, that could constitute a confounding variable, as members of the military usually tend to do what they are told by their superiors. The measures did not seem to be affected, however, as the perception of an impending crisis did not increase in any other way than what would be expected from the gradual building up of the scenario.

Next, the crisis perception scale seemed to present some minor issues. For the concept of time, partial construct *time2* had an element of stealing thunder in it, and *time1* and *time4* showed lower validity and reliability values than the other measures within the crisis perception construct. In the overall reliability tests of the crisis perception construct, however, the measure of time did stand up. Yet in our next research study we will measure time in a direct way. Another element from the perception scale that came up during the pre-test, was a partial construct for stakeholder's expectations, *expect2*, which measured for how people felt about the organisation, but the factor analyses did not indicate any anomaly. The factor and reliability analysis showed positive results for the crisis perception scale. We composed the scale based on studies performed in different fields of research and in various organisations. Therefore, we think that it can be applied outside of this study. It may need refining and additions, which would benefit the research domain.

The profile elements in this study were chosen based on previous research, but the conclusion that personal profiles do have an influence on crisis perception indicates that the list of personality traits that may add to that effect may need to be extended, for example by applying measures of leadership style (e.g. Boin, Hart, McConnell, & Preston, 2010) and Myers-Briggs Type Indicator scores (e.g. Gardner & Martinko, 1996).

Finally, the difference between a communication degree and additional training needs to be established so that organisations can benefit from more effective training programmes.

## Conclusion

The perception of an event as leading to a crisis, and the subsequent crisis communication from the viewpoint of an organisation and individual personnel profiles is a subject that has not often been studied. Previous research does provide a handle for grasping the domains that lead to coherent conclusions and further research. We studied the influence of individual organisation members' personal profiles on their perception of an imminent crisis for that organisation. We composed a comprehensive definition of a crisis and a crisis perception scale, which in a scenario-driven survey study helped to establish that one's study background, position within the hierarchy, and crisis training and experience have an influence on one's crisis perception. An organisation can put those findings to use in its personnel policy to improve its crisis communication by moving leading communication functions to a strategic level and decentralising others, and by recruiting, training and promoting personnel based on their communication competence as well. By doing so, an organisation can improve its crisis communication and thus safeguard its reputation or even improve it.

## Literature

Aertsen, T., Jaspaert, K., & Van Gorp, B. (2013). From theory to practice: A crisis simulation exercise. *Business Communication Quarterly*, *76*, 322–338.

Arpan, L. M., & Roskos-Ewoldsen, D. R. (2005). Stealing thunder: Analysis of the effects of proactive disclosure of crisis information. *Public Relations Review*, *31*, 425–433.

Barr, P. S., & Huff, A. S. (1997). Seeing isn't believing: Understanding diversity in the timing of strategic response. *Journal of Management Studies*, *34*, 337–370.

Baxter, A. D., Boet, S., Reid, D., & Skidmore, G. (2014). The aging anesthesiologist: A narrative review and suggested strategies. *Canadian Journal of Anesthesia/Journal canadien d'anesthésie*, *61*, 865–875.

Benoit, W. (1997). Image repair discourse and crisis communication. *Public Relations Review*, *23*, 177–186.

Billings, R. S., Milburn, T. W. & Schaalman, M. L. (1980). A model of crisis perception: A theoretical and empirical analysis. *Administrative Science Quarterly*, 25, 300–316.

Boin, A., Hart, P. T., McConnell, A., & Preston, T. (2010). Leadership style, crisis response and blame management: The case of Hurricane Katrina. *Public Administration*, 88(3), 706–723.

Coombs, W. T. (2014). *Ongoing crisis communication: Planning, managing, and responding*. Thousand Oaks, CA: Sage.

Dawes, J. G. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5 point, 7 point and 10 point scales. *International Journal of Market Research*, 51, 61–77.

DeVellis, R. F. (2016). *Scale development: Theory and applications* (Vol. 26). Sage publications.

Donnellon, A., Gray, B., & Bougon, M. G. (1986). Communication, meaning, and organized action. *Administrative Science Quarterly*, 31, 43–55.

Dutton, J. E., & Ashford, S. J. (1993). Selling issues to top management. *Academy of Management Review*, 18, 397–428.

Field, A., & Hole, G. (2003). *How to design and report experiments*. Thousand Oaks, CA: Sage.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Thousand Oaks, CA: Sage.

Fink, S. (1986). *Crisis management: Planning for the inevitable*. New York: American Management Association.

Fowler, K. L., Kling, N. D., & Larson, M. D. (2007). Organizational preparedness for coping with a major crisis or disaster. *Business & Society*, 46, 88–103.

Gardner, W. L., & Martinko, M. J. (1996). Using the Myers-Briggs Type Indicator to study managers: A literature review and research agenda. *Journal of Management*, 22(1), 45–83.

Grunig, J. E. (2013). *Excellence in public relations and communication management*. New York: Routledge.

Grunig, J. E., & Grunig, L. A. (2000). Public relations in strategic management and strategic management of public relations: Theory and evidence from the IABC Excellence project. *Journalism Studies*, 1, 303–321.

Guth, D. W. (1995). Organizational crisis experience and public relations roles. *Public Relations Review*, 21, 123–136.

Harlow, W. F., Brantley, B. C., & Harlow, R. M. (2011). BP initial image repair strategies after the Deepwater Horizon spill. *Public Relations Review*, 37, 80–83.

Hermann, C. F. (1963). Some consequences of crisis which limit the viability of organizations. *Administrative Science Quarterly*, 8, 61–82.

Horsley, J. S., & Barker, R. T. (2002). Toward a synthesis model for crisis communication in the public sector: An initial investigation. *Journal of Business and Technical Communication*, 16, 406–440.

Hutcheson, G. D., & Sofroniou, N. (1999). *The multivariate social scientist: Introductory statistics using generalized linear models*. Thousand Oaks, CA: Sage.

Jackson, S. E., & Dutton, J. E. (1988). Discerning threats and opportunities. *Administrative Science Quarterly*, 33, 370–387.

James, E. H., Wooten, L. P., & Dushek, K. (2011). Crisis management: Informing a new leadership research agenda. *The Academy of Management Annals*, 5, 455–493.

Kiessler, S., & Sproull, L. (1982). Managerial response to change environments: Perspectives on problem sensing from social cognition. *Administrative Science Quarterly*, 27, 548–570.

Marra, F. J. (1999). Crisis communication plans: Poor predictors of excellent crisis public relations. *Public Relations Review*, 24, 461–474.

Marynissen, H., Ladkin, D., Denyer, D., Snoeijers, E., & Van Achte, T. (2013). The role of individual risk perception in an organization managing high risks. *Conference paper for the Third International Conference on Engaged Management Scholarship*.

Marynissen, H., Pieters, S., Van Dorpe, S., van het Erve, A.-M., & Vergeer, F. (2010). *Geen commentaar! Communicatie in turbulente tijden*. Amsterdam: Business Contact.

Mishra, A. K. (1996). Organizational responses to crisis: The centrality of trust. In R. M. Kramer & T. Tyler (Eds.), *Trust in Organizations* (pp. 261–287). Location: Sage.

Mitroff, I. I., Shrivastava, P., & Udwadia, F. E. (1987). Effective crisis management. *The Academy of Management Executive*, 1, 283–292.

Mitroff, I. (2001). *Managing crises before they happen: What every executive and manager needs to know about crisis management*. New York: AMACOM, American Management Association.

Molleda, J. C. (2009). Global public relations. *IPR (Institute for Public Relations) Essential Knowledge Project*.

Morreale, S. P., & Pearson, J. C. (2008). Why communication education is important: The centrality of the discipline in the 21st century. *Communication Education*, 57, 224–240.

Paraskevas, A., & Altinay, L. (2013). Signal detection as the first line of defence in tourism crisis management. *Tourism Management*, 34, 158–171.

Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management. *Academy of Management Review*, 23, 59–76.

Pieters, S., & Eeckman, E. (2015). Crisiscommunicatie. In E. Eeckman, & P. Van San (Eds.), *Communicatie Troef. Doeltreffende communicatie in en door zorgorganisaties* (pp. 194–211). Leuven: Lannoo Campus.

Penrose, J. M. (2000). The role of perception in crisis planning. *Public Relations Review*, 26, 155–171.

Reilly, A. H. (2008). The role of human resource development competencies in facilitating effective crisis communication. *Advances in Developing Human Resources*, 10, 331–351.

Richardson, B. (1994). Socio-technical disasters: Profile and prevalence. *Disaster Prevention and Management: An International Journal*, 3, 41–69.

Sayegh, L., Anthony, W. P., & Perrewé, P. L. (2004). Managerial decision-making under crisis: The role of emotion in an intuitive decision process. *Human Resources Management Review*, 14, 179–199.

Seeger, M. W., Sellnow, T. L., & Ulmer, R. R. (2012). Communication, organization, and crisis. In M. Roloff (Ed.), *Communication yearbook 21* (p. 231). New York: Routledge.

Sisco, H. F. (2012). Nonprofit in crisis: An examination of the applicability of situational crisis communication theory. *Journal of Public Relations Research*, 24, 1–17.

Slovic, P. E. (2000). *The perception of risk*. London: Earthscan publications.

Smart, C., & Vertinsky, I. (1977). Designs for crisis decision units. *Administrative Science Quarterly*, 640–657.

Smart, C., & Vertinsky, I. (1984). Strategy and the environment: A study of corporate responses to crises. *Strategic Management Journal*, 5, 199–213.

- Tench, R., Zerfass, A., Verhoeven, P., Verčič, D., Moreno, A., & Okay, A. (2013). *Competencies and role requirements of communication professionals in Europe. Insights from quantitative and qualitative studies*. ECOPSI Research Report. Leeds Metropolitan University.
- Tjosvold, D. (1984). Effects of crisis orientation on managers' approach to controversy in decision making. *Academy of Management Journal*, 27, 130–138.
- Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive psychology*, 5, 207–232.
- Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2013). *Effective crisis communication: Moving from crisis to opportunity*. Thousand Oaks, CA: Sage.
- Van Gorp, B., & Pauwels, L. (2009). De communicatiefunctie in Belgische organisaties. Hoe excellent is deze ingevuld? *Tijdschrift voor communicatiewetenschap*, 37, 64.
- Van Wijk, C. (2008). *De Media-Explosie. Trends en issues in massacommunicatie*. Den Haag: Academic Service.
- Weick, K. E. (1969). *The social psychology of organizing*. Boston: Addison-Wesley.
- Weick, K. E., & Sutcliffe, K. M. (2007). *Managing the unexpected: Resilient performance in an age of uncertainty* (Vol. 8). Hoboken, NJ: John Wiley & Sons.
- Wendling, C., Radisch, J., & Jacobzone, S. (2013). The use of social media in risk and crisis communication. *OECD Working Papers on Public Governance* (No. 25). Paris: OECD Publishing.
- Wieland, A., & Handfield, R. B. (2014). The challenge of ensuring human rights in the end-to-end supply chain. *Supply Chain Management Review*, 18, 49–51.
- Williams, K. D., Bourgeois, M. J., & Croyle, R. T. (1993). The effects of stealing thunder in criminal and civil trials. *Law and Human Behavior*, 17, 597.
- Zerfass, A., Verčič, D., Verhoeven, P., Moreno, A., & Tench, R. (2015). European Communication Monitor 2015. Creating communication value through listening,

messaging and measurement. Results of a Survey in 41 Countries. Brussels: EACD/EUPRERA. *Helios Media*.

Zhang, B., Marita, V., Veijalainen, J., Wang, S., & Kotkov, D. (2016). The issue arena of a corporate social responsibility crisis—The Volkswagen case in Twitter. *Studies in Media and Communication*, 4, 32–43.



## Additional discussion of results

An observation, for which I postulated no hypothesis, and which is not documented in the third paper, is that French-speaking respondents have a higher score on crisis perception than Dutch-speaking do, a pattern showing throughout the scenario.

The fact that the French questionnaire is a translation of the Dutch one, could be an explanation, as a text translated in another language does not always carry the same connotations. To bring about the same effect on populations of distinct cultures, one may need to pass another message. Falkheimer and Heide (2006) state that an organization is continually transforming, progressing, and adjusting to the environment. Members of an organization produce and reproduce its social structure through communication; therefore, language determines our understanding of the world around us. Wertz & Kim (2010) analyse different messages for a culturally heterogeneous public in crisis situations. Personality traits can enhance that effect. Hofstede & McCrae (2004) established a significant and substantial relationship between personality scores of 33 different countries, thus influencing perception of the environment. That can also explain the correlation in this study between *language* and *credibility* of the crisis scenario. For the construct of *time*, which makes up an important part of the crisis perception scale, Hofstede (1984) specifies that time can be culturally regarded as a scarce resource; in more Uncertainty Avoiding societies, life tends to be more hurried than in less Uncertainty Avoiding communities and it is more difficult for people to relax and do nothing (Hofstede, 1984). Minkov and Hofstede (2014), examined Belgian society and detected two clearly separated clusters, the Dutch speaking and French speaking citizens. They found a close attachment of the French speaking Belgians to the French cultural cluster, whereas the closest cultural neighbour of the Dutch speaking Belgians is Sweden.

In spite of the proven difference in culture between the two linguistic cultural groups in Belgium, I would not conclude that French-speaking culturally perceive a crisis more quickly than Dutch-speaking, although the data seems to show that

they do. Perhaps their different personalities make them perceive a situation differently. This will be further investigated in the next project. Therefore, a short elaboration on culture seems to be in place.

## Culture

One definition of culture is that it is the collective programming of the mind which distinguishes the members of one group or society from those of another (Hofstede, 1984). The basis for cultural variance in work-related value patterns, in which we can situate perception relates to organisational issues and crises, was laid by Hofstede (1983). He came to the conclusion that half of the variance in mean scores of employees in 50 countries, can be explained by four basic dimensions: power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. These four dimensions are used to explain different ways of structuring organizations, different motivations of people within organizations, and different issues people and organizations face within society (Hofstede, 1983). Half of the question for this analysis were related to perceptions of the organizational regime and perceptions of the organizational climate, including stress-inducing factors. *Individualism* stands for a preference for loose social connections, in which individuals take care of themselves, whereas *collectivism* stands for a preference for a tightly knit social framework in which individuals can expect their relatives, clan, or other in-group to look after them in exchange for unquestioning loyalty (Hofstede, 1984). People in large *power distance* societies accept a hierarchical order in which everybody has a place which needs no further justification. People in small power distance societies strive for power equalization and demand justification for power inequalities (Hofstede, 1984). Strong *uncertainty avoidance* societies maintain rigid codes of belief and behaviour and are intolerant towards deviant persons and ideas. Weak uncertainty avoidance societies maintain a more relaxed atmosphere in which practice counts more than principles and deviance is more easily tolerated (Hofstede, 1984). *Masculinity* stands for a preference in society for achievement, heroism, assertiveness, and material success. Its opposite, *femininity*, stands for a preference for relationships, modesty, caring for the

weak, and the quality of life. Feminine societies strive for minimal social differentiation between the sexes (Hofstede, 1984). One of the implications of these observations is that management within a society is very much constrained by its cultural context, because it is impossible to coordinate the actions of people without a deep understanding of their values, beliefs, and expressions (Hofstede, 1984).

One of the embodiments of the theory of cultural variance, came about close at home and was studied by Taylor (2000). She carried out a case study of the Coca-Cola scare in Belgium in 1999, immediately after the so-called dioxin crisis. The purpose of her study was to explore cultural variability, especially uncertainty avoidance and power distance, and to examine how it affects public response to crisis. Results showed that publics who live in nations that are high in uncertainty avoidance and power distance tend to react more strongly, and more quickly, to perceived threats.

Finally, as one of the variables in my study is represented by personality traits, I refer to Hofstede and McCrae (2004), who conclude that personality can be related to almost any feature of culture. I will not make specific hypotheses, but will measure for differences between Dutch and French speaking respondents and explain those in the framework of Hofstede's cultural variance theory (Hofstede, 2003).



## Project 4: crisis communication exercise

*explore, define, analyse, **determine**, and conclude*

In the third project, a new and reliable scale came out promising for measuring crisis perception, but it needed further testing with a different sample. Updated literature and the need for a more realistic setting, suggested the incorporation of a crisis exercise environment. A possible confounding variable of disobedience needed to be evacuated, for which a new scenario seemed a solution. A person's communication-related function did not seem to have an effect, but in the second project, it did have. Therefore, I kept it as an independent variable. As individual factors did seem to have an influence on crisis perception, more personality-oriented indicators were required.

In the last study of my PhD research project, all things come together. Not only did the crisis perception scale seem reliable and robust, also the observation that incorporating the measurement in a crisis exercise simulation with multiple stages is inherent to the subject's perception, has been an insight that may provide a framework for crisis communication training. The social media factor that was studied in the first two projects, makes a come-back in this study, albeit in the form of a trigger for crisis situations. The observations from my first research, however, were applied, as in the build-up of the crisis scenario, the messages on social media evolve from factual to more emotional-driven. In the scenario, this is expressed by tweets at the start of the scenario, a platform that is common for factual information exchange, and the use of a Facebook message in the last stage, a platform that is more used for sharing emotions rather than spreading facts. In that last stage, there are also tweets in which the sender uses emotionally charged expressions (swearing, memes), which in my first research proved to have a boosting effect.

In this last paper, I discuss the results in the framework of this and of the previous three projects.



## A crisis communication exercise simulation: individual profiles having an influence on organisational crisis perception

This paper will be discussed at the International Communication Association 68th Annual Conference, 24-28 May 2018, Prague, CZ.

### Abstract

Preventing organisational crises implies that the organisation perceives a situation as a possible crisis and acts appropriately. This study investigates the pre-crisis phase in which an organisational crisis has not yet reached the critical level of being perceived by an organisation's stakeholders, but which staff members from that organisation possibly perceive as threatening. Each individual has a different perception and therefore an organisation needs to know which profiles have a better perception of an impending crisis, to put the right people in the right places. Using a crisis exercise simulation, a crisis perception scale and individual factors and personality indicators, this study demonstrates that a person's academic training, notably in communication related topics, a person's position within the organisation and previous crisis experience are significant indicators of someone's crisis perception ability, as well as individual factors such as organisational commitment, risk behaviour and regulatory focus.

Keywords: crisis communication, issues management, individual profile, personality indicators, perception scale, scenario-based exercise

### Introduction

The best strategy to fight a crisis is to make sure that it never comes to exist in the first place. In crisis communication research, an organisational crisis is strongly linked with the perception or initial awareness by the organisation's stakeholders (e.g. Coombs, 2014), a process that takes place in the time frame just before a crisis. By taking control of that crisis perception, organisations may prevent a crisis.

The use of the term *crisis perception* throughout this study should be understood as the ability to perceive a situation as evolving into a crisis for the organisation concerned. In that sense, it may be considered as situational awareness focused on crisis signals. For this concept of crisis perception, organisations must rely on staff members, with their individual backgrounds and traits, possibly influencing the way in which they perceive a crisis. Hence, this study looks at crisis perception from the individual's position within an organisation confronted with an impending crisis.

The research question that this study seeks to answer is: *do certain individual characteristics have an influence on how people perceive a crisis from within their own organisation during a pre-crisis phase?* Therefore, this study considers individual profiles from personnel members within a given organisation, including educational background, organisational function, crisis experience and cultural background, but also by examining individual factors, comprised of risk behaviour, organisational commitment, and regulatory focus. In an online crisis exercise simulation, these traits are held against individuals' scores on a crisis perception scale, thus establishing a typical profile of personnel being able to perceive a crisis before other stakeholders do. Members of the organisation staff perceiving a crisis before other stakeholders do, may create a strategic stretch of time for the organisation's crisis management and crisis communication. On top of that, a crisis perception measure (Snoeiijers and Poels, 2017) is tested in different circumstances (multiple organisations, other profiles) and other correlations (personality indicators and individual factors), and possible interactions between the variables in this study are verified.

The purpose of this investigation and its contribution to the field of public relations and crisis communication is providing more insight into crisis prevention strategies and the early phase of an organisational crisis build-up, and a better understanding of how organisations can gain strategically crucial time by perceiving a crisis early and by choosing or recruiting the right people to do so. In that way, this study also contributes to extending the field of crisis communication to other research domains, such as management and



organisational studies, thereby promoting interdisciplinary study (Pearson and Clair, 1998). This research may present organisations with practical arguments to upgrade their communication functions to a higher, strategic level.

## Theoretical background

In the past decade or so, crisis communication research has grown into a fully-fledged academic field, illustrations of which include the increasing number of publications, especially in public relations journals, dedicated conferences, and workgroups, divisions, or sections within international communication organisations (e.g. Schwarz, Seeger, and Auer, 2016). Looking at individual perception or situational awareness in the context of crises, individual factors and organisations, the current study addresses various fields of research. Crisis communication theory remains the basis for this work and the notion of crisis perception is the cornerstone of the current study, a reason for which we will need to situate it in its respective disciplines. Additionally, we look for individual factors and personality traits that lead to individual perception differences. Finally, the setup of the study involves the use of social media, a subject much of the current literature on crises pays particular attention to.

### *Crisis communication*

As one of the leading crisis communication scholars of the last decade, Coombs (2014 p. 3) defines a crisis as the perception of an unpredictable event that threatens important expectancies of stakeholders related to health, safety, environmental and economic issues, and which can seriously impact an organization's performance and generate negative outcomes. So logically, if no one perceives such an event as problematic, there is no crisis. For an organisation, crisis perception is therefore an important key to successful crisis management and crisis communication, on the grounds that the organisation can be the first to perceive an event as representing an imminent crisis and thus take control of the communication on that situation by gathering crucial information and communicating proactively. As opposed to reactive communication, proactive

communication allows an organisation to frame the message and the situation, for instance by stealing thunder (Arpan & Roskos-Ewoldsen, 2005).

Coombs is not the first one to define a crisis. Amongst the most common aspects of a crisis, taken from definitions in the body of literature, we find a lack of time to take action, threatened expectations of stakeholders and media targeting the organisation and its crisis strategy. Benoit (1997) speaks of attributed responsibility of an organisation in a crisis situation, which other authors discuss in the context of post-crisis communication strategies and not so much as part of the building-up towards a crisis itself. Some authors (Hermann, 1963; James, Wooten & Dushek, 2011; Pearson & Clair, 1998; Tjosvold, 1984; Ulmer, Sellnow & Seeger, 2013) touch upon the insecurity or uncertainty of stakeholders and managers during a crisis, which we have interpreted as a lack of information, especially in the early stage of a crisis (Sayegh, Anthony & Perrewé, 2004). The notion of an event turning into a crisis only when perceived as such (Coombs, 2014), is one of the key building stones of this study. After comparing definitions from the most cited authors in scientific literature, Snoeijers and Poels (2017, p.66) reformulated a definition of a crisis:

*A crisis starts to evolve when a stakeholder perceives that an organisation can no longer meet his expectations. Initially, very little information is available on the ongoing situation, which may impede the decision to communicate and can endanger the organisation's interests. A crisis attracts the attention of other stakeholders and of the media, depending on the responsibility attributed to the organisation by the stakeholders and on the organisational communication, which may amplify or play down the crisis.*

This definition carries with it the aspect of time and continuity. To cope with and specially to prevent a crisis, an organisation must be aware of the continuity of a crisis. Fink (1986) sees it as a disease striking an organisation in four stages: prodromal or symptomatic, acute, chronic, and finally healing. In the first stage, a disease or a crisis can be cured or prevented. Mitroff (2001) describes five

stages: signal detection, analysis and prevention, damage control, recovery and lessons learned, which is parallel to the classification by Fink (1986). Richardson (1994) proposes three stages, pre-crisis, crisis and post-crisis, a classification adopted by Coombs (2014). The pre-crisis phase, the stage on which this study focuses, consists of signal detection, prevention, and crisis preparation. The initial stage of signal detection, involves issues management, risk management and reputation management (Coombs, 2014). Jaques (2010) points to issues management as a crisis prevention strategy, a view shared by Coombs (2014). Issues management has its own continuity (Hainsworth, 1990; Register and Larkin, 2008; Van Wijk, 2008). Van Wijk's life cycles of an issue start at the pre-phase, when an event takes place, but no one notices. The issue is then born when stakeholders notice and are discontent. Next, the issue grows as pressure groups get involved, media coverage grows, and the public debate starts to take place. Later, the issue reaches adulthood when stakeholders take stands, people disagree and mistrust the organisation, the issue and the organisation are top-of-mind in media coverage, and in communication emotions and images prevail; a crisis is at hand. Thereupon an issue consolidates and fades (Van Wijk, 2008).

By taking action early in the issue life cycle, a crisis may be averted. Therefore, a situation needs to be assessed under the pressing circumstances of an impending crisis, and the organisation would want to choose to be the first to perceive the signals.

### *Crisis perception*

Crises that have been averted do not figure in literature, which may be one of the reasons why crisis prevention has been neglected in literature compared to crisis management (Jaques, 2014). Based on Coombs' definition of a crisis (Coombs, 2014), the focus of this study in organisational crisis communication lies with the brief time before anyone perceives a crisis and the extent to which an organisation can perceive a crisis itself, implying a strategic advantage. That advantage lies in the additional time to gather information but more importantly to communicate proactively to gain control of the communication. Therefore, an

organisation must have the resources and the people to be able to perceive a crisis more quickly than other stakeholders can. Staw, Sandelands and Dutton (1981) refer to the rigidity that threat can cause in an organisation's functioning, on an organisation as well as on the individual staff members' level. Mitroff (2001) refers to warning signals which an organisation can use to prevent a crisis but picking up those signals is highly associated with individuals and their psychology (Pearson and Clair, 1998). The individual perception of decision-makers affects the organisation's crisis strategy (Penrose, 2000), and Jaques (2014) presents various case studies that show how organisational structures and management may present an obstruction to the information flow necessary for issues management and for perceiving a crisis. He states that crisis prevention instead of just crisis response necessitates moving responsibility from the operational to the executive level (Jaques, 2010).

The definition of a crisis formulated above, gives way to the construction of a crisis perception scale, with four dimensions. A first dimension is *time* (Coombs, 2014; Hermann, 1963; Pearson and Clair, 1998; Tjosvold, 1984). One of the items relates to stealing thunder (Arpan et al., 2005), which has a powerful sense of time but also of willingness to act. A second dimension is *media attention*, which Fink (1986), Benoit (1997) and Mitroff (2001) also mention. Media attention increases time pressure and the probability that stakeholders take action. A third dimension refers to those stakeholders and their *expectations*, which nearly all authors do. The fourth dimension of attributed responsibility or *involvement* is derived from Benoit (1997). This scale, developed by Snoeijers and Poels (2017), will be further discussed in the method section.

Oriented by earlier research (Donnellon, Gray and Bougon, 1986; Marra, 1999; Morreale and Pearson, 2008; Pearson and Clair, 1998; Penrose, 2000; Tjosvold, 1984) this crisis perception measure showed that communication-related academic training and professional experience in communication-related crises positively correlate with a better perception of an impending organisational crisis. A study by Snoeijers and Poels (2017) also indicated that people in high-level functions have a higher score on perceiving a crisis, which contradicts the

main findings in studies on higher management and their relation to organisational communication (Tjosvold, 1984), which often refer to organisation blindness and stress blocking decisions during crises. However, Fowler, Kling, and Larson (2007) showed that top-level managers and middle-level managers showed a higher level of perceived preparedness than employees at lower hierarchical levels. Snoeijers and Poels (2017) similarly argued that high-ranked members of an organisation have a more strategic view of things, and thus are better positioned to spot possible problems. In the same study, personnel members in communication-related functions did not have higher scores on crisis perception than others in that organisation (Snoeijers and Poels, 2017), which seemed counter-intuitive and in apparent contradiction with the literature (Donnellon, Gray & Bougon, 1986). Staff with more externally oriented functions such as communication, should have a sufficient view on the organisation's situation. Finally, inspired by research in risk perception (e.g. Marynissen, Ladkin, Denyer, Snoeijers and Van Achte, 2013) and crisis exercise (e.g. Asproth, Borglund, and Öberg, 2013; Budden and Budden, 2010), we can assume that people with experience or training in crisis situations, will have a better perception of crises. Based on the research above and with the aim to check and replicate certain results from those studies, and therefore render the findings of previous research more robust, we can formulate the following hypotheses:

H1: Personnel members of an organisation that is experiencing an impending crisis, who have a communication-related degree, will have a better perception of the emerging crisis than those who have a degree in another domain.

H2: Personnel members of an organisation that is experiencing an impending crisis, who have a higher position in the hierarchy, will have a better perception of the emerging crisis than those who have a lower position.

H3: Personnel members of an organisation that is experiencing an impending crisis, who have a communication-related function, will have a

better perception of the emerging crisis than those who do not have a similar function.

H4a: Personnel members of an organisation that is experiencing an impending crisis, who have experienced a crisis situation within their organisation, will have a better perception of the emerging crisis than those who do not have had that experience.

H4b: Personnel members of an organisation that is experiencing an impending crisis, who have recently participated in a crisis exercise, will have a better perception of the emerging crisis than those who did not.

### *Individual factors and personality traits*

Apart from individual profiles based on study, work and experience, psychological personality traits and individual factors may play a decisive role in crisis perception. A person's perceptions are dynamic processes that lead to decisions and changes in behaviour based on individual and collective schemes or mental models (Barr & Huff, 1997). Pearson and Clair (1998) bring up the importance of interdisciplinary study in crisis communication research and explicitly refer to the psychological perspective on crisis management. They point out that cognitive approaches to the study of an organizational crisis typically are based firstly on crises representing highly uncertain, complex, and emotional events; secondly on people being limited in their information-processing capabilities during a crisis; and thirdly on crises emerging because of executives', managers', or operators' erroneous responses. Brockner and James (2008) look at individual and organisational factors in an organisation (risk taking, regulatory focus, self-efficacy, learning orientation), but their focus lies with managers and the point where they perceive a crisis no longer as a threat but as an opportunity. Weick (1988) points out that "crises engage human action, human action can amplify small deviations into major crises, and in any search for causes, we invariably can find some human act which may have set the crisis in motion" (p. 308). Having an important linkage to human resources management and organisational psychology, this research explores individual factors that are more

common in organisational contexts and risk behaviour research, which is closely connected with crisis research (Regeister and Larkin, 2008). Similarly, Reynolds and Seeger (2005) argue that risk communication and crisis communication share many similarities. As no direct measure of crisis perception has been researched from a psychological viewpoint, risk behaviour therefore represents an adjacent research domain to probe for relevant individual factors and personality traits. Wachinger, Renn, Bech, and Kuhlicke (2013) studied risk perception and found that the connection between risk perception, willingness to act and risk preparedness remains complex and unclear. Weick (1988) brings the willingness to act, or enactment is the term he uses, in connection with commitment, stating that it has on the one hand a positive side, generating meaning and structure, so that people have a more accurate view of what is happening, and on the other hand a dark side, producing blind spots, blocking people from seeing a problem for what it is. Other factors, such as function within an organisation (cf. *supra*), will probably influence a positive or negative effect from commitment.

Nicholson, Soane, Fenton-O'Creevy, and Willman (2005) argue that personality has major effects on risk behaviour. They found significant correlations between the constructs in their specific risk-taking scale and the five-factor model of McCrea and Costa (1992), commonly known as the Big Five, a much-used measurement of personality, despite some criticism (e.g. Block, 2010). The five factors have been defined as openness to experience, conscientiousness, extraversion, agreeableness, and emotional stability. Questionnaires to measure these constructs tend to be voluminous, but Gosling, Rentfrow, and Swann (2003) present a very useful and brief measurement of Big Five personality traits, which is widely used by scholars and which we used as well. However, as we limit ourselves to an abbreviated measure of Big Five personality traits, forcefully leaving out all the subtle distinctions that undoubtedly have an influence on a person's perception of a crisis (McRea and Costa, 1992), we leave that personality indicator out of our predictions, but it does serve to link other personality indicators and indicate possible explanations for other individual factors.

Erdheim, Wang, and Zickar (2006) link Big Five personality constructs to organisational commitment, the relative strength of an individual's identification with and involvement in a particular organisation, characterized by a strong belief in and acceptance of the organization's goals and values, a willingness to exert considerable effort on behalf of the organization, and a strong desire to maintain membership in the organization (Mowday, Steers and Porter, 1979). Dewett and Denisi (2007) discuss organisational citizenship behaviour (Smith, Organ and Near, 1983; Williams and Anderson, 1991) and refer to regulatory focus, a two-factor goal-oriented behaviour scale, in which promotion represents a tendency towards accomplishment and advancement, whereas prevention is concerned with safety and fulfilment of responsibilities (Higgins, Friedman, Harlow, Idson, Ayduk, and Taylor, 2001). Regulatory focus, in turn, is analysed using the Big Five framework by Lanaj, Chang and Johnson (2012). Additionally, regulatory focus is correlated to risk behaviour, in which promotion focus leads to risk-seeking behaviour, while a prevention focus leads to risk avoidance (Bryant and Dunford, 2008; Gino and Margolis, 2011). Finally, Colquitt, Scott, and LePine (2007) explore correlations between risk-taking and organisational citizenship through organisational and individual trust. Close examination of the literature on individual factors and personality traits possibly connecting to crisis perception, has produced an overview as represented in Figure 5.



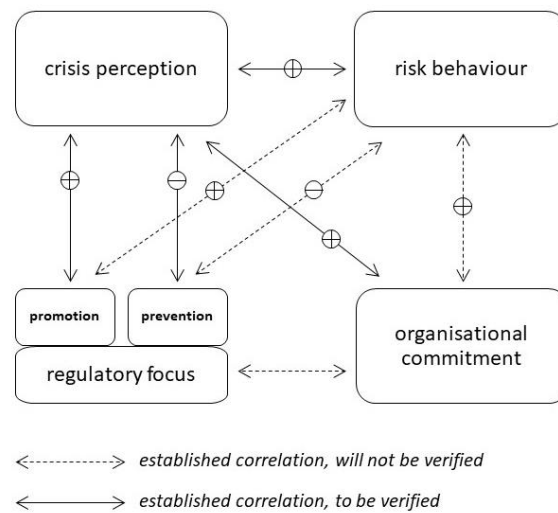


Figure 5: Individual factors and personality traits, and possible correlations

A research sub question would therefore be:

RQ1: is a person’s crisis perception influenced by that person’s individual profile on risk behaviour, organisational commitment, or regulatory focus?

Based on previous research, we can make some assumptions for commitment, risk and regulatory focus, in relation to crisis perception.

H5a: Organisational members showing higher organisational commitment, will have a better perception of the emerging crisis than those who did not. (e.g. Weick, 1988)

H5b: Organisational members showing higher risk-taking behaviour, will have a better perception of the emerging crisis than those who did not. (e.g. Wachinger et al., 2013)

H5c: Organisational members showing a preference for promotion focus, will have a better perception of the emerging crisis than those preferring a prevention focus. (e.g. Gino and Margolis, 2011).

### Social media

The use of social media in crisis communication is a domain well covered in the wake of the emergence of crisis communication research, though the main body of

research is devoted to social media usage during a crisis (e.g. Snoeijers, Poels and Nicolay, 2014 for an overview) and not preceding the crisis. The first area in which digital media has made a significant difference is on the process aspects of issues management – particularly scanning, monitoring, and tracking of issues (Jaques, 2014, p. 39). Frandsen and Johansen (2017) place social media at the beginning of the crisis time line and suggest that social media have become triggers and accelerators of organisational crises. Austin and Jin (2017) declare that media play an essential role in crisis communication, although they look at it from the viewpoint of crisis information production and dissemination, so not through the framework of situational awareness. The importance of situational awareness by the use of social media is discussed by Vieweg, Hughes, Starbird and Palen (2010), though their aim was to develop an automated way to gather information during a crisis, as did Salfinger, Retschitzegger, Schwinger and Pröll (2016). Be that as it may, in a study by Moreno, Navarro, Tench and Zerfass (2015), results show that practitioners with an elevated level of usage of social media give more importance to social media channels, influence of social media on internal and external stakeholders and relevance of key gatekeepers and stakeholders along with a better self-estimation of competences. They raise the question whether a public relations social media bubble might exist.

From the above, we can conclude that social media do play an increasing role in crisis situational analysis, offering a platform by which an organisation can keep a finger on the pulse of stakeholders' crisis perception (Jaques, 2014; Vieweg et al., 2010). In the current study, we will not focus on social media variables, but we do apply the principles found in the literature to the exercise inputs, which consist of media messages (tweets, posts, e-mail). In each stage, we adapt the impact (increasing shares and likes, e.g. Hermida, Fletcher, Korell and Logan, 2012), volume of the inputs (e.g. Kietzmann, Hermkens, McCarthy, and Silvestre, 2011), and the messages' source (e.g. Pornpitakpan, 2004).

## *Culture*

Earlier research that we carried out, showed that in measuring crisis perception, cultural differences might show up in the results. The population of which we took a sample, consisted of Dutch speaking and French speaking Belgians. Not only do these two make up distinct linguistic groups, but they also differ in culture. That does not come as a surprise, as Falkheimer and Heide (2006) state that an organization is more organic than static, and is continually transforming, progressing, and adjusting to the environment. Members of that organization produce and reproduce its social structure through language, which determines our understanding of the world around us. When looking at the crisis perception scale, we see, for instance, that the construct of *time* is culturally charged. In the framework of cultural variance, Hofstede (1984) regards time as a scarce resource. In more uncertainty avoiding societies, life tends to be more hurried than in less uncertainty avoiding societies and it is more difficult for people to relax and do nothing (Hofstede, 1984). Specifically of importance for the results of our sample, could be the findings of Minkov and Hofstede (2014), who examined Belgians and detected two clearly separated clusters, the Dutch speaking and French speaking. They found a close attachment of the French speaking Belgians to the French cultural cluster, whereas the closest cultural neighbour of the Dutch speaking Belgians is Sweden.

The specific effects of cultural influence in the perception of a crisis will be very complex, a reason for which we choose to make no hypotheses for it in this study, but rather ask a final research question on the possible influence of culture on the results:

RQ2: does a difference in culture (Dutch-French) influence one's crisis perception?

## *Method*

To measure one's crisis perception and look for correlations with elements in that person's profile, the experiment consists of two main components: a crisis

exercise simulation with a within-subjects design and a questionnaire containing multiple personality measurements.

### *Case selection and participants*

Crisis communication research is often devoted to for-profit organisations, as the loss of revenue is one of the most obvious consequences of mismanaging a crisis. For public organisations, it is likewise important to handle a crisis in a professional way, as they are accountable to the citizens and to political actors, who decide on the mission and budget of those public agencies.

Participants have been recruited through an intra-organisational network of communication experts from the Belgian federal government agencies, a population whose profiles and functions are well documented, that is sufficiently homogeneous for practical reasons of the crisis exercise scenario being fit-for-all, and that is willing to spend sufficient time and effort in participating in such an exercise.

A total of 853 respondents participated in this study. On an estimated population of 67,500 members, that would represent a response rate of 1,3%, which seems very low. News messages on intranet sites, which was the way of inviting people to participate in this study, seem to pass unnoticed. Further investigation showed that only a few agencies ( $N=4$ , out of 14) published the invitation on their intranet, despite a reminder and the extension of the data collection period. The number of participants does, however, constitute a representative sample for this study. 47% of the participants completed the questionnaire, 53% did so only partially. The sample consisted of Dutch (63,3%) and French speaking civil servants, a normal ratio in Belgium.

### *Setup*

A live crisis communication exercise that was organised for a small group of communication professionals taken from the same population of civil servants, proved very useful to pre-test the scenario and the questionnaire, and to resolve issues encountered in developing the exercise simulation. The crisis exercise

platform that was used for the live exercise was based on a time-triggered scenario of a continuous media flux (social media, e-mail, news media, ...) building up towards a crisis, similar to the one described by Asproth et al. (2013). A live scenario-driven crisis exercise proved unfit for the current experiment, as it was extremely difficult to supervise many participants during the exercise and to exclude as much disturbing variables as possible. As in previous research, the timeline of a live exercise has been mimicked by four consecutive screenshots with a brief additional description and repeated measures.

The crisis exercise simulation plays upon a cyber-attack, possibly crippling the web-based services for citizens and staff. The exercise has four stages, based on issues management theory, and more particular on Van Wijk's phases in issues management (Heath and Palenchar, 2008; Van Wijk, 2008). In each stage, the participant is clearly informed that the organisation has not communicated on the issue, a typical tactics in government agencies, as it transpired from the live exercise preceding this study. In a first phase, the pre-phase, trigger events and facts are presented in two internal e-mails, and those conditions remain unchanged during the exercise; the only information changing is the input from stakeholders by media messages. In a second phase, the birth of the issue, expectation gaps arise, which reflects in a sample of three tweets and an e-mail with information questions, all from citizens and presented as taken from several dozens of media messages. In a third phase, growth of the issue, public debate widens and media focus on the events, which transpires from a sample of six media messages, from citizens, unions, political decision takers, colleagues, and press, some expressing frustration. The messages are presented as taken from more than a hundred messages. In a fourth phase, adulthood of the issue, mistrust between stakeholders and organisation sets in and emotions become a part of the communication. This is shown by a Facebook message with comments, a tweet containing rude language, a tweet containing a sarcastic meme and a press tweet with a critical tone. These messages are presented as being a sample from several hundreds of similar posts. These four pre-crisis phases have been translated into four media feeds (e-mail, social media, news media), just as they

would be presented in a crisis exercise. After each phase, the participant's perception of the situation was established by means of a crisis perception scale (cf. *infra*).

In the second part of the questionnaire, participants were presented with personality and demographic questions.

### *Measurements*

To be able to measure an individual's ability to perceive a situation as possibly developing into a crisis, Snoeijers and Poels (2017) developed a crisis perception scale based on the crisis literature. This twelve-item scale showed a high reliability (Cronbach's  $\alpha > 0.8$ ) and will be used and retested in the current study. The model yielded sufficient criterion and factorial validity within a large sample (Snoeijers and Poels, 2017). We did, however, perform a new factor analysis in which we kept the 12-item scale (Table 12). We conducted a principal axis factor analysis with oblique rotation, for which the Kaiser-Meyer-Olkin measure, verifying the sampling adequacy for the analysis, resulted in  $KMO=.87$ , which falls into the range of meritorious (Field, 2013). All KMO values for the individual items were greater than .74, well above the acceptable limit of .5 (Field, 2013). We run an analysis to obtain eigenvalues for each factor in the data. Two factors had eigenvalues over Kaiser's criterion of 1 and in combination explained 51,91% of the variance. The scree plot was a bit ambiguous, showing only slight inflexions. All items clustered into two factors, time and the other constructs of media, expectations and involvement. These results were similar to the ones in the study by Snoeijers and Poels (2017). We checked for the reliability of the scale for the new sample, which resulted in Cronbach's  $\alpha = 0.86$ , showing a high reliability. When breaking down the reliability analysis to the four different scenario phases, the increasing reliability of the scale catches the eye (from  $\alpha = 0.67$  in the first phase to  $\alpha = 0.87$  in the fourth).

time1	<i>Before communicating, my organisation has to wait until the situation is totally clear.</i>
time2	<i>In this case, it is important to quickly bring out a minimum of information, rather than to wait to have more complete information.</i>
time3	<i>In this situation, my organisation has little time to take action.</i>
time4	<i>My organisation has to take the time to analyse the situation and should not be ruled by time pressure.</i>
media1	<i>My organisation's spokesperson should be ready to make a statement to the press.</i>
media2	<i>The media will not pay any attention to my organisation in this case.</i>
media3	<i>There will be political questions for my organisation following this situation.</i>
expect1	<i>I expect my family and friends to ask me questions about this because I work for this organisation.</i>
expect2	<i>As an employee of this organisation, I have a bad feeling about how the organisation handles this case.</i>
expect3	<i>This situation is a threat for my organisation's reputation.</i>
involve1	<i>This situation does not concern my organisation.</i>
involve2	<i>It is possible that my organisation is involved in this situation.</i>

Table 12: Constructs and items from the crisis perception scale

The personality indicator scales used in this study are all based on previous research and the original questionnaire setup (e.g. number of Likert items) was preserved. We gave preference to short measurement questionnaires, to limit the time for the overall questionnaire on crisis perception. Organisational commitment was measured by a much-cited scale developed by Mowday, et al. (1979), who tested a 15 items questionnaire that could be limited to 9 items. In our study, risk behaviour was measured following Weber, Blais, and Betz (2002) as well as Nicholson et al. (2005), who proposed a domain-specific risk behaviour assessment scale, including recreational, health, career, financial, safety and social risks, adding up to a general risk profile for past and present behaviour. Higgins et al. (2001) introduced an 11-item regulatory focus measure, in which promotion and prevention focus are tested separately, which reflects in our analysis. Finally, Gosling, et al. (2003) suggested a very brief measure of the Big-Five personality domains. In a 10-item questionnaire, they determine subjects' extraversion, agreeableness, conscientiousness, emotional stability, and openness to new experiences. We only measured these crude Big Five indicators to

interpret results from other individual indicators, and we have not made any predictions, given the complexity of the five indicators.

## Results

The hypotheses were verified by analysing the data with repeated-measures ANOVAs with the independent variables as between-subject factors and the four phases of the exercise as within-subject factors, as well as by using regression analysis. All tests were carried out with a confidence interval of 0.95. To interpret the size of an effect, we used the partial eta squared indicator offered by the statistical analysis program. Some subgroups based on profile, were of unequal size, in which case we used Cohen's *d* to verify the effect size (Field, 2013), which had the implication of having to be measured for the distinct phases of the scenario separately. To better interpret certain results, we performed additional analyses on certain measures for each phase.



factor	F-value	overall effect size	partial effect size for each phase			
			1	2	3	4
academic studies	$F(3, 385) = 15.36$	$\eta_p^2 = 0.11^{**}$	$d=0.42^{**}$	$d=0.44^{**}$	$d=0.51^{**}$	$d=0.52^{**}$
communication studies	$F(1, 393) = 7.52$	$\eta_p^2 = 0.02^{**}$	$d=0.40^*$	$d=0.56^{**}$	$d=0.54^{**}$	$d=0.40^{**}$
organisational function	$F(4, 384) = 8.81$	$\eta_p^2 = 0.08^{**}$	$d=0.50^{**}$	$d=0.32^{**}$	$d=0.41^{**}$	$d=0.45^{**}$
# people reporting	$F(3, 385) = 2.88$	$\eta_p^2 = 0.02^*$	$d=0.34^{**}$	$d=0.25^*$	$d=0.25^*$	$d=0.29^{**}$
communication function	$F(1, 387) = 3.13$			$d=0.27^*$		
crisis exercise	$F(1, 393) = 1.32$		$d=0.29^*$			
crisis experience	$F(1, 385) = 3.24$	$\eta_p^2 = 0.03^*$		$d=0.37^{**}$	$d=0.23^*$	$d=0.25^*$
organisational commitment	$F(1, 389) = 8.91$	$\eta_p^2 = 0.02^{**}$	$d=0.25^*$		$d=0.30^{**}$	$d=0.34^{**}$
specific risk behaviour	$F(1, 388) = 14.05$	$\eta_p^2 = 0.04^{**}$	$d=0.26^*$	$d=0.31^{**}$	$d=0.37^{**}$	$d=0.41^{**}$
regulatory focus prevention	$F(1, 388) = 0.04$					
regulatory focus promotion	$F(1, 388) = 7.35$	$\eta_p^2 = 0.02^{**}$	$d=0.24^*$	$d=0.30^{**}$	$d=0.22^*$	$d=0.24^*$

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 \* . Correlation is significant at the 0.05 level (2-tailed).  
 Effect sizes thresholds for  $\eta_p^2$  are 0.01 (small), 0.06 (medium) and 0.14 (large) (Richardson, 2011).  
 Effect size thresholds for Cohen's  $d$  are 0.20 (small), 0.50 (medium) and 0.80 (large) (Field, 2013)  
 Non-significant correlations were left out of the effect-size columns.

Table 13: Results from repeated measures ANOVA with between-subject factors, with crisis perception score as outcome variable

The results from the repeated measures ANOVA (Table 13) showed that respondents with an academic communication related background (N=34) do have a higher score (M=7.75, SD=0.86 for the second phase) on crisis perception than others (N=361; M=7.19, SD=1.11), with a medium effect size ( $d=0.56$ ). That supports the first hypothesis. An additional variable that stands out in the results is academic studies, yielding a medium effect. Especially holders of a master's degree (N=156) score higher on the crisis perception scale (M=8.26, SD=1.14 for the fourth phase) than those with a bachelor's degree (N=61), who in turn score higher (M=7.86, SD=1.23) than those without a degree (N=172; M=7.40, SD=1.17). When testing for an effect of communication studies within the group holding an academic degree, the ones with a communication related degree have a higher score on the crisis perception scale (M=8.11, SD=0.87) than those having an academic degree in other domains (M=7.81, SD=1.11), though the effect is somewhat smaller ( $d=0.30$ ). The second hypothesis was also

confirmed by the test results, with a medium size effect for organisational function, showing that personnel in higher management (N=55) score higher on the crisis perception scale (M=8.27, SD=1.26 in the fourth phase) than those in middle management (N=148), who score higher (M=7.92, SD=1.06) than expert staff (N=92), who in their turn score higher (M=7.77, SD=1.18) than staff who execute (N=36). They, finally, score higher (M=7.34, SD=1.16) than supporting staff (N=58; M=7.17, SD=1.33). In Table 13, partial effect sizes are based on the interpretation by Fowler et al. (2007) of management (top and middle) and others. Linked to that variable, we checked for the number of people reporting to respondents in their organisation, and that generated a significant but small effect. Subsequently, we found no significant effect for staff members having a communication related function in the results from the repeated-measures ANOVA, nor for those having participated in a crisis exercise. Working in a communication function does, however, have a significant and small effect in the second phase of the scenario,  $F(1, 387) = 4.83, p = 0.029, d = 0.27$ . That provides elements to discuss the third hypothesis. Participation in a crisis exercise generates a significant but small effect only in the first phase of the scenario,  $F(1, 387) = 5.21, p = 0.023, d = 0.29$ . For staff members having had previous crisis experience in their organisation (N=244), there was a significant effect on their crisis perception score (M=7.40, SD=1.08 for the second phase) which proved higher than for those who did not previously experienced an organisational crisis (N=145; M=7.00, SD=1.07), resulting in a small to medium effect size ( $d = 0.37$ ). These results favour our fourth hypothesis, though not entirely.

Multiple regression analysis was used to test if the individual factors significantly predicted participants' crisis perception scores. The result of the regression indicated that the individual factors explained 7% of the variance ( $R^2=0.07, F(4,389)=7.09, p<0.001$ ). It was found that organisational commitment ( $\beta=0.15, p=0.003$ ), specific risk-taking behaviour ( $\beta=0.19, p<0.001$ ), as well as promotion focus ( $\beta=0.14, p=0.007$ ) significantly predicted a person's crisis perception. To further examine and visualise the correlations between the individual factors and personality traits, and scores on crisis perception, a

correlation analysis was performed in addition to the repeated measures ANOVA and the regression (Table 14). For crisis perception, only weak correlations could be found, notably with organisational commitment, specific risk behaviour and regulatory promotion focus. Stronger correlations, which corroborate findings from earlier research, exist between organisational commitment and promotion focus, and between prevention focus and risk taking, the latter in a negative sense.

factor	crisis perception	commitment	risk taking	promotion focus	prevention focus
crisis perception	1	0.15**	0.19**	0.14**	
organisational commitment	0.15**	1		0.28**	
risk taking	0.19**		1		-0.32**
promotion focus	0.14**	0.28**		1	
prevention focus			-0.32**		1

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 \* . Correlation is significant at the 0.05 level (2-tailed).

Table 14: Factor correlations in Pearson's *r*

The second research sub question involved the cultural difference between respondents and the possible influence that might have on their perception of a crisis. There was no significant influence on crisis perception of the linguistic groups to which respondents belong, but we noted some interesting correlation effects with the other personality indicators. French speaking participants scored significantly higher on specific risk taking,  $F(1, 388)=13.02$ ,  $p<0.001$ ,  $\eta_p^2= 0.032$ . French speaking participants also scored higher on promotion focus,  $F(1, 388)=8.24$ ,  $p=0.004$ ,  $\eta_p^2= 0.021$ . We also found significant correlation effects for three Big Five personality indicators. Dutch speaking respondents scored significantly higher on emotional stability,  $F(1, 387)=17.44$ ,  $p<0.000$ ,  $\eta_p^2= 0.043$ , whereas French speaking participants scored higher on openness,  $F(1, 387)=5.01$ ,  $p=0.026$ ,  $\eta_p^2= 0.013$ , and on conscientiousness,  $F(1, 387)=5.49$ ,  $p=0.020$ ,  $\eta_p^2= 0.014$ .

## Discussion

This study shows that individual characteristics have an influence on how people perceive a crisis from within their own organisation during a pre-crisis phase.

The first hypothesis, that a communication-related degree would induce a higher score on the crisis perception scale, is corroborated by the results. Another variable showing a significant effect on crisis perception is academic degree. Especially participants with a master's degree score higher than others, but the increased score by holders of a communication-related degree stand also within the group of master's degrees. Morreale and Pearson (2008) already pointed out the importance of a communication training to face issues such as crisis communication. In the sample, only one individual with a communication-related degree held a function in higher management, 13 reported to be part of middle management and 14 considered themselves experts. Tench, Verčič, Zerfass, Moreno, Verhoeven, and Jugo (2017) underline the importance of specialists in executive communication functions, and they argue that communication specialists should support the overall goals of the organisation through strategic communication, and that communication should evolve from a soft to a hard discipline.

Although the initial hypothesis, based on management literature, seemed to indicate the inverse, personnel members of an organisation that is experiencing an impending crisis, who have a higher position in the hierarchy, have a higher score on the crisis perception scale, which is a confirmation of the second hypothesis of this study. Management and leaders do seem to have a proficiency in crisis perception, but other research calls attention to the problematic crisis communication by management (e.g. Tjosvold, 1984). Yusko and Goldstein (1997) point out the importance of selecting and training an organisation's leaders to effectively handle crisis situations, through crisis exercises and assessments.

As was the case in previous research, the third hypothesis, based on literature (e.g. Donnellon et al., 1986), was not entirely substantiated. Personnel members who have a communication-related function do not necessarily perceive a crisis in

a different way than those who do not have a similar function. Working in a communication function does, however, have a significant and small effect in the second phase of the scenario, which may indicate that, once a crisis generates external communication, as was the case in that particular phase, communication staff does perceive a crisis more than others do, but the effect does not last throughout the scenario. The belief that this may be related to the non-strategic position of the communication function within the organisation and the subsequent self-censorship by communication staff, may hold for other organisations than the one studied in Snoeijers and Poels (2017). Van Gorp and Pauwels (2009) indicated that Belgian organisations do not compare positively in excellent communication to other countries such as the Netherlands. It may also be that government organisations are typical in underestimating communication experts, an example of which could be the difficulties with which the questionnaire, described as communication research, had been disseminated throughout the federal agencies. Heide and Simonsson (2014) demonstrate that the absence of strategic crisis management thinking and discourse in organisations, confines communication professionals to a technical role rather than a managerial and strategic role. So, this phenomenon could be of a more global nature.

The fourth hypothesis, in which we assumed that crisis experience and training yield a higher score on crisis perception, could only be partially endorsed by the results. When the scenario starts with the first phase, previous crisis exercise does result in a higher crisis perception score. This indicates that respondents having participated in a crisis exercise in the past, are more alert and may be prone to spot a crisis in a very early phase, though this may also lead to reading something into the situation that is not there (Frandsen and Johansen, 2017). These researchers quote Weick and Sutcliffe (2007), who warn against imposing our expectations on the signs we perceive, as we will tend to fill the gaps when not enough information is available, such as in possible crisis situations. Borodzicz (2004) refers to the difficulties in designing useful crisis simulations, bearing upon the complexity of the situation. Furthermore, crisis simulations do

not typically involve crisis communication on a management level, as illustrated in the case studied by Heide and Simonsson (2014). Crisis experience, on the other hand, generates a higher score on crisis perception, which not only is a confirmation of our hypothesis and the study of Snoeijers and Poels (2017) on the subject, but also a confirmation of existing risk and crisis research (e.g. Marynissen et al., 2013).

As an answer to the first research sub question, whether crisis perception correlates to risk behaviour, organisational commitment, or regulatory focus, only weak correlations could be found, with organisational commitment, specific risk taking and regulatory promotion focus. Nevertheless, these correlations are significant, and we can therefore consider our fifth group of assumptions to be confirmed: organisational members showing higher organisational commitment, risk taking behaviour or promotion focus, will have a better perception of the emerging crisis. Note that our hypothesis on regulatory focus could only be partially confirmed, as prevention focus did not show any significant correlation with crisis perception. One's commitment to the organisation intuitively ties in with perceiving a crisis threatening the organisation. The overall score for domain-specific risk-taking correlating with crisis perception, suggests that perceiving crises may involve a positive stance towards risk taking. The nature of the questions in the crisis perception scale could be interpreted as somewhat critical of the organisation (particularly the construct *expect2*), which implicates a particular career risk, which does not appear from the correlations, though. The finding that promotion-focused and not prevention-focused participants scored higher on crisis perception, seems counter-intuitive. We would expect that the prevention of negative outcomes and the protection of an organisation's reputation should prevail over the promotion focus on advancement, growth, and life accomplishment. The moderate correlation between promotion-focus and organisational commitment, may offer an explanation. The few weak correlations and the limited variance in crisis perception explained by these factors, raises the question whether other psychological indicators would have yielded more result.

Some will probably mediate a person's crisis perception and may explain a larger percentage of the variance.

The second research sub question was related to another individual factor that we considered, cultural difference, in this case Dutch and French speaking respondents. We could not establish an influence of linguistic groups on crisis perception, although it would have been something to have expected from the literature review. However, correlations with personality traits were observed, although they were weak or moderate (emotional stability). These results can be explained by looking at the cultural variance between the two language groups in Belgium, as studied by Minkov and Hofstede (2014). By combining their results to Hofstede's tables of national variance (Hofstede, 2003), we can deduce that Dutch speaking Belgians live in a more feminine society, with less power distance and less uncertainty avoidance than their French speaking fellow citizens. If we compare those observations to the correlations that Hofstede and McCrae (2004) found with Big Five indicators, we find that neuroticism (the opposite of emotional stability) is strongly correlated to cultural masculinity and uncertainty avoidance, and conscientiousness has a strong correlation with power distance, which fits our results. Openness, however, has a negative moderate correlation to power distance and a positive moderate correlation to masculinity, which leaves us with a contradictory result. The tendency for more risk-taking with French speaking, transpiring from our results, is in turn contradicted by the interpretation by Hofstede (1984) that weak Uncertainty Avoidance stands for a willingness to take risks and to innovate. We can, however, assume from this observations that cultural variance is correlated to various personality indicators. In our interpretation, the factors of high risk taking, promotion focus, and a higher score on neuroticism, openness, and conscientiousness, could make difference in interpreting a crisis and specifically reporting it.

Practically, this study offers practical arguments for organisations to upgrade their communication functions to a higher, strategic level. Organisations should prefer to recruit communication specialists with an academic degree, who need to advance towards key strategic communication functions, instead of relying on



staff to be trained on-the-job to fill in executive communication functions (Tench et al., 2017; Van Gorp and Pauwels, 2009). Assessment of candidates for these strategic communication functions probably involve personality tests, a few of which give an indication of a person's perception of an impending crisis, notably the indicators of organisational commitment, specific risk taking and promotion focus. Organisation members need to be trained in communication and crisis management (Reilly, 2008). This can be established through realistic crisis exercise trainings (Asproth et al., 2013). Placing individuals with higher crisis perception in the right positions may provide more time for an organisation to prepare and carry out its communication in case of a crisis, which is strategically important (Snoeijers and Poels, 2017).

Theoretically, the crisis perception scale offers a robust tool to bolster the current crisis communication research. More than that, the architecture of the research, intertwining a multi-phased scenario with recurrent measures of perception, can be applied to other domains in which an unfolding simulation or live situation that allows for periodic measure transpire.

### *Limitations and further research*

It was meant that this study would yield various organisations to be able to generalize the results. Although but a few of the organisations responded, the eventual sample carried enough responses to perform the analysis with a confidence level of 95% (Field, 2003). For future studies, special attention must be paid to the recruitment of respondents. More respondents would not necessarily result in more reliable results, but the diversification of the respondents and their organisation would certainly make the results more generalisable.

We were confronted with a relatively low reliability of the crisis perception measure in first stage of scenario ( $\alpha=.67$ ). There may be a double explanation for that. Firstly, during the initial phase of a scenario building up towards a crisis, the pre-phase from issues management (Van Wijk, 2008), there is little information and no crisis can be identified; in our scenario, the first stage



consists of organisation-internal factual information and no stakeholder communication has taken place. Secondly, the crisis perception measurement scale is inextricably bound up with a multi-phased situational analysis, as the construct of time and increasing information becoming available is expressed by the different stages of the scenario. In other words, the scale has to be used in a situation where a possible crisis is building up or during a simulation of those circumstances. Keeping in mind these conditions, the seemingly low reliability coefficient for the first measurement should not pose a problem (DeVellis, 2016). Consequently, the data in this study were not analysed for each scenario phase separately, but with a four-level repeated-measures ANOVA with between-subject factors (Field, 2013).

We found correlations between crisis perception and a selection of individual factors and personality indicators, based on our literature research. Though the correlations proved weak and were not significant for all the indicators, they were sufficient to assume that other personality indicators could play a role in crisis perception. The profile elements of hierarchical function and leadership showed weak correlations with nearly all the personality indicators that we tested, but investigating that went beyond the aim of this study. In future research, aspects of hierarchy and leadership could be considered. Jaques (2014), for instance, calls attention issue and crisis management in the broader context of executive capabilities and the importance of leadership in managing risks, issues, and crises.

The observations we made in analysing the correlation between cultural variance and personality traits, were not the object of a hypothesis, but the cultural variance in Belgium is certainly not a domain that has been researched thoroughly. Results such as ours may contribute and give direction to future studies on the cultural factor of crisis and risk perception.

## Conclusion

The results from the crisis exercise simulation show that there are individual characteristics that have an influence on how people perceive a crisis from within

their own organisation during a pre-crisis phase. These characteristics include study background, and more particularly a master's degree and a degree in communication related studies, a person's function in an organisational hierarchy, previous crisis experience, and, to a much lesser extent, experience in a communication function and previous crisis exercise training. These findings substantiate the results of previous research and validate the crisis perception scale used. On top of that, correlations between crisis perception and organisational commitment, risk behaviour and promotion focus were found. This study contributes to a better understanding of crisis prevention strategy and the early phase of an organisational crisis build-up, and of how organisations can gain strategically crucial time by perceiving a crisis early and by choosing or recruiting the right people to do so.

## References

- Arpan, L. M., & Roskos-Ewoldsen, D. R. (2005). Stealing thunder: Analysis of the effects of proactive disclosure of crisis information. *Public Relations Review*, *31*, 425-433.
- Asproth, V., Borglund, E., & Öberg, L. M. (2013). Training exercises for crisis management training in intra-organizational settings. In *Proceedings of the 10th International Conference on Information Systems for Crisis Response and Management, ISCRAM*, 105-109. KIT Publishers.
- Austin, L., Fisher Liu, B., & Jin, Y. (2012). How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research*, *40*(2), 188-207.
- Austin, L., & Jin, Y. (Eds.). (2017). *Social Media and Crisis Communication*. New York: Routledge.
- Barr, P. S., & Huff, A. S. (1997). Seeing isn't believing: Understanding diversity in the timing of strategic response. *Journal of Management Studies*, *34*, 337-370.
- Benoit, W. (1997). Image Repair Discourse and Crisis Communication. *Public Relations Review*, *23*, 177-186.

Block, J. (2010). The five-factor framing of personality and beyond: Some ruminations. *Psychological Inquiry*, 21(1), 2-25.

Borodzicz, E. P. (2004). The missing ingredient is the value of flexibility. *Simulation & Gaming*, 35(3), 414-426.

Brockner, J., & James, E. H. (2008). Toward an understanding of when executives see crisis as opportunity. *The Journal of Applied Behavioral Science*, 44(1), 94-115.

Bryant, P., & Dunford, R. (2008). The influence of regulatory focus on risky decision-making. *Applied Psychology*, 57(2), 335-359.

Budden, C. B., & Budden, M. C. (2010). Developing crisis management skills through a realistic case scenario. *Journal of Business Case Studies*, 6(6), 131.

Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, Trustworthiness, and Trust Propensity: A Meta-Analytic Test of Their Unique Relationships With Risk Taking and Job Performance. *Journal of Applied Psychology*, 92(4), 909-927.

Coombs, W. T. (2014). *Ongoing Crisis Communication: Planning, Managing, and Responding*. Thousand Oaks, CA: Sage.

Coombs, W. T., & Holladay, J. S. (2012). The paracrisis: The challenges created by publicly managing crisis prevention. *Public Relations Review*, 38(3), 408-415.

DeVellis, R. F. (2016). *Scale development: Theory and applications* (Vol. 26). Thousand Oaks, CA: Sage.

Dewett, T., & Denisi, A. S. (2007). What motivates organizational citizenship behaviours? Exploring the role of regulatory focus theory. *European Journal of Work and Organizational Psychology*, 16(3), 241-260.

Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., & Wagner, G. G. (2011). Individual risk attitudes: Measurement, determinants, and behavioral consequences. *Journal of the European Economic Association*, 9(3), 522-550.

Donnellon, A., Gray, B., & Bougon, M. G. (1986). Communication, meaning, and organized action. *Administrative Science Quarterly*, 43-55.

Erdheim, J., Wang, M., & Zickar, M. J. (2006). Linking the Big Five personality constructs to organizational commitment. *Personality and Individual Differences*, 41(5), 959-970.

Falkheimer, J., & Heide, M. (2006). Multicultural crisis communication: Towards a social constructionist perspective. *Journal of contingencies and crisis management*, 14(4), 180-189.

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics*. Thousand Oaks, CA: Sage.

Fink, S. (1986). *Crisis management: Planning for the inevitable*. New York: American Management Association.

Frandsen, F., & Johansen, W. (2017). *Organizational Crisis Communication*. Thousand Oaks, CA: Sage.

Gino, F., & Margolis, J. D. (2011). Bringing ethics into focus: How regulatory focus and risk preferences influence (un) ethical behavior. *Organizational Behavior and Human Decision Processes*, 115(2), 145-156.

Gonzalez-Herrero, A., & Pratt, C. B. (1995). How to manage a crisis before-or whenever-it hits. *Public Relations Quarterly*, 40(1), 25.

Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in personality*, 37(6), 504-528.

Hainsworth, B. E. (1990). The distribution of advantages and disadvantages. *Public Relations Review*, 16(1), 33-39.

Heath, R. L., & Palenchar, M. J. (2008). *Strategic issues management: Organizations and public policy challenges*. Thousand Oaks: Sage Publications.

- Heide, M., & Simonsson, C. (2014). Developing internal crisis communication: New roles and practices of communication professionals. *Corporate Communications: An International Journal*, 19(2), 128-146.
- Hermann, C. F. (1963). Some Consequences of Crisis Which Limit the Viability of Organizations. *Administrative Science Quarterly*, 8, 61-82.
- Hermida, A., Fletcher, F., Korell, D., & Logan, D. (2012). Share, like, recommend: Decoding the social media news consumer. *Journalism Studies*, 13(5-6), 815-824.
- Higgins, E. T., Friedman, R. S., Harlow, R. E., Idson, L. C., Ayduk, O. N., & Taylor, A. (2001). Achievement orientations from subjective histories of success: Promotion pride versus prevention pride. *European Journal of Social Psychology*, 31(1), 3-23.
- Hofstede, G. (2003). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage publications.
- Hofstede, G., & McCrae, R. R. (2004). Personality and culture revisited: Linking traits and dimensions of culture. *Cross-cultural research*, 38(1), 52-88.
- Jaques, T. (2010). Embedding issues management as a strategic element of crisis prevention. *Disaster Prevention and Management: An International Journal*, 19(4), 469-482.
- Jaques, T. (2014). *Issues and crisis management: Exploring issues, crises, risk and reputation*. Victoria, Australia: Oxford University Press.
- James, E. H., Wooten, L. P., & Dushek, K. (2011). Crisis management: Informing a new leadership research agenda. *The Academy of Management Annals*, 5, 455-493.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business horizons*, 54(3), 241-251.

Lanaj, K., Chang, C. H., & Johnson, R. E. (2012). Regulatory focus and work-related outcomes: a review and meta-analysis.

Liu, B. F., & Fraustino, J. D. (2014). Beyond image repair: Suggestions for crisis communication theory development. *Public Relations Review*, *40*, 543-546.

Marra, F. J. (1999). Crisis communication plans: Poor predictors of excellent crisis public relations. *Public Relations Review*, *24*, 461-474.

Marynissen, H., Ladkin, D., Denyer, D., Snoeijers, E., & Van Achte, T. (2013). The role of individual risk perception in an organization managing high risks. In *Conference paper for the Third International Conference on Engaged Management Scholarship, September*.

McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of personality and social psychology*, *52*(1), 81.

Minkov, M., & Hofstede, G. (2014). Clustering of 316 European regions on measures of values: do Europe's countries have national cultures?. *Cross-Cultural Research*, *48*(2), 144-176.

Mitroff, I. (2001). *Managing crises before they happen: what every executive and manager needs to know about crisis management*. New York: AMACOM, American Management Association.

Moreno, A., Navarro, C., Tench, R., & Zerfass, A. (2015). Does social media usage matter? An analysis of online practices and digital media perceptions of communication practitioners in Europe. *Public Relations Review*, *41*, 242-253.

Morreale, S. P., & Pearson, J. C. (2008). Why communication education is important: The centrality of the discipline in the 21st century. *Communication Education*, *57*(2), 224-240.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of vocational behavior*, *14*(2), 224-247.

Nicholson, N., Soane, E., Fenton-O'Creevy, M., & Willman, P. (2005). Personality and domain-specific risk taking. *Journal of Risk Research*, 8(2), 157-176.

Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management. *Academy of management review*, 23, 59-76.

Penrose, J. M. (2000). The role of perception in crisis planning. *Public Relations Review*, 26, 155-171.

Pornpitakpan, C. (2004). The persuasiveness of source credibility: A critical review of five decades' evidence. *Journal of applied social psychology*, 34(2), 243-281.

Regeester, M., & Larkin, J. (2008). *Risk issues and crisis management in public relations: A casebook of best practice*. London: Kogan Page Publishers.

Reynolds, B., & Seeger, W. (2005). Crisis and emergency risk communication as an integrative model. *Journal of health communication*, 10(1), 43-55.

Richardson, B. (1994). Socio-technical disasters: profile and prevalence. *Disaster Prevention and Management: An International Journal*, 3, 41-69.

Richardson, J.T.E. (2011). Eta squared and partial eta squared as measurements of effect size in educational research. *Educational Research Review*, 6, 135-147.

Salfinger, A., Retschitzegger, W., Schwinger, W., & Pröll, B. (2016). Towards a Crowd-Sensing Enhanced Situation Awareness System for Crisis Management. In *Fusion Methodologies in Crisis Management* (pp. 177-211). Springer International Publishing.

Sayegh, L., Anthony, W. P., & Perrewé, P. L. (2004). Managerial decision-making under crisis: The role of emotion in an intuitive decision process. *Human Resource Management Review*, 14(2), 179-199.

Schwarz, A., Seeger, M. W., & Auer, C. (Eds.). (2016). *The Handbook of International Crisis Communication Research*. Hoboken, NJ: John Wiley & Sons.



Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of applied psychology*, 68(4), 653.

Snoeijers, E. M., Poels, K., & Nicolay, C. (2014). # universitycrisis: The impact of social media type, source, and information on student responses toward a university crisis. *Social Science Computer Review*, 32(5), 647-661.

Snoeijers, E. M., & Poels, K. (2017). Factors that influence organisational crisis perception from an internal stakeholder's point of view. *Public Relations Review*. In press.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative science quarterly*, 501-524.

Tench, R., Verčič, D., Zerfass, A., Moreno, A., Verhoeven, P., & Jugo, D. (2017). *Communication Excellence: How to Develop, Manage and Lead Exceptional Communications*. Basingstoke, UK: Palgrave Macmillan.

Tjosvold, D. (1984). Effects of Crisis Orientation on Managers' Approach to Controversy in Decision Making. *Academy of Management Journal*, 27, 130-138.

Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2013). *Effective crisis communication: Moving from crisis to opportunity*. Thousand Oaks, CA: Sage.

Van Gorp, B., & Pauwels, L. (2009). De communicatiefunctie in Belgische organisaties. Hoe excellent is deze ingevuld? *Tijdschrift voor communicatiewetenschap*, 37, 64.

Van Wijk, C. (2008). *De Media-Explosie. Trends en issues in massacommunicatie*. The Hague: Academic Service.

Vieweg, S., Hughes, A. L., Starbird, K., & Palen, L. (2010). Microblogging during two natural hazards events: what twitter may contribute to situational awareness. In *Proceedings of the SIGCHI conference on human factors in computing systems*, 1079-1088. New York: Association for Computing Machinery.



Wachinger, G., Renn, O., Begg, C., & Kuhlicke, C. (2013). The risk perception paradox—implications for governance and communication of natural hazards. *Risk analysis*, *33*(6), 1049-1065.

Weber, E. U., Blais, A. R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of behavioral decision making*, *15*(4), 263-290.

Weick, K. E., & Sutcliffe, K. M. (2007). *Managing the unexpected: Resilient performance in an age of uncertainty* (Vol. 8). Hoboken, NJ: John Wiley & Sons.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of management*, *17*(3), 601-617.

Yusko, K. P., & Goldstein, H. W. (1997). Selecting and Developing Crisis Leaders Using Competency-Based Simulations. *Journal of Contingencies and Crisis Management*, *5*(4), 216-223.

## Appendices

### *Appendix A: organisational commitment questions*

(Mowday, Steers and Porter, 1979) 7 point likert, 9 items

#	ENG	NED	FRA
0		Hieronder vindt u een aantal uitspraken over de organisatie waarvoor u momenteel werkt. Geef aan in hoeverre u het eens bent met onderstaande uitspraken.	Vous trouverez ci-dessous quelques affirmations sur l'organisation pour laquelle vous travaillez actuellement. Indiquez dans quelle mesure vous êtes d'accord avec les affirmations ci-dessous.
1	I am willing to put a great deal of effort beyond that normally expected in order to help this organization be successful.	Ik wil me meer inzetten dan men van me verwacht zodat deze organisatie succesvol zou zijn.	Je suis prêt à m'investir plus de ce qu'on attend de moi pour rendre cette organisation plus à succès.
2	I talk up this organization to my friends as a great organization to work for.	Ik vertel mijn vrienden dat deze organisatie geweldig is om voor te werken.	Je parle à mes amis de cette organisation comme une excellente organisation pour laquelle travailler.
3	I would accept almost any type of job assignment in order to keep working for this organization.	Ik zou bijna elke taak aanvaarden om voor deze organisatie te blijven werken.	J'accepterais presque n'importe quelle tâche pour pouvoir continuer à travailler pour cette organisation.
4	I find that my values and the organization's values are very similar.	Mijn waarden en die van de organisatie liggen dicht bij elkaar.	Mes valeurs et celles de l'organisation sont très similaires.
5	I am proud to tell others that I am part of this organization.	Ik vertel anderen met trots dat ik deel uitmaak van deze organisatie.	Je raconte aux autres avec fierté que je fais partie de cette organisation.
6	This organization really inspires the very best in me in the way of job performance.	Deze organisatie doet me het beste van mezelf geven voor wat betreft werkprestatie.	Cette organisation inspire le meilleur de moi en matière de rendement au travail.
7	I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	Ik ben erg blij dat ik deze organisatie heb gekozen om voor te werken in plaats van andere die ik had kunnen kiezen toen ik hier begon.	Je suis vraiment content d'avoir choisi cette organisation comme employeur au lieu d'autres que je considérais quand j'ai commencé.
8	I really care about the fate of this organization.	Ik trek me het lot van deze organisatie echt aan.	Je me soucie du sort de cette organisation.
9	For me this is the best of all possible organizations for which to work.	Voor mij is dit de beste organisatie om voor te werken.	Pour moi, cette organisation est la meilleure pour laquelle travailler.

### *Appendix B: general risk taking question*

(Dohmen, Falk, Huffman, Sunde, Schupp, and Wagner 2011) 1-10: not at willing to take risks – very willing to take risks, 1 item

ENG	NED	FRA
Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?	Bent u over het algemeen iemand die volledig bereid is risico's te nemen of probeert u die te vermijden?	En général, êtes-vous une personne entièrement prête à prendre des risques ou essayer-vous de les éviter ?

### Appendix C: domain specific risk-taking questions

(Nicholson, Soane, Fenton-O'Creevy, and Willman, 2005) 5 point Likert, 12 items

#	ENG	NED	FRA
0	We are interested in everyday risk-taking. Please could you tell us if any of the following have ever applied to you, now or in your adult past?	Wij willen meer weten over alledaagse risico's. Kunt u aangeven welke van onderstaande risico's op u van toepassing zijn, nu of in uw verleden als volwassene? De items bij elk risico zijn slechts voorbeelden, misschien hebt u nog andere gelijkaardige risico's genomen.	Nous sommes intéressés par la prise de risque quotidienne. Pouvez-vous indiquer quels des risques ci-dessous s'appliquent à vous, aujourd'hui ou dans votre passé adulte. Les exemples ne sont que des illustrations ; peut-être vous avez pris d'autres risques.
1	recreational risks (e.g. rock climbing, scuba diving)	vrijtijdsrisico's (vb. rotsklimmen, scubaduiken)	risques récréatifs (p.ex. escalade, plongée sous-marine)
2	health risks (e.g. smoking, poor diet, high alcohol consumption)	gezondheidsrisico's (vb. roken, ongezond eten, veel alcohol drinken)	risques de santé (p.ex. fumer, mauvaise alimentation, forte consommation d'alcool)
3	career risks (e.g. quitting a job without another to go to)	carrière- <i>risico's</i> (vb. ontslag nemen zonder dat u ander werk hebt)	risques de carrière (p.ex. quitter un emploi sans avoir un autre)
4	financial risks (e.g. gambling, risky investments)	financiële <i>risico's</i> (vb. gokken, risicovolle investeringen)	risques financiers (p.ex. jeux d'argent, investissements risqués)
5	safety risks (e.g. fast driving, city cycling without a helmet)	veiligheidsrisico's (vb. oversteken door rood, veiligheidsgordel niet vastklikken)	risques de sécurité (p.ex. traverser au feu rouge, ne pas mettre sa ceinture de sécurité)
6	social risks (e.g. standing for election, publicly challenging a rule or decision)	sociale <i>risico's</i> (vb. opkomen bij een verkiezing, publiekelijk een regel of beslissing aanvechten)	risques sociaux (p.ex. se représenter à une élection, contester publiquement une règle ou une décision)

## Appendix D: regulatory focus questions

(Higgins, Friedman, Harlow, Idson, Ayduk, and Taylor, 2001) 5 point Likert, 11 items

#	ENG	NED	FRA
0	This set of questions asks you HOW FREQUENTLY specific events actually occur or have occurred in your life. Please indicate your answer to each question by circling the appropriate number below it.	Deze vragen peilen naar hoe dikwijls bepaalde dingen gebeuren of gebeurd zijn in uw leven. Duid bij elke vraag uw antwoord aan.	Cet ensemble de questions vous demande à quelle fréquence des événements spécifiques se produisent ou se sont produits dans votre vie. Veuillez indiquer votre réponse à chaque question.
1	Compared to most people, are you typically unable to get what you want out of life? (never-very often)	Bereikt u in het leven meestal wat u wilt, in vergelijkingen met de meeste anderen? (R!)	Comparé à la plupart des gens, êtes-vous généralement capable d'obtenir ce que vous voulez de la vie ? (R !)
2	Growing up, would you ever “cross the line” by doing things that your parents would not tolerate? (never-very often)	Ging u in uw jeugd ooit “een stap te ver” door dingen te doen die niet mochten van uw ouders?	Dans votre jeunesse, auriez-vous jamais « franchi la ligne » en faisant des choses que vos parents ne toléreraient pas?
3	How often have you accomplished things that got you “psyched” to work even harder? (never-many times)	Hoe dikwijls hebt u dingen verwezenlijkt die u hebben aangezet om nog meer te werken?	Combien de fois avez-vous accompli des choses qui vous ont poussés à travailler encore plus ?
4	Did you get on your parents’ nerves often when you were growing up? (never-very often)	Werkte u in uw jeugd weleens op de zenuwen van uw ouders?	Dans votre jeunesse, avez-vous souvent porté sur les nerfs de vos parents ?
5	How often did you obey rules and regulations that were established by your parents? (never-always)	Hoe dikwijls volgde u regels en beperkingen die uw ouders hadden opgelegd?	À quelle fréquence avez-vous obéi aux règles et règlements établis par vos parents ?
6	Growing up, did you ever act in ways that your parents thought were objectionable? (never-very often)	Gedroeg u zich in uw jeugd weleens op een manier die uw ouders afkeurden?	Dans votre jeunesse, vous comportiez-vous parfois d'une manière que vos parents croyaient répréhensible ?
7	Do you often do well at different things that you try? (never-very often)	Lukken de verschillende dingen die u probeert meestal goed?	Est-ce que les différentes choses que vous essayez réussissent souvent bien ?
8	Not being careful enough has gotten me into trouble at times. (never-very often)	Ik heb weleens problemen gehad omdat ik niet voorzichtig genoeg was.	Ne pas être assez prudent m'a parfois causé des ennuis.
9	When it comes to achieving things that are important to me, I find that I don't perform as well as I ideally would like to do. (never true-very often true)	Om dingen te verwezenlijken die belangrijk voor me zijn, vind ik dat ik niet zo goed presteer dan dat ik in het ideale geval zou willen.	Quand il s'agit de réaliser des choses qui sont importantes pour moi, je trouve que je ne réussis pas aussi bien que je le ferais idéalement.
10	I feel like I have made progress toward being successful in my life. (certainly false-certainly true)	Ik heb het gevoel dat ik vooruitgang heb geboekt om succesvol te zijn in mijn leven.	J'ai l'impression d'avoir fait des progrès pour réussir dans ma vie.
11	I have found very few hobbies or activities in my life that capture my interest or motivate me to put effort into them. (certainly false-certainly true)	Er zijn niet veel hobby's of activiteiten in mijn leven die me interesseren of me motiveren om er tijd in te steken.	J'ai trouvé très peu de passe-temps ou d'activités dans ma vie qui captent mon intérêt ou me motivent à y mettre de l'effort.

## *Appendix E: Big Five questions*

(Gosling, Rentfrow, and Swann, 2003) 7 point Likert, 10 items

#	ENG	NED	FRA
0	Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.	Hieronder vindt u enkele karaktertrekken die al dan niet op u van toepassing kunnen zijn. Kunt u aangeven in welke mate u het eens of oneens bent met de volgende uitspraken? Geef aan in hoeverre de twee karaktertrekken samen bij u horen, zelfs wanneer een ervan meer van toepassing zou zijn dan de andere.	Voici un certain nombre de traits de personnalité qui peuvent ou ne peuvent pas s'appliquer à vous. Pouvez-vous indiquer dans quelle mesure vous êtes d'accord ou non avec les affirmations suivantes ? Vous devez évaluer la mesure dans laquelle la paire de traits s'applique à vous, même si une caractéristique s'applique plus fortement que l'autre.
1	I see myself as extraverted, enthusiastic.	Ik zie mezelf als extravert, enthousiast.	Je me considère extraverti, enthousiaste.
2	I see myself as critical, quarrelsome.	Ik zie mezelf als kritisch, ruziezoekend.	Je me considère critique, querelleur.
3	I see myself as dependable, self-disciplined.	Ik zie mezelf als betrouwbaar, vol zelfdiscipline.	Je me considère fiable, auto-discipliné.
4	I see myself as anxious, easily upset.	Ik zie mezelf als angstig, gemakkelijk van streek.	Je me considère anxieux, facilement contrarié.
5	I see myself as open to new experiences, complex.	Ik zie mezelf als open voor nieuwe ervaringen, complex.	Je me considère ouvert à de nouvelles expériences, complexe.
6	I see myself as reserved, quiet.	Ik zie mezelf als gereserveerd, rustig.	Je me considère réservé, tranquille.
7	I see myself as sympathetic, warm.	Ik zie mezelf als sympathiek, warm.	Je me considère sympathique, chaleureux.
8	I see myself as disorganized, careless.	Ik zie mezelf als ongeorganiseerd, nonchalant.	Je me considère désorganisé, négligent.
9	I see myself as calm, emotionally stable.	Ik zie mezelf als kalm, emotioneel stabiel.	Je me considère calme, émotionnellement stable.
10	I see myself as conventional, uncreative.	Ik zie mezelf als conventioneel, weinig creatief.	Je me considère conventionnel, peu créatif.

## Conclusion

*explore, define, analyse, determine, and **conclude***

*“[...] there ain't nowt a man can't bear if he'll only be dogged. [...] It's dogged as does it. It ain't thinking about it.” (Trollope, 1867, Ch. LXI)*

When I began to explore the realm of crisis communication research, a first study learned that media source, media content, and media platform, have an influence on how people react to a crisis. That research involved one stakeholder group. But what with the other stakeholders, especially in the frame of reference of crisis prevention, and what with the impact of social media? This was brought into play in the second study. The assumptions for social media factors in the second study could not be proven. However, the results showed that internal stakeholders differ significantly in perceiving an impending crisis by their function. Considering the limited results on social media use in crisis communication, with the booming research in social mediated crisis communication, it would prove difficult to make a significant contribution to the body of research, but the role of individual stakeholders in crisis communication still needed to be researched further, the reason for which the following studies focused more on the internal stakeholder aspect. Need for a larger and homogeneous sample within the same organization, led me to my own organisation, Belgian Defence. The scale for crisis perception had to be refined as well. Having applied these observations in the third study, a promising crisis perception scale needed further testing, a scenario driven experiment had to be more realistic, possibly included in a crisis exercise, and personality traits of function, background, but also culture, had to be verified and extended to more personality-oriented indicators. Finally, the fourth project culminated to a verified and tested conclusion:

*individual factors, such as hierarchical function, education background, crisis experience, personality, and cultural variance, have an influence on a person's crisis perception from within the organisation that he or she is a member of, thereby playing a key role in the organisation's crisis perception, and therefore in its strategic communication.*

As explained in the papers, by that understanding, organisations can earmark or recruit staff who have a better perception of a crisis, so that the organisation can be the first to perceive an impending crisis, which creates the strategic advantage to take control of the crisis communication and possibly smother the crisis before it is perceived by others, avoiding reputational damage. But this conclusion has more far-reaching implications.

## Practical implications and recommendations

The first paper showed that non-profit organisations can apply the strategies in corporate organisational crisis communication, such as stealing thunder, transparency, honesty, and empathy. Top management plays a key role in communicating about the crisis. When using social media for crisis communication, research has not yet been able to present an all-inclusive model to predict stakeholders' behaviour and possible reputation damage. In this study, though, Twitter seemed to be a platform for crisis communication that is preferred over Facebook, when wanting to promote secondary communication (retweeting, telling others).

In the second paper, it became clear that people in a communication function have a better perception of crises and issues than people who do not have a communication-related function, and people in a management position have a better perception of issues than those who are at a different organisational level. However, most communication professionals in organisations have a rather limited view of the organisation and focus on communication opportunities, while managers have a more comprehensive view of the organisation and its interests, but in stressful circumstances such as crises, that information does not come down to the communication department, that is often not situated at a strategic



level. Communication professionals ending up in a management function, however, are often not involved in the organisation's communication anymore, as it is no strategic function in many organisations. In that case, communication experts seem to lose their crisis perception capacities and their willingness to act. A similar phenomenon takes place when managers are occupying a communication function. As communication is no strategic function, they may be cut off from the decision-making process, a plausible reason those profiles show a lower crisis perception and willingness to act. These observations may pose a problem for swift and effective organisational communication in crisis situations.

The findings from the third paper, that someone's study background, position within the hierarchy and crisis training and experience, have an influence on that person's crisis perception, can be applied when earmarking staff members with communication expertise. Specialists should be recruited based on their academic credentials and should be able to move to high-level management functions within their communication speciality. Communication is one of the most important aspects of personnel management and development. An organisation's members should be trained in communication, crisis management and media management to increase personnel's and the organisation's resilience to stress and crises. Therefore, an organisation should also lift its communication function to a strategic level and fill it with communication specialists, whereas recruiting non-communication specialists in key communication functions should be avoided. It is not very realistic to recruit staff on the basis of their crisis experience, but crisis exercises are excellent for enhancing personnel's perception of crises and help establish a more crisis resilient organisation. One of the points that came out of the third study, was the concern for false positives, handling a situation as a crisis when it turns out that it is none. In these times of fast and uncontrolled communication, it is very difficult to make out whether a situation will evolve into a crisis or not, especially when little information is available. When an organisation communicates proactively before a crisis has been perceived by others, chances are that a crisis may never occur. No one will know whether the crisis would never have occurred or whether the crisis

communication averted it. False positives should therefore not be a major concern.

The fourth study offers practical arguments for organisations to upgrade their communication functions to a higher, strategic level. Organisations should prefer to recruit communication specialists with an academic degree, who need to advance towards key strategic communication functions, instead of relying on staff to be trained on-the-job to fill in executive communication functions. Individual factors and indicators such as organisational commitment, risk-taking behaviour, and regulatory focus, may already be part of assessment procedures of candidates for these strategic communication functions. A crisis simulation could complete these assessment batteries. But also, when already recruited, organisation members need to be trained in communication and crisis management through realistic crisis exercise trainings. The multi-staged crisis scenario to measure for crisis perception, with the inherent crisis perception scale as developed in project three and four, could be integrated in crisis exercises, as illustrated in a simulation in the fourth project. Presenting subjects with a situation or an event, providing little information and upping the pressure in stages, while each time measuring for perception, may prove to be a valuable assessment tool for crisis exercises (e.g. Palttala and Vos, 2012). Placing individuals with higher crisis perception in the right positions may provide more time for an organisation to prepare and carry out its communication in case of a crisis, which is strategically important.

In an overall observation of practical implications emerging from the literature and the different studies, we can conclude that, by subscribing to the framework of excellent communication (Grunig, 2013), to my results, and to good practices in crisis communication (e.g. Coombs, 2014; Frandsen and Johansen, 2017; Heath, 2006; Seeger, 2006), organisations may create a more advantageous structure for strategic management, including crisis management. This demands steps from management in organisational culture, structure, and human resources. Recruiting fresh staff and earmarking people that already work within the organisation, is a typical domain for the Human Resources department. For

Hutchins and Wang (2008) HR needs to stay proactive by constantly and consistently scanning and evaluating to identify issues that may threaten organizational sustainability, which reminds of situational awareness in a crisis perception frame. Therefore, creating a crisis-prepared mentality and organizational environment is a major task for HR professionals. Hutchins and Wang (2008) mention training and teaching organizational leaders and members how to look for signs, for instance by organising crisis management exercises. Organizational leaders and members, who could experience organisational inhibitions, should be engaged in collective sense making of, and critical reflections on, crisis experiences (Stern, 1997). Leadership qualities that facilitate crisis management are, amongst others, strategic thinking, communication, empowerment, trust, and integrity. HR must therefore foster these qualities and organizational culture that would enable organisations to foresee crisis situations (Lagadec, 1997). Crisis management should be integrated in general management and specific crisis communication channels must be established (Lockwood, 2005). Training and development (e.g., leadership development), career development (e.g., succession planning), and organization development (e.g., organisational culture, organisational learning, strategic alignment) underscore the fundamental role Human Resources Development should play in crisis management efforts (Hutchins and Wang, 2008). Putting communication specialists in strategic functions is one of the recommendations that surfaces from my literature study and my research results, specifically from the last two projects.

## Theoretical implications

The objective of this PhD research was to contribute to the insight into processes taking place during the initial stage of an emerging crisis, with a focus on crisis perception by individual organisation members to prevent a crisis from breaking out. The main theoretical contributions of this study are the refinement of a crisis definition and the subsequent elaboration and testing of a crisis perception scale. But each paper resulted in interesting theoretical considerations.

The paper from the first project, was one of the first to compare two different social media platforms for crisis communication. Then, relatively little research had been performed on the subject, and models of crisis communication seem to have a limited life span or remain incomplete as long as social media keep evolving at the current pace at which science seems to keep lagging behind, which it still does today (Coombs, 2014; Roshan et al., 2016; Spence et al., 2016; Valentini et al., 2017; Zerfass et al., 2017). Social media undoubtedly have a huge influence on crisis communication (Frandsen and Johansen, 2017), but it is the evolution of a communication channel (in both directions), rather than a revolution (Coombs, 2014).

In the second paper, one of the conclusions was that most crisis communication research, specifically experimental research, has focused on the crisis message and the means by which it is disseminated, while the perception of a crisis and the individual factors involved have hardly been looked at. In this study, elements from issues management, crisis management and willingness to act were measured to have an idea of how people perceive a situation, yielding very high values on Cronbach's  $\alpha$ . In the next project, these measures would be integrated in a factorially analysed measurement.

From a theoretical point of view, the third paper provides an original approach to crisis communication research, namely that from within an organisation in the early stages of crisis development, individual members of an organisation have proven to have different perceptions of the situation depending on their professional and personal profiles. An important theoretical contribution is a renewed definition of a crisis, including various issues playing a role in the initial phase of a crisis, and the development of a measure for individual crisis perception. A consensus around the definition of a crisis is needed to offer managers and leaders insight for developing good practices and facing challenges (Roux-Dufort, 2016). The definition in this dissertation might meet this apprehension:

*A crisis starts when a stakeholder sees his expectations of an organisation threatened; this fast-evolving situation on which very little information is available initially, can endanger the organisation's interests, modified by the related communication or the lack of it; this attracts the attention of other stakeholders and the media, dependent on the responsibility attributed to the organisation by the stakeholders and the success of the organisational communication.*

On the basis of this definition, the crisis perception scale was developed. Further tested in the fourth paper, the crisis perception scale offers a robust tool to bolster the current crisis communication research. The research design turned out to be a novelty in the domain of crisis communication research, although the multi-staged approach is common in crisis management exercises. The crisis perception measurement scale seems to be inextricably bound up with a multi-phased situational analysis, as the construct of time and increasing information becoming available is expressed by the different stages of the scenario. In other words, the scale has to be used in a situation where a possible crisis is building up or during a simulation of those circumstances. More than that, the architecture of the research, intertwining a multi-phased scenario with recurrent measures of perception, can be applied to other domains in which an unfolding simulation or live situation that allows for periodic measure transpire.

By way of synthesis, Figure 6 shows how during the time between an event and the perception of a crisis (Coombs, 2014), a crisis builds up through stages of issue development (Bridges, 2004). In the model there are four stages (including the event as a zero-measure), as in the crisis perception measure in this dissertation. The model illustrates how possible reputation damage increases with time, because the chances that stakeholders perceive a crisis increase as well. Simultaneously, the time that an organisation has to take action, decreases with time. An organisation would therefore want to perceive the impending crisis first and take subsequent and appropriate action, so that the situation might cool down and a crisis would be averted. The research in this dissertation has shown that organisation members with a specific profile in education, organisational

function, crisis experience, and cultural variance, and other individual factors, have a better chance of perceiving a crisis first.

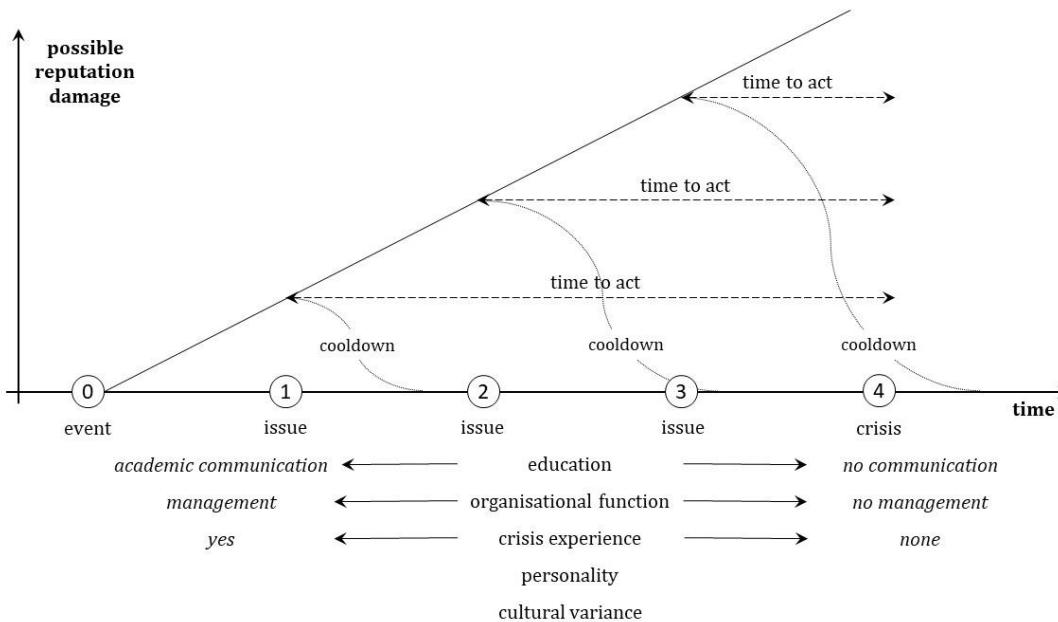


Figure 6: Issue-driven crisis build-up model with human factors influencing crisis perception

## Future research

In the first paper, most of the counterintuitive effects that we encountered include a surprise effect and emotions, mechanisms that we associate with social psychology and interpersonal communication, implying that more interdisciplinary research may be the way to progress in the domain of crisis communication through social media. Recent reference works include more interdisciplinary research (e.g. Austin and Jin, 2017; Schwarz et al., 2016), but even those authors stress the need for further research, as the domain of social media evolves at dizzying speed. Nevertheless, the results from the first paper show interesting and often counterintuitive effects that still need to be tackled and corroborated in future studies.

As the studies focused on people’s perception before a crisis strikes, crisis communication strategies have not been researched further after the first paper. Emotion or empathy is a strong content element in crisis communication, a factor that was kept constant in the first paper. In the primary process of the second

project, the factor of emotion and empathy was still under consideration for further research, but the shift in focus made it redundant. Since then, others have researched the subject of empathy and emotions in crisis situations (e.g. Myers, 2016; Jin, Fraustino, and Liu, 2016), but Jamal and Abu Bakar (2017) carry the discussion on empathy in crisis communication over to the domain of charismatic leadership, in which charisma is the result of excellent communication and interpersonal skills, and these skills can be learned and developed. This view on crisis communication paves the way for more training-driven research.

Research in the third paper showed that there has to be a significant difference between a communication degree and additional training. This difference needs to be studied so that organisations can benefit from more effective training programmes.

The conclusions presented in this dissertation are valid for one type of organisation, non-profit, and more particular governmental agencies. It is an advantage to work within a homogeneous environment, but the results may be difficult to generalise. Having recruited the subjects for the experiments mainly from non-profit organisations, except for the second project, could ask for more research on for-profit organisations. Liu, Horsley and Levenshus (2010) made a comparison but found no significant differences between profit and non-profit organisations in diversity of publics, opportunities for professional development, participation in organizational leadership, or management support for communication. The sample from the third paper is very robust, however, and quantitatively, the results are large enough to allow more general conclusions. Benchmarking with other types of organisation could support the crisis perception model and the findings. It could be assumed that the results may be generalised, but further research seems to urge itself.

Though the correlations between crisis perception and a selection of personality indicators proved weak and were not significant for all the indicators, they were sufficient to assume that other personality indicators could play a role in crisis

perception. The profile elements of hierarchical function and leadership showed weak correlations with nearly all the personality indicators. In future research, investigating these aspects of hierarchy, leadership, and personality in the framework of crisis management, could be considered. Jaques (2014), for instance, calls attention to issue and crisis management in the broader context of executive capabilities and the importance of leadership in managing risks, issues, and crises. The individual profile factors in the studies were chosen based on previous research, but the conclusion that personal profiles do have an influence on crisis perception indicates that the list of personality traits that may add to that effect may need to be extended, for example by applying measures of leadership style (e.g. Boin, Hart, McConnell, & Preston, 2010) and Myers-Briggs Type Indicator scores (e.g. Gardner & Martinko, 1996).

Finally, the cultural variance in Belgium is certainly not a domain that has been researched thoroughly, and in my research, I did not make it the centre of attention. Studies three and four may, nonetheless, contribute and give direction to future studies on the cultural factor of crisis and risk perception.

## Final considerations

This dissertation was the result of nearly six years of research and four well-defined projects, one project logically deriving from the other. In the structure of this dissertation, I demonstrated this logical makeup by associating it with a typical scientific research paper structure, from exploring, over defining, analysing, and determining, to concluding. Considering the research gaps defined in the beginning, this dissertation contributes to the insight into processes taking place during the initial stage of an emerging crisis, with a focus on crisis perception in order to prevent a crisis from breaking out. The attention was mainly directed to non-profit and government organisations, and, although the role of social media in crisis communication was not exhaustively researched, my literature study and test results provided a frame to put it into perspective as a rapidly evolved channel of communication rather than a new factor in crisis



communication or perception. As an answer to the general research question formulated in the introduction,

*is there a difference in how people perceive a crisis from within their own organisation during a pre-crisis phase?*

the answer is yes, there is. There is a difference in perception, influenced by:

- ∅ the source of the crisis information (the dean of a university or the communication department), the kind of information (instructing or adapting) and the social media platform on which it was sent (Twitter or Facebook)
- ∅ a person's function within the organisation (management has a better crisis perception than people in a communication function)
- ∅ someone's study background (internal stakeholders who have an academic degree have a better perception than those who do not, and those with a communication-related degree have a better perception than those with another degree), position within the hierarchy (management level has a better perception than other levels) and crisis training and experience (training or real life experience in crises leads to a better perception)
- ∅ the cultural language group someone belongs to (French speaking respondents had a better perception than Dutch speaking)
- ∅ typical personality indicators such as organisational commitment (higher commitment is correlated to better perception), risk behaviour (more risk taking is correlated to better perception) and regulatory focus (promotion focus is correlated to higher crisis perception).

This research might be regarded as an impetus to the deeper individual differences within an organisation. In the last research we have looked at personality indicators possibly providing an explanation for variance in crisis perception, but there are many other individual factors, which might, in turn, influence or be influenced by a person's position in an organisation and his or her study background. Additionally, why does an academic degree, and specifically one in a communication related domain, cause variance in crisis

perception, and a communication course not? These are questions that remain open at the end of this dissertation, the answers to which may be of use in recruiting and forming crisis management teams and in other strategically crucial decisions in any organisation.

## References

### *References (co-)authored by the PhD candidate*

Marynissen, H., Ladkin, D., Denyer, D., Snoeijers, E., & Van Achte, T. (2013). The role of individual risk perception in an organization managing high risks. *Conference paper for the Third Annual International Conference on Engaged Management Scholarship, 19-22 September, Atlanta, Georgia.*

Snoeijers, E. M., Poels, K., & Nicolay, C. (2014). # universitycrisis: The impact of social media type, source, and information on student responses toward a university crisis. *Social Science Computer Review, 32(5)*, 647-661.

Snoeijers, Erik M. (2015). Crisis perception from within an organisation following a social media crisis message. *Paper presented at the 65<sup>th</sup> International Communication Association Annual Conference, 21-25 May, San Juan, Puerto Rico. Under review for Journal of Contingencies and Crisis Management.*

Snoeijers, Erik M. (2016). Factors That Influence Crisis Perception from an Internal Stakeholder's Point of View. *Paper presented at the 66th International Communication Association Annual Conference, 9-13 June, Fukuoka, Japan.*

Snoeijers, Erik M. (2016). Factors That Influence Crisis Perception from an Internal Stakeholder's Point of View: Work in Progress. *Paper presented at the 6th European Communication Conference, ECREA 9-12 November, Prague, Czech Republic.*

Snoeijers, Erik M. (2017). A crisis perception exercise: the influence of employees on situational awareness and analysis in a pre-crisis phase. *Paper presented at the 67<sup>th</sup> International Communication Association Annual Conference, 25-29 May, San Diego, CA.*

Snoeijers, E. M., & Poels, K. (2017). Factors that influence organisational crisis perception from an internal stakeholder's point of view. *Public Relations Review, 44*, 65-74.

Snoeiijers, Erik M. (2018). A crisis communication exercise simulation: individual profiles having an influence on organisational crisis perception. *Paper discussed at the International Communication Association 68th Annual Conference, 24-28 May 2018, Prague, CZ.*

### *Other references*

Adams, D. (1979). *The Hitchhiker's Guide to the Galaxy*. London: Serious Productions Ltd.

Aertsen, T., Jaspaert, K., & Van Gorp, B. (2013). From Theory to Practice A Crisis Simulation Exercise. *Business Communication Quarterly*, 76(3), 322-338.

Ahluwalia, R., Burnkrant, R. E., & Unnava, H. R. (2000). Consumer response to negative publicity: The moderating role of commitment. *Journal of Marketing Research*, 37, 203-214.

Arpan, L. M., & Roskos-Ewoldsen, D. R. (2005). Stealing thunder: Analysis of the effects of proactive disclosure of crisis information. *Public Relations Review*, 31, 425-433.

Asproth, V., Borglund, E., & Öberg, L. M. (2013). Training exercises for crisis management training in intra-organizational settings. In *Proceedings of the 10th International Conference on Information Systems for Crisis Response and Management, ISCRAM*, 105-109. KIT Publishers.

Austin, L., & Jin, Y. (Eds.). (2017). *Social Media and Crisis Communication*. New York: Routledge.

Austin, L., Fisher Liu, B., & Jin, Y. (2012). How audiences seek out crisis information: Exploring the social-mediated crisis communication model. *Journal of Applied Communication Research*, 40(2), 188-207.

Barr, P. S., & Huff, A. S. (1997). Seeing isn't Believing: Understanding Diversity in the Timing of Strategic Response. *Journal of Management Studies*, 34, 337-370.

Baxter, A. D., Boet, S., Reid, D., & Skidmore, G. (2014). The aging anesthesiologist: a narrative review and suggested strategies. *Canadian Journal of Anesthesia/Journal canadien d'anesthésie*, *61*(9), 865-875.

Benabou, R. (2013). Groupthink: Collective Delusions in Organizations and Markets. *Review of Economic Studies*, *80*, 429-462.

Benoit, W. (1997). Image Repair Discourse and Crisis Communication. *Public Relations Review*, *23*, 177-186.

Bertolo, B. (2017). De strategische merkcommunicatie van Defensie: Case-study OVG. *Thesis 42nd session Candidate Senior Officer's Course extra-muros, supervised by E. M. Snoeijers*. Brussels: Defence College.

Billings, R. S., Milburn, T. W., & Schaalman, M. L. (1980). A Model of Crisis Perception - A Theoretical and Empirical Analysis. *Administrative Science Quarterly*, *25*, 300-316.

Block, J. (2010). The five-factor framing of personality and beyond: Some ruminations. *Psychological Inquiry*, *21*(1), 2-25.

Boin, A., Hart, P. T., McConnell, A., & Preston, T. (2010). Leadership style, crisis response and blame management: The case of Hurricane Katrina. *Public Administration*, *88*(3), 706–723.

Borodzicz, E. P. (2004). The missing ingredient is the value of flexibility. *Simulation & Gaming*, *35*(3), 414-426.

Bridges, J. A. (2004). Corporate issues campaigns: Six theoretical approaches. *Communication Theory*, *14*(1), 51-77.

Brockner, J., & James, E. H. (2008). Toward an understanding of when executives see crisis as opportunity. *The Journal of Applied Behavioral Science*, *44*(1), 94-115.

Bryant, P., & Dunford, R. (2008). The influence of regulatory focus on risky decision-making. *Applied Psychology*, *57*(2), 335-359.

Budden, C. B., & Budden, M. C. (2010). Developing crisis management skills through a realistic case scenario. *Journal of Business Case Studies*, 6(6), 131.

Cancel, A. E., Cameron, G. T., Sallot, L. M., & Mitrook, M. A. (1997). It depends: A contingency theory of accommodation in public relations. *Journal of Public Relations Research*, 9(1), 31-63.

Claeys, A.-S., & Cauberghe, V. (2012). Crisis response and crisis timing strategies, two sides of the same coin. *Public Relations Review*, 38, 83-88.

Clarke, C. E., & Chess, C. (2006). False alarms, real challenges - One university's communication response to the 2001 anthrax crisis. *Biodefense Strategy, Practice, and Science*, 4 (1), 74-83.

Collier, J., & Esteban, R. (2007). Corporate social responsibility and employee commitment. *Business ethics: A European review*, 16(1), 19-33.

Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, Trustworthiness, and Trust Propensity: A Meta-Analytic Test of Their Unique Relationships With Risk Taking and Job Performance. *Journal of Applied Psychology*, 92(4), 909-927.

Coombs, W. T. (2001). Teaching the crisis management/communication course. *Public Relations Review*, 27, 89-101.

Coombs, W. T. (2004). Impact of past crises on current crisis communication: Insights from Situational Crisis Communication Theory. *Journal of Business Communications*, 41, 265–289.

Coombs, W. T. (2007). *Ongoing crisis communication: Planning, managing and responding*. Thousand Oaks, CA: Sage.

Coombs, W. T. (2007b). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review*, 10, 163–176.

Coombs, W. T. (2008). Crisis communication and social media. Retrieved 11 April 2014 from <http://www.instituteforpr.org/topics/crisis-communication-and-social-media/>.

Coombs, W. T. (2010a). Parameters for crisis communication. In W. T. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 17-53). West Sussex, United Kingdom: Wiley-Blackwell.

Coombs, W. T. (2010b). Crisis communication and its allied fields. In W. T. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 54-64). West Sussex, United Kingdom: Wiley-Blackwell.

Coombs, W. T. (2010c). Pursuing evidence-based crisis communication. In W. T. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 301-318). West Sussex, United Kingdom: Wiley-Blackwell.

Coombs, W. T. (2014). *Ongoing Crisis Communication: Planning, Managing, and Responding*. Thousand Oaks, CA: Sage.

Coombs, W. T., & Holladay, S. J. (2005). An exploratory study of stakeholder emotions: Affect and crises. *Research on emotion in organizations*, 1, 263-280.

Coombs, W. T., & Holladay, S. J. (2009). Further explorations of post-crisis communication: Effects of media and response strategies on perceptions and intentions. *Public Relations Review*, 35, 1-6.

Coombs, W. T., & Holladay, S. J. (2012). The paracrisis: The challenges created by publicly managing crisis prevention. *Public Relations Review*, 38(3), 408-415.

Coombs, W. T., & Holladay, S. J. (2012b). Amazon.com's Orwellian nightmare: Exploring apology in an online environment. *Journal of Communication Management*, 16 (3), 280-295.

Cornelissen, J. P. (2014). *Corporate communication. A Guide to Theory & Practice*. London, UK: Sage Publications.

Dabner, N. (2012). 'Breaking Ground' in the use of social media: A case study of a university earthquake response to inform educational design with Facebook. *Internet and Higher Education, 15*, 69-78.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used? *International Journal of Market Research, 50*, 61-77.

de Villa M., Rajwani T. (2013). The mirror trap. Do managerial perceptions influence organizational responses to crises? *Academia-Revista Latinoamericana de Administración, 26*, 170-188.

DeVellis, R. F. (2016). *Scale development: Theory and applications* (Vol. 26). Thousand Oaks, CA: Sage.

Dewett, T., & Denisi, A. S. (2007). What motivates organizational citizenship behaviours? Exploring the role of regulatory focus theory. *European Journal of Work and Organizational Psychology, 16*(3), 241-260.

Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., & Wagner, G. G. (2011). Individual risk attitudes: Measurement, determinants, and behavioral consequences. *Journal of the European Economic Association, 9*(3), 522-550.

Donnellon, A., Gray, B., & Bougon, M. G. (1986). Communication, meaning, and organized action. *Administrative Science Quarterly, 31*, 43-55.

Dutton, J. E., & Ashford, S. J. (1993). Selling issues to top management. *Academy of management review, 18*(3), 397-428.

Erdheim, J., Wang, M., & Zickar, M. J. (2006). Linking the Big Five personality constructs to organizational commitment. *Personality and Individual Differences, 41*(5), 959-970.

Falkheimer, J., & Heide, M. (2006). Multicultural crisis communication: Towards a social constructionist perspective. *Journal of contingencies and crisis management, 14*(4), 180-189.



Fearn-Banks, K. (2016). *Crisis communications: A casebook approach*. Oxford, UK: Routledge.

Fediuk, T. A., Coombs, W. T., Botero, I. C. (2010). Exploring crisis from a receiver perspective: Understanding stakeholder reactions during crisis events. In T. W. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 301-318). West Sussex, United Kingdom: Wiley-Blackwell.

Field, A. (2009). *Discovering statistics using SPSS*. Thousand Oaks, CA: Sage publications.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Thousand Oaks, CA: Sage.

Field, A., & Hole, G. (2002). *How to design and report experiments*. Thousand Oaks, CA: Sage.

Fink, S. (1986). *Crisis management: Planning for the inevitable*. New York: American Management Association.

Fombrun, C. (1996). *Reputation: Realizing value from the corporate image*. Boston, MA: Harvard Business School Press.

Fowler, K. L., Kling, N. D., & Larson, M. D. (2007). Organizational preparedness for coping with a major crisis or disaster. *Business & Society*, 46(1), 88-103.

Frandsen, F., & Johansen, W. (2017). *Organizational Crisis Communication*. Thousand Oaks, CA: Sage.

Freberg, K. (2012). Intention to comply with crisis messages communicated via social media. *Public Relations Review*, 38, 416-421.

Freberg, K., Graham, K., McGaughey, K., Freberg, L. A. (2011). Who are the social media influencers? A study of public perceptions of personality. *Public Relations Review*, 37, 90-92.

Freberg, K., Palenchar, M. J., & Veil, S. R. (2013). Managing and sharing H1N1 crisis information using social media bookmarking services. *Public Relations Review, 39*, 178-184.

Gainey, B. S. (2010). Educational crisis management practices tentatively embrace the new media. In T. W. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 301-318). West Sussex, United Kingdom: Wiley-Blackwell.

Gardner, W. L., & Martinko, M. J. (1996). Using the Myers-Briggs Type Indicator to study managers: A literature review and research agenda. *Journal of Management, 22*(1), 45–83.

Gino, F., & Margolis, J. D. (2011). Bringing ethics into focus: How regulatory focus and risk preferences influence (un) ethical behavior. *Organizational Behavior and Human Decision Processes, 115*(2), 145-156.

Goodman, M. B. (2017). Communicating Strategic Change: The Continuum of Reputation, Issues Management, and Crisis Management Is Built on a Positive Corporate Culture. In Austin, L., & Jin, Y. (Eds.). *Social Media and Crisis Communication*, 41. New York: Routledge.

Gonzalez-Herrero, A., & Pratt, C. B. (1995). How to manage a crisis before-or whenever-it hits. *Public Relations Quarterly, 40*(1), 25.

Gonzalez-Herrero, A., & Smith, S. (2008). Crisis communications management on the web: how internet-based technologies are changing the way public relations professionals handle business crises. *Journal of Contingencies and Crisis Management, 16*(3), 143-153.

Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in personality, 37*(6), 504-528.

Grunig, J. E. (2013). *Excellence in public relations and communication management*. Oxford, UK: Routledge.

Grunig, J. E., & Grunig, L. A. (2000). Public relations in strategic management and strategic management of public relations: Theory and evidence from the IABC Excellence project. *Journalism Studies*, 1(2), 303-321.

Grunig, J. E., & Hunt, T. (1984). *Managing public relations*. San Diego, CA: Harcourt Brace Jovanovich.

Guth, D. W. (1995). Organizational crisis experience and public relations roles. *Public Relations Review*, 21(2), 123-136.

Hainsworth, B. E. (1990). The distribution of advantages and disadvantages. *Public Relations Review*, 16(1), 33-39.

Harlow, W. F., Brantley, B. C., & Harlow, R. M. (2011). BP initial image repair strategies after the Deepwater Horizon spill. *Public Relations Review*, 37(1), 80-83.

Hearit, K. M. (1995). “Mistakes were made”: Organizations, apologia, and crises of social legitimacy. *Communication Studies*, 46(1-2), 1-17.

Hearit, K. M. (2004). Corporate apologia: When an organization speaks in defense of itself. In Heath, R. L. (Ed.). *The SAGE handbook of public relations*. Sage: Thousand Oaks, CA, 501-512.

Hearit, K. M., & Courtright, J. L. (2003). A social constructionist approach to crisis management: Allegations of sudden acceleration in the Audi 5000. *Communication Studies*, 54(1), 79-95.

Heath, R. (2006). Best practices in crisis communication: Evolution of practice through research. *Journal of Applied Communication Research*, 34 (3), 245-248.

Heath, R. L., & Palenchar, M. J. (2008). *Strategic issues management: Organizations and public policy challenges*. Thousand Oaks: Sage Publications.

Heide, M., & Simonsson, C. (2014). Developing internal crisis communication: New roles and practices of communication professionals. *Corporate Communications: An International Journal*, 19(2), 128-146.

Helsloot, I., & Groenendaal, J. (2013). Twitter: An Underutilized Potential during Sudden Crises? *Journal of Contingencies and Crisis Management*, *21*, 178-183.

Hermann, C. F. (1963). Some Consequences of Crisis Which Limit the Viability of Organizations. *Administrative Science Quarterly*, *8*, 61-82.

Hermida, A., Fletcher, F., Korell, D., & Logan, D. (2012). Share, Like, Recommend. Decoding the social media news consumer. *Journalism Studies*, *13*, 815-824.

Higgins, E. T., Friedman, R. S., Harlow, R. E., Idson, L. C., Ayduk, O. N., & Taylor, A. (2001). Achievement orientations from subjective histories of success: Promotion pride versus prevention pride. *European Journal of Social Psychology*, *31*(1), 3-23.

Hindmoor, A., & McConnell, A. (2013). Why Didn't They See it Coming? Warning, Signs, Acceptable Risks and the Global Financial Crisis. *Political Studies*, *61*, 543.

Hofstede, G. (1983). National cultures in four dimensions: A research-based theory of cultural differences among nations. *International Studies of Management & Organization*, *13*(1-2), 46-74.

Hofstede, G. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5). sage.

Hofstede, G. (2003). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage publications.

Hofstede, G., & McCrae, R. R. (2004). Personality and culture revisited: Linking traits and dimensions of culture. *Cross-cultural research*, *38*(1), 52-88.

Horsley, J. S., & Barker, R. T. (2002). Toward a synthesis model for crisis communication in the public sector: An initial investigation. *Journal of Business and Technical Communication*, *16*(4), 406-440.

- Hutcheson, G. D., & Sofroniou, N. (1999). *The multivariate social scientist: Introductory statistics using generalized linear models*. Sage.
- Hutchins, H. M., & Wang, J. (2008). Organizational crisis management and human resource development: A review of the literature and implications to HRD research and practice. *Advances in Developing Human Resources*, 10(3), 310-330.
- Imran, M., Meier, P., & Boersma, K. (2017). The use of social media for crisis management. In Boersma, K., & Fonio, C. (Eds.). *Big data, surveillance and crisis management*. New York: Routledge.
- Jackson, S. E., & Dutton, J. E. (1988). Discerning Threats and Opportunities. *Administrative Science Quarterly*, 33, 370-387.
- Jamal, J., & Abu Bakar, H. (2017). The mediating role of charismatic leadership communication in a crisis: A Malaysian example. *International Journal of Business Communication*, 54(4), 369-393.
- James, E. H., Wooten, L. P., & Dushek, K. (2011). Crisis management: Informing a new leadership research agenda. *The Academy of Management Annals*, 5, 455-493.
- Jaques, T. (2010). Embedding issues management as a strategic element of crisis prevention. *Disaster Prevention and Management: An International Journal*, 19(4), 469-482.
- Jaques, T. (2014). *Issues and crisis management: Exploring issues, crises, risk and reputation*. Victoria, Australia: Oxford University Press.
- Jin, Y., & Cameron, G. (2007). The effects of threat type and duration on public relations practitioner's cognitive, affective, and conative responses in crisis situations. *Journal of Public Relations Research*, 19, 255–281.
- Jin, Y., Fraustino, J. D., & Liu, B. F. (2016). The scared, the outraged, and the anxious: How crisis emotions, involvement, and demographics predict publics'

conative coping. *International Journal of Strategic Communication*, 10(4), 289-308.

Jin, Y., Liu, B. F., Austin, L. L. (2011). Examining the role of social media in effective crisis management: The effects of crisis origin, information form, and source on publics' crisis responses. *Communication Research*. doi: 10.1177/0093650211423918

Jin, Y., Liu, B. F., Austin, L. L. (2014). Examining the role of social media in effective crisis management: The effects of crisis origin, information form, and source on publics' crisis responses. *Communication Research*, 41, 74-94.

Johansen, W., Aggerholm, H. K., & Frandsen, F. (2012). Entering new territory: A study of internal crisis management and crisis communication in organizations. *Public Relations Review*, 38(2), 270-279.

Kahneman, D. (2011). *Thinking. Fast and Slow*. New York: Farrar, Straus and Giroux.

Kaplan, A.M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53, 59-68.

Kaplan, A.M., & Haenlein, M. (2011). Two hearts in three-quarter time: How to waltz the social media/viral marketing dance. *Business Horizons*, 54, 253-263.

Kavanaugh, A. L., Fox, E. A., Sheetz, S. D., Yang, S., Li, L. T., Shoemaker, D. J., & Xie, L. (2012). Social media use by government: From the routine to the critical. *Government Information Quarterly*, 29, 480-491.

Keown-McMullan, C. (1997). Crisis: when does a molehill become a mountain? *Disaster Prevention and Management: An International Journal*, 6(1), 4-10.

Kerkhof, P., Beugels, D., Utz, S., Beukeboom, C. J. (2011-05-25). Crisis PR in Social Media: An Experimental Study of the Effects of Organizational Crisis Responses on Facebook. *Paper presented at the annual meeting of the*

*International Communication Association, TBA, Boston, MA.* Retrieved 2013-07-22 from [http://citation.allacademic.com/meta/p491855\\_index.html](http://citation.allacademic.com/meta/p491855_index.html)

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

Kouzes, A. (2008). Crisis management in crisis?. *Administrative Theory & Praxis*, 30(2), 155-183.

Lachlan, K. A., Spence, P. R., Lin, X., Najarian, K., & Del Greco, M. (2016). Social media and crisis management: CERC, search strategies, and Twitter content. *Computers in Human Behavior*, 54, 647-652.

Lagadee, P. (1997). Learning processes for crisis management in complex organizations. *Journal of Contingencies and Crisis management*, 5(1), 24-31.

Lanaj, K., Chang, C. H., & Johnson, R. E. (2012). Regulatory focus and work-related outcomes: a review and meta-analysis.

Larsson, A. O., & Ågerfalk, P. (2013). Snowing, freezing...tweeting? Organizational Twitter use during crisis. *First Monday*, 18, 9.

Ledford, C. J. (2012). Changing channels: a theory-based guide to selecting traditional, new, and social media in strategic social marketing. *Social marketing quarterly*, 18(3), 175-186.

Lee, J., Woeste, J. H., Heath, R. L. (2007). Getting ready for crises: Strategic excellence. *Public Relations Review*, 33, 334-336.

Lim, J. S. (2017). How a paracrisis situation is instigated by an online firestorm and visual mockery: Testing a paracrisis development model. *Computers in Human Behavior*, 67, 252-263.

Liu, B. F., & Fraustino, J. D. (2014). Beyond image repair: Suggestions for crisis communication theory development. *Public Relations Review*, 40, 543-546.

Liu, B. F., & Kim, S. (2011). How organizations framed the 2009 H1N1 pandemic via social and traditional media: Implications for U.S. health communicators. *Public Relations Review*, *37*, 233-244.

Liu, B. F., Horsley, J. S., & Levenshus, A. B. (2010). Government and corporate communication practices: do the differences matter?. *Journal of Applied Communication Research*, *38*(2), 189-213.

Liu, B. F., Jin, Y., & Austin, L. L. (2013). The tendency to tell: Understanding publics' communicative responses to crisis information form and source. *Journal of Public Relations Research*, *25*(1), 51-67.

Lockwood, N. R., & SPHR, G. (2005). Crisis management in today's business environment. *SHRM Research Quarterly*, *4*, 1-9.

Luoma-aho, V., Tirkkonen, P., & Vos, M. (2013). Monitoring the issue arenas of the swine-flu discussion. *Journal of Communication Management*, *17*(3), 239-251.

Macedo, I. M., & Pinho, J. C. (2006). The relationship between resource dependence and market orientation: The specific case of non-profit organisations. *European Journal of Marketing*, *40*, 533-553.

Mainardes, E. W., Alves, H., Raposo, M. (2010). An exploratory research on the stakeholders of a university. *Journal of Management and Strategy*, *1*, 76-88.

Mair, V. H. (2010). danger + opportunity ≠ crisis. How a misunderstanding about Chinese characters has led many astray. Essay afkomstig van [www.pinyin.info](http://www.pinyin.info) op 11 januari 2016.

Maresh-Fuehrer, M. M., & Smith, R. (2016). Social media mapping innovations for crisis prevention, response, and evaluation. *Computers in Human Behavior*, *54*, 620-629.

Marra, F. J. (1999). Crisis communication plans: Poor predictors of excellent crisis public relations. *Public Relations Review*, *24*(4), 461-474.



- Marynissen, H., Ladkin, D., Denyer, D., Snoeijers, E., Van Achte, T. (2013). The Role of Individual Risk Perception in an Organization Managing High Risks. *Third Annual International Conference on Engaged Management Scholarship, Atlanta, Georgia.*
- Marynissen, H., Pieters, S., Van Dorpe, S., van het Erve, A.-M., & Vergeer, F. (2010). *Geen commentaar! Communicatie in turbulente tijden.* Business Contact.
- McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of personality and social psychology, 52*(1), 81.
- Mertens, P. (2014). Extra overheidsondersteuning voor crisiscommunicatie. *Ad Rem Tijdschrift voor zakelijke communicatie, 28*(2), 3-5.
- Minkov, M., & Hofstede, G. (2014). Clustering of 316 European regions on measures of values: do Europe's countries have national cultures?. *Cross-Cultural Research, 48*(2), 144-176.
- Mishra, A. K. (1996). Organizational responses to crisis: The centrality of trust. In: Kramer, R. M., & Tyler, T. (eds.). *Trust In Organizations*, 261-287. Thousand Oaks, CA: Sage.
- Mitroff, I. I. (1988). Crisis management: cutting through the confusion. *Sloan Management Review, 29*, 15-20.
- Mitroff, I. I. (2001). *Managing crises before they happen: what every executive and manager needs to know about crisis management.* New York: AMACOM, American Management Association.
- Mitroff, I. I., Shrivastava, P., & Udwadia, F. E. (1987). Effective crisis management. *The Academy of Management Executive, 1*, 283-292.
- Molleda, J. C. (2009). Global public relations. *IPR (Institute for Public Relations) Essential Knowledge Project.*

Moon, B. B., & Rhee, Y. (2012). Message strategies and forgiveness during crises: Effects of causal attributions and apology appeal types on forgiveness.

*Journalism & Mass Communication Quarterly*, 89 (4), 677-694.

Moreno, A., Navarro, C., Tench, R., & Zerfass, A. (2015). Does social media usage matter? An analysis of online practices and digital media perceptions of communication practitioners in Europe. *Public Relations Review*, 41, 242-253.

Moreno, Á., Zerfass, A., Tench, R., Verčič, D., & Verhoeven, P. (2009). European Communication Monitor: Current developments, issues and tendencies of the professional practice of public relations in Europe. *Public Relations Review*, 35(1), 79-82.

Morreale, S. P., & Pearson, J. C. (2008). Why communication education is important: The centrality of the discipline in the 21st century. *Communication Education*, 57(2), 224-240.

Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of vocational behavior*, 14(2), 224-247.

Muralidharan, S., Rasmussen, L., Patterson, D., & Shin, J. H. (2011). Hope for Haiti: An analysis of Facebook and Twitter usage during the earthquake relief efforts. *Public Relations Review*, 37(2), 175-177.

Myers, C. (2016). Apology, sympathy, and empathy: The legal ramifications of admitting fault in US public relations practice. *Public Relations Review*, 42(1), 176-183.

Nicholson, N., Soane, E., Fenton-O'Creevy, M., & Willman, P. (2005). Personality and domain-specific risk taking. *Journal of Risk Research*, 8(2), 157-176.

Orr, J. E. (1996). *Talking about machines: An ethnography of a modern job*. ILR Press / Cornell University Press.

- Pace, S., Balboni, B., & Gistri, G. (2017). The effects of social media on brand attitude and WOM during a brand crisis: Evidences from the Barilla case. *Journal of marketing communications*, 23(2), 135-148.
- Palen, L., Vieweg, S., Liu S. B., Hughes, A. L. (2009). Crisis in a networked world: Features of computer-mediated communication in the April 16, 2007, Virginia Tech event. *Social Science Computer Review*, 27 (4), 467-480.
- Palenchar, M. J. (2010). Risk communication. In Heath, R. L. (Ed.). *The SAGE handbook of public relations*. Sage: Thousand Oaks, CA, 447-460.
- Paraskevas, A., & Altinay, L. (2013). Signal detection as the first line of defence in tourism crisis management. *Tourism Management*, 34, 158-171.
- Palttala, P., & Vos, M. (2012). Quality indicators for crisis communication to support emergency management by public authorities. *Journal of Contingencies and Crisis Management*, 20(1), 39-51.
- Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management. *Academy of management review*, 23, 59-76.
- Pempek, T. A., Yermolayeva, Y. A., Calvert, S. L. (2009). College students' social networking experiences on Facebook. *Journal of Applied Developmental Psychology*, 30, 227-238.
- Penrose, J. M. (2000). The role of perception in crisis planning. *Public Relations Review*, 26(2), 155-171.
- Perry, R. W. (2018). Defining Disaster: An Evolving Concept. In Rodriguez, H., Donner, W., & Trainor, J. E.. *Handbook of disaster research* (pp. 3-22). Springer, New York, NY.
- Peters, R. G., Covello, V. T., McCallum, D. B. (1997). The determinants of trust and credibility in environmental risk communication: An empirical study. *Risk Analysis*, 17, 43-54.

Pfeffer, J., Zorbach, T., & Carley, K. M. (2014). Understanding online firestorms: Negative word-of-mouth dynamics in social media networks. *Journal of Marketing Communications*, 20(1-2), 117-128.

Pieters, S., & Eeckman, E. (2015). Crisiscommunicatie. In: Eeckman, E., & Van San, P.. *Communicatie Troef. Doeltreffende communicatie in en door zorgorganisaties*. Lannoo Campus.

Pornpitakpan, C. (2004). The persuasiveness of source credibility: A critical review of five decades' evidence. *Journal of applied social psychology*, 34(2), 243-281.

Qualman, E. (2012). *Socialnomics: How social media transforms the way we live and do business* (2nd ed.). Hoboken, NJ: Wiley.

Regester, M., & Larkin, J. (2008). *Risk issues and crisis management in public relations: A casebook of best practice*. London: Kogan Page Publishers.

Reilly, A. H. (2008). The role of human resource development competencies in facilitating effective crisis communication. *Advances in Developing Human Resources*, 10(3), 331-351.

Reuter, C., Hughes, A. L., & Kaufhold, M. A. (2018). Social Media in Crisis Management: An Evaluation and Analysis of Crisis Informatics Research. *International Journal of Human-Computer Interaction*, 1-15.

Reynolds, B., & Seeger, W. (2005). Crisis and emergency risk communication as an integrative model. *Journal of health communication*, 10(1), 43-55.

Richardson, B. (1994). Socio-technical disasters: profile and prevalence. *Disaster Prevention and Management: An International Journal*, 3(4), 41-69.

Richardson, J.T.E. (2011). Eta squared and partial eta squared as measurements of effect size in educational research. *Educational Research Review*, 6, 135-147.

Rogers, M. B., & Pearce, J. M. (2016). The Psychology of Crisis Communication. In: Schwarz, A., Seeger, M. W., & Auer, C. (Eds.). *The Handbook of International Crisis Communication Research*. Chichester, UK: Johan Wiley & Sons.

Roh, S. (2017). Examining the paracrisis online: The effects of message source, response strategies and social vigilantism on public responses. *Public Relations Review*, 43(3), 587-596.

Roshan, M., Warren, M., & Carr, R. (2016). Understanding the use of social media by organisations for crisis communication. *Computers in Human Behavior*, 63, 350-361.

Roux-Dufort, C. (2016). Delving into the Roots of Crises. The Genealogy of Surprises. In: Schwarz, A., Seeger, M. W., & Auer, C. (Eds.). *The Handbook of International Crisis Communication Research*. Chichester, UK: Johan Wiley & Sons.

Roux-Dufort, C., & Lalonde, C. (2013). Exploring the theoretical foundations of crisis management. *Journal of Contingencies and Crisis Management*, 21(1), 1-3.

Ryan, S. (1990). Conflict management and conflict resolution. *Terrorism and Political violence*, 2(1), 54-71.

Salfinger, A., Retschitzegger, W., Schwinger, W., & Pröll, B. (2016). Towards a Crowd-Sensing Enhanced Situation Awareness System for Crisis Management. In *Fusion Methodologies in Crisis Management* (pp. 177-211). Springer International Publishing.

Sayegh, L., Anthony, W. P., & Perrewé, P. L. (2004). Managerial decision-making under crisis: The role of emotion in an intuitive decision process. *Human Resource Management Review*, 14(2), 179-199.

Schultz, F., Utz, S., Göritz, A. (2011). Is the medium the message? Perceptions of and reactions to crisis communication via twitter, blogs and traditional media. *Public Relations Review*, 37, 20-27.

Schwarz, A., Seeger, M. W., & Auer, C. (Eds.). (2016). *The Handbook of International Crisis Communication Research*. Hoboken, NJ: John Wiley & Sons.

Seeger, M. W. (2006). Best practices in crisis communication: An expert panel process. *Journal of Applied Communication Research*, 34(3), 232-244.

Seeger, M. W., Sellnow, T. L., & Ulmer, R. R. (2012). Communication, Organization, and Crisis. In Roloff, M. (ed.), *Communication yearbook 21*, 231. Routledge.

Selbst, P. L. (1978). The Containment and Control of Organizational Crises. In Sutherland, J. (Ed.). *Management Handbook for Public Administrators*, pp. 843–896. New York: Van Nostrand Reinhold.

Sellnow, T. L., & Seeger, M. W. (2013). *Theorizing crisis communication*. Foundations of Communication Theory Vol. 4. Oxford, UK: John Wiley & Sons.

Shi, J., Kapucu, N., Zhu, Z., Guo, X., & Haupt, B. (2017). Assessing risk communication in social media for crisis prevention: a social network analysis of microblog. *Journal of homeland security and emergency management*, 14(1).

Sisco, H. F. (2012). Nonprofit in crisis: An examination of the applicability of situational crisis communication theory. *Journal of Public Relations Research*, 24, 1-17.

Slovic, P. E. (2000). *The perception of risk*. London, UK: Earthscan publications.

Slovic, P. E. (2010). *The feeling of risk: New perspectives on risk perception*. London, UK: Earthscan.

Smart, C., & Vertinsky, I. (1977). Designs for crisis decision units. *Administrative science quarterly*, 640-657.

Smart, C., & Vertinsky, I. (1984). Strategy and the environment: A study of corporate responses to crises. *Strategic management journal*, 5(3), 199-213.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of applied psychology*, 68(4), 653.

Smith, T., Coyle, J. R., Lightfoot, E. & Scott, A. (2007). Reconsidering models of influence: The relationship between consumer social networks and word-of-mouth effectiveness. *Journal of Advertising Research*, 47, 387-397.

Spence, P. R., Lachlan, K. A., & Rainear, A. M. (2016). Social media and crisis research: Data collection and directions. *Computers in Human Behavior*, 54, 667-672.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative science quarterly*, 501-524.

Stern, E. (1997). Crisis and learning: A conceptual balance sheet. *Journal of contingencies and crisis management*, 5(2), 69-86.

Strauß, N., & Jonkman, J. (2017). The benefit of issues management: anticipating crises in the digital age. *Journal of Communication Management*, 21(1), 34-50.

Sun, T., & Wu, G. (2012). Traits, predictors, and consequences of Facebook self-presentation. *Social Science Computer Review*, 30, 419-433.

Surgeoner, B. V., Chapman, B. J., Powell, D. A. (2009). University students' hand hygiene practice during a gastrointestinal outbreak in residences: What they say they do and what they actually do. *Journal of Environmental Health*, 72 (2), 24-28.

Taylor, M. (2000). Cultural variance as a challenge to global public relations: A case study of the Coca-Cola scare in Europe. *Public Relations Review*, 26(3), 277-293.

Taylor, M. (2010). Toward a Holistic Organizational Approach to Understanding Crisis. In: Coombs, W. T., & Holladay, S. J. (Eds.). *The Handbook of Crisis Communication*. Oxford: Blackwell Publishing.



Tench, R., Verčič, D., Zerfass, A., Moreno, A., Verhoeven, P., & Jugo, D. (2017). *Communication Excellence: How to Develop, Manage and Lead Exceptional Communications*. Basingstoke, UK: Palgrave Macmillan.

Tench, R., Zerfass, A., Verhoeven, P., Verčič, D., Moreno, A., & Okay, A. (2013). *Competencies and Role Requirements of Communication Professionals in Europe. Insights from quantitative and qualitative studies*. ECOPSI Research Report. Leeds Metropolitan University.

Tjosvold, D. (1984). Effects of Crisis Orientation on Managers' Approach to Controversy in Decision Making. *Academy of Management Journal*, 27, 130-138.

Trollope, A. (1867). *The Last Chronicle of Barset*. London: Smith, Elder and Co..

Turk, J. V., Jin, Y., Stewart, S., Kim, J., Hipple, J. R. (2012). Examining the interplay of an organization's prior reputation, CEO's visibility, and immediate response to a crisis. *Public Relations Review*, 38, 574-583.

Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive psychology*, 5, 207-232.

Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2007). *Effective crisis communication: Moving from crisis to opportunity*. Thousand Oaks, CA: Sage.

Ulmer, R. R., Sellnow, T. L., & Seeger, M. W. (2013). *Effective crisis communication: Moving from crisis to opportunity*. Thousand Oaks, CA: Sage.

Utz, S., Schultz, F., Glocka, S. (2013). Crisis communication online: How medium, crisis type and emotions affected public reactions in the Fukushima Daiichi nuclear disaster. *Public Relations Review*, 39, 40-46.

Valentini, C. (2015). Is using social media “good” for the public relations profession? A critical reflection. *Public Relations Review*, 41(2), 170-177.

Valentini, C., Romenti, S., and Kruckeberg, D. (2017). Handling Crises in Social Media: From Stakeholder Crisis Awareness and Sense-making to Organizational



Crisis Preparedness. In Austin, L., & Jin, Y. (Eds.). *Social Media and Crisis Communication*, 57-67. New York: Routledge.

Van Gorp, B., & Pauwels, L. (2009). De communicatiefunctie in Belgische organisaties. Hoe excellent is deze ingevuld? *Tijdschrift voor Communicatiewetenschap*, 37, 64-77.

Van Riel, C. B., & Fombrun, C. J. (2007). *Essentials of corporate communication: Implementing practices for effective reputation management*. Oxford, UK: Routledge.

Van Tulder, R., & Van Der Zwart, A. (2005). *International business-society management: Linking corporate responsibility and globalization*. Oxford, UK: Routledge.

Van Wijk, C. (2008). *De Media-Explosie. Trends en issues in massacommunicatie*. The Hague, NL: Academic Service.

Varma, T. M. (2011). Crisis communication in higher education: The use of “negotiation” as a strategy to manage crisis. *Public Relations Review*, 37, 373-375.

Veil, S. R., Petrun, E. L., & Roberts, H. A. (2012). Issue management gone awry: When not to respond to an online reputation threat. *Corporate Reputation Review*, 15(4), 319-332.

Vieweg, S., Hughes, A. L., Starbird, K., & Palen, L. (2010). Microblogging during two natural hazards events: what twitter may contribute to situational awareness. In *Proceedings of the SIGCHI conference on human factors in computing systems*, 1079-1088. New York: Association for Computing Machinery.

Voss, M., & Lorenz, D. F. (2016). Sociological Foundations of Crisis Communication. In: Schwarz, A., Seeger, M. W., & Auer, C. (Eds.). *The Handbook of International Crisis Communication Research*. Chichester, UK: Johan Wiley & Sons.

VRM Vlaamse Regulator voor de media (2012). Mediaconcentratie in Vlaanderen. Rapport 2012. D/2012/3241/327. Brussels: Flemish Government.

Wachinger, G., Renn, O., Begg, C., & Kuhlicke, C. (2013). The risk perception paradox—implications for governance and communication of natural hazards. *Risk analysis*, 33(6), 1049-1065.

Walaski, P. (2013). Social Media Powerful Tools for SH&E Professionals. *Professional Safety*, 58, 10.

Walther, J. B., Loh, T., Granka, L. (2005). Let me count the ways - The interchange of verbal and nonverbal cues in computer-mediated and face-to-face affinity. *Journal of Language and Social Psychology*, 24, 36-65.

Wan, S., Koh, R., Ong, A., & Pang, A. (2015). Parody social media accounts: Influence and impact on organizations during crisis. *Public Relations Review*, 41(3), 381-385.

Wang, S. S., & Stefanone, M. A. (2013). Showing off? Human mobility and the interplay of traits, self-disclosure, and Facebook check-ins. *Social Science Computer Review*, 31, 437-457.

Waters, R. D., Burnett, E., Lamm, A., & Lucas, J. (2009). Engaging stakeholders through social networking: How nonprofit organizations are using Facebook. *Public relations review*, 35(2), 102-106.

Watson, H., & Rodrigues, R. (2017). Bringing Privacy into the Fold: Considerations for the Use of Social Media in Crisis Management. *Journal of Contingencies and Crisis Management*.

Weber, E. U., Blais, A. R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of behavioral decision making*, 15(4), 263-290.

Weick, K. E. (1969). *The social psychology of organizing*. Addison-Wesley.

Weick, K. E. (1993). The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38, 628–652.

Weick, K. E. (2005). The experience of theorizing. Sensemaking as topic and resource. In Smith, K. G., Hitt, M. A. (Eds.), *Great minds in management. The process of theory development*, Oxford University Press, Oxford, UK.

Weick, K. E., & Sutcliffe, K. M. (2007). *Managing the unexpected: Resilient performance in an age of uncertainty* (Vol. 8). Hoboken, NJ: John Wiley & Sons.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological review*, 92(4), 548.

Wendling, C., J. Radisch and S. Jacobzone (2013), “The Use of Social Media in Risk and Crisis Communication”, *OECD Working Papers on Public Governance*, No. 25, Geneva, Switzerland: OECD Publishing.

Wertz, E. K., & Kim, S. (2010). Cultural issues in crisis communication: A comparative study of messages chosen by South Korean and US print media. *Journal of Communication Management*, 14(1), 81-94.

Wieland, A., & Handfield, R. B. (2014). The Challenge of Ensuring Human Rights in the End-to-End Supply Chain. *Supply Chain Management Review*.

Williams, D. E., & Olaniran, B. A. (1998). Expanding the crisis planning function: Introducing elements of risk communication to crisis communication practice. *Public Relations Review*, 24(3), 387-400.

Williams, K. D., Bourgeois, M. J., & Croyle, R. T. (1993). The effects of stealing thunder in criminal and civil trials. *Law and Human Behavior*, 17(6), 597.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of management*, 17(3), 601-617.

Yusko, K. P., & Goldstein, H. W. (1997). Selecting and Developing Crisis Leaders Using Competency-Based Simulations. *Journal of Contingencies and Crisis Management*, 5(4), 216-223.

Zaichkowsky, J. L. (1994). The Personal Involvement Inventory – Reduction, Revision and Application to Advertising. *Journal of Advertising*, 23, 59-70.

Zerfass, A., Verčič, D., Verhoeven, P., Moreno, A., & Tench, R. (2015). European Communication Monitor 2015. Creating Communication Value through Listening, Messaging and Measurement. Results of a Survey in 41 Countries. Brussels: EACD/EUPRERA. *Helios Media*.

Zerfass, A., Moreno, Á., Tench, R., Verčič, D., & Verhoeven, P. (2017). European Communication Monitor 2017. How strategic communication deals with the challenges of visualisation, social bots and hypermodernity. Results of a survey in 50 Countries. Brussels: EACD/EUPRERA, Quadriga Media Berlin.

Zhang, B., Marita, V., Veijalainen, J., Wang, S., & Kotkov, D. (2016). The Issue Arena of a Corporate Social Responsibility Crisis–The Volkswagen Case in Twitter. *Studies in Media and Communication*, 4(2), 32-43.

Zhao, D., Wang, F., Wei, J., Liang, L. (2013). Public reaction to information release for crisis discourse by organization: Integration of online comments. *International Journal of Information Management*, 33, 485-495.

## Summary in Dutch

### *Crisiscommunicatie en crisisperceptie in organisaties: menselijke factoren en strategische kansen.*

Communiceren in tijden van crisis, dat vraagt om snelheid, transparantie, empathie en een proactieve houding. De vele voorbeelden van hoe organisaties negatief in het nieuws komen na een incident of een crisis, doen vermoeden dat ze daarmee worstelen, ook grote bedrijven met belangrijke communicatiebudgetten. Veel onderzoek naar crisiscommunicatie legt zich toe op commerciële bedrijven, omdat financiële schade een van de belangrijkste gevolgen is van een slechte aanpak van een crisis. Maar ook voor de overheid is het belangrijk om crises professioneel aan te pakken en dus een goede crisiscommunicatie te voeren, want zij moeten immers verantwoording afleggen bij het publiek en bij de politiek, die uiteindelijk beslissen over de middelen en de opdrachten.

In dit onderzoek heb ik een definitie van crisis samengesteld uit inzichten uit mijn literatuurstudie van crisiscommunicatie: “een crisis begint zich te ontwikkelen wanneer een belanghebbende de perceptie heeft dat een organisatie niet beantwoordt aan zijn of haar verwachtingen. In het begin is er erg weinig informatie over de situatie, wat de beslissing om te communiceren kan verhinderen en de organisatiebelangen in gevaar kan brengen. Een crisis trekt de aandacht van andere belanghebbenden en de media, afhankelijk van de verantwoordelijkheid die de belanghebbenden bij de organisatie leggen en van de communicatie door de organisatie, die de crisis kan vergroten of doen afnemen”.

Een incident wordt pas een crisis wanneer iemand dat als zodanig gaat zien of percipiëren. Door het toepassen van excellente communicatieprincipes, kan een organisatie die crisis zelf opmerken. Dat kan een strategisch voordeel opleveren onder de vorm van meer tijd om informatie te verzamelen en proactief te communiceren. Dit onderzoek naar crisiscommunicatie van organisaties, focust zich op het weinig onderzochte standpunt van de leden van een organisatie

tijdens de fase voorafgaand aan een crisis. De onderzoeksvraag is of het individuele profiel van een lid van een organisatie een invloed heeft op zijn of haar crisisperceptie. Het onderzoek is verdeeld over vier studies waarin bij deelnemers aan een crisissimulatie gepeild wordt naar hun inschatting van de situatie, hun perceptie van de crisis.

De eerste studie van een voedselcrisis in een universiteit, toont aan dat voor non-profitorganisaties dezelfde regels gelden als voor commerciële bedrijven wanneer het gaat over crisiscommunicatie. Ook zij moeten proactief en transparant communiceren, met de gepaste boodschappen. Daarbij speelt het topmanagement van de organisatie duidelijk een sleutelrol als geloofwaardige bron van informatie. Minder duidelijk in de eerste studie zijn de regels bij het gebruik van sociale media tijdens crises, wat kan wijzen op het complexe en vluchtige karakter van die communicatieplatformen.

Uit de tweede studie bij een gemengde populatie van overheidswerknemers en privéwerknemers, waarin ik een schaal heb geïntroduceerd voor het meten van crisisperceptie, kon ik afleiden dat werknemers in een communicatiefunctie én leden van het managementteam een beter crisisperceptie hebben. Maar in tijden van crisis lukt het meestal niet om strategisch belangrijke informatie zoals crisisperceptie binnen een korte tijd tot bij het communicatieteam te krijgen, en het communicatieteam heeft zelden het mandaat om zelfstandig proactief te communiceren. Ook hier bleek sociale media nauwelijks een verschil van betekenis te maken.

In de derde studie bij een grote overheidsorganisatie, heb ik de schaal voor crisisperceptie verfijnd en kon ik bovendien aantonen dat werknemers met een academisch diploma in een communicatiedomein en organisatieleden die een crisisoefening of een echte crisis hebben meegemaakt, naast de bevestiging dat management een crisis wel degelijk beter opmerkt dan anderen in de organisatiehiërarchie. Werknemers in een communicatiefunctie hadden echter geen andere perceptie van een crisissituatie dan hun collega's, wat te wijten kan

zijn aan organisatiecultuur. Deze studie gaf ook een duidelijk cultuurverschil aan in crisisperceptie tussen Nederlands- en Franstaligen.

De vierde studie, eveneens bij overheidsorganisaties, was een bevestiging van eerdere onderzoeksresultaten en een bevestiging van de betrouwbaarheid van de crisisperceptieschaal. Uit die studie bleek ook dat die schaal best geïntegreerd wordt gebruikt in een opbouwend crisisscenario, naar analogie met meer grootschalige crisisoefeningen. Bijkomend heb ik gepeild naar verschillen in persoonlijkheid bij crisisperceptie, en daaruit bleek dat risicogedrag, betrokkenheid bij de organisatie en positieve motivatie een positief verband vertoont met iemands crisisperceptie. Het cultuurverschil uit de derde studie deed zich in de vierde niet voor, waardoor ik over dat aspect geen duidelijke conclusies kan formuleren.

Algemeen kunnen we uit de studies afleiden dat er voor organisaties in een crisissituatie strategische kansen voor het grijpen liggen wanneer ze het belang van communicatie valoriseren door de functie hoger in de hiërarchie op te nemen en er de juiste mensen voor te zoeken. Met de juiste profielen kan een organisatie een dreigende crisis als eerste percipiëren, wat een strategisch voordeel oplevert in tijd om informatie in te winnen en proactief te communiceren, waardoor de organisatie de controle krijgt in het brede gesprek over de crisis, en door proactief en transparant te communiceren winnen aan geloofwaardigheid. Daardoor kan een organisatie een crisis in de kiem smoren voor die reputatieschade kan veroorzaken.