Boundary Spanners and Bystanders

Influencing functional helping behaviour

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Summary

Whenever disaster strikes people tend to help themselves and others to safety. This prosocial behaviour is discussed in both foreign and Dutch literature as 'emergent behaviour' and more specifically helping behaviour of bystanders. The discussion in the literature however lacks a theoretical foundation, explaining this behaviour. The goal of this thesis is to provide a first step towards a theoretical explanation of the witnessed helping behaviour. Additionally, this thesis aims at providing insight into how emergency workers can best make use of the helping behaviour of bystanders. To this end, first, an extensive literature review provides indicators under which circumstances helping behaviour will emerge and how the emergency workers can influence the functionality of that helping behaviour through their interaction with the bystander. Next, these indicators are tested in a comparative case study of four major crises and disasters that occurred in the past decade in The Netherlands: the Turkish Airlines crash near Schiphol in 2009, the Queen's Day attack in Apeldoorn in 2009, the mall shooting in Alphen aan den Rijn in 2011 and finally the train collision near the 'Westerpark' in Amsterdam in 2012. This study is of a qualitative nature and consists of a content analysis of evaluations, research reports and interviews with emergency workers who were on the scene.

Indicators for the emergence of helping behaviour can be found both in sociological and organisational studies. From a sociological view, the *Emergent Norm Theory* (ENT) suggests that in crisis and disaster situations people interact with each other in order to come up with new normative guidelines, since the normal ones are disrupted. It is expected that bystanders with specific knowledge, such as emergency (medical) response training, provide a strong opinion that speeds up the interaction process. As a result, other bystanders start helping sooner and more will contribute to the helping effort. In addition, emergency workers themselves can also provide such a strong opinion by expressing and communicating specific instructions for the bystanders. The *Self-Categorisation Theory* (SCT) argues slightly differently. According to the SCT, bystanders relate to the social identity of fellow helping bystanders or victims and act according its associated norms. If emergency workers point out the salience of the common social identity of victims and bystander, it could lead to an increase in bystander helping. Organisational studies provide additional indicators on how emergency workers can influence the functionality of helping behaviour. Emergency workers are seen as '*boundary spanners*': in crisis and disaster situations they have the ability to change their organisation to meet the newly emerged demands. When such a boundary spanner actively seeks the collaboration with helping bystanders, it will help prevent dysfunctional behaviour such as an unclear overview of the response and interference with the information streams. As a collaborative tool the emergency workers must employ the right mix of hard and soft power in his interaction with the bystanders. In order to get a right balance of hard and soft power there is need for professional discretion. Finally, it is expected that when the emergency workers are prepared for their encounter with helping behaviour they can more easily put it to use.

In all of the four studied cases, bystanders were present with specific knowledge on how to respond in emergency situations. However only in the case of the airplane crash this speeded up the social interaction process with a resulting increase in bystander helping. At the Queen's Day attack there were enough helpers directly on the scene and in the case of the Mall Shooting there was such a great danger that the interaction process was interrupted all together. In the Train Collision case, a common identity was already present, that stimulated the passengers to help each other.

The passengers with emergency medical training in the trains made use of that and kept pointing out the salience of the common identity of fellow passengers. The emergency workers continued this process which increased and prolonged the helping behaviour. Furthermore, the extent of helping behaviour increased due to the communication of specific instructions from the emergency workers on how to help. At the crash site of the airplane they instructed bystanders to go towards the shelters for medical treatment and this speeded up the evacuation of the surrounding of the plane. In the case of the mall shooting and the train collision the emergency workers used clear instructions that led to more helping behaviour.

With regard to boundary spanning activities of emergency workers in the four cases, some difference can be noticed. At the Turkish Airlines crash the emergency workers did not actively pursue collaboration with helping bystanders in the beginning. This resulted in an unclear overview of the response and interference with the information streams because victims were not registered properly. After a while however, the emergency workers collaborated with a few helping bystanders with specific knowledge or resources in a joint coordinated emergency response. This joint coordinated response was also witnessed in the case of the Queen's Day attack. Helping bystanders with emergency medical training formed hybrid teams with responding emergency workers, which resulted in a clear coordinated response. The train collision case also shows an active collaboration with helpers inside of the trains who have specific emergency medical response knowledge. Active collaboration in the case of the mall shooting was primarily witnessed at the shelter location. The initial care and registration of people involved was performed by bystanders because of capacity problems with the emergency response. Hard power was used effectively as a collaboration tool in the case of the airplane crash and the mall shooting: the incident location was too unsafe. A more soft approach was used in the care taking of the victims in order to increase the capacity of the emergence response. The same applies for the case of the train collision. At the Queen's Day attack there was some interference of the emergency response due to the soft approach: the first ambulances were stripped of all medical supplies by the helping bystanders. Finally, in none of the cases the emergency workers had specific preparation for their interaction with helping behaviour.

Based on the analysis of the cases it can be concluded that emergency workers can influence the extent of helping behaviour through their interaction with helping bystanders. Active joint collaboration and a right balance between hard and soft power limits dysfunctional aspects of helping behaviour and increases the functionalities. There are however some limits to theory derived from the literature. The social interaction process might be interrupted because there already is enough emergency response capacity available or helping bystanders are exposed to too great a risk. Pointing out the salience of the identity only seems to apply on relative small groups involved in the incident, such as the groups of passengers. Dysfunctional helping behaviour can be kept to a minimum when collaboration is pursued, however the use of too much soft power might also lead to interference of the emergency response, as was the case in the Queen's Day attack. Finally it must be noted that the results of this research are difficult to generalise to all crises and disasters in The Netherlands, since the cases of this study were selected by their extent of helping behaviour. However this thesis does provide a rich picture of the possibilities of helping behaviour in those incidents that require large scale emergency response. It provides the first theoretical foundation of the witnessed prosocial behaviour and gives emergency workers an important insight into how they can best use the helping behaviour they encounter.

Preface

In September 2007 I have started my student life here in Enschede. Almost exactly seven years later this period in my life will be closed with my master's colloquium at the School of Management and Governance of the University of Twente. I will proudly present and defend my thesis titled *"Boundary Spanners and Bystanders; influencing functional helping behaviour"*. With this thesis I aimed to contribute to the scientific discussion on helping behaviour of bystanders during major crises and disasters in The Netherlands and provide a valuable insight for emergency workers on how they can best make use of the helping behaviour they so often encounter. Through their interaction with helping bystander they can span the boundaries of crisis and disaster management organisations in order to meet the new demands in exceptional situations like crises and disasters.

My personal interest in boundary spanning is clearly visible in the past couple of years; in both inside and outside of my study program. It is also my vision that this type of work is one of the most important within the field of public administration. Government facing all sorts of cutbacks are somewhat forced into closer collaboration with private actors. Which is not necessarily a bad thing. On the contrary, this provides the opportunities to collectively tackle the bigger problems our society faces. Both inside and outside of the domain of 'Public Safety'. After my graduation I will continue working on the field of boundary spanning. I have gotten the opportunity to finally put all the things learned to use at the Dutch Ministry of Infrastructure and the Environment. I will leave Enschede with a satisfied feeling and gratefully take this next step in my professional career.

Now is also the time and place to thank several people who helped me and stood by me during the past seven years. First of all, I want to thank my supervisors prof. René Torenvlied and dr. Guus Meershoek for their guidance during the process of writing my thesis. I additionally want to thank the Security Region Twente and its employees for providing me with a workplace and valuable feedback and support along the way. I also want to thank the friends that stood by me during my study time and I especially want to express my gratitude towards the ones who have red my thesis and provided me with valuable feedback. I could not have achieved this result without the loving support from my parents, sister and brother and of course my loving girlfriend Astrid. Finally, I want to thank God Almighty for his continuing and unconditional Love, Strength and Support all throughout my life.

I wish all the readers of my thesis much pleasure,

Tony Hoogendoorn

Enschede; 19th of August, 2014

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1 – Introduction

On April 30th 2009 the annual traditional festivities for Queen's Day are on the way in city of Apeldoorn. An extra highlight for the community of Apeldoorn this year is the visit of the Dutch Royal Family. When the open-top bus with the Royal Family drove onto the intersection of the 'Jachtlaan' and the 'Loolaan', the beautiful day went suddenly pitch black. At 11:50 am, a 38-year old man drove his car through the barriers and through a great number of onlookers in an attempt to drive into the bus with the Royal Family. He ran over 17 people; including some children. Ultimately, eight people died, including the culprit. Immediately after the attack he claims that his action was a deliberate attempt to attack Queen Beatrix and her family. The whole nation was shocked and unwantedly became confronted with the horrific images of the attack and the aftermath via live TV-broadcasting by several national and regional broadcasting agencies. Fortunately after several seconds a small ray of light is visible: Dozens of people rush onto the intersection to provide the first emergency medical aid to the victims, both nearby civilians and emergency workers. Soon a reasonable calmness takes hold of the situation and civilians and emergency workers do what they can to save as many lives as possible. The aftermath of this attack is a perfect example of a phenomena that can be witnessed at the scene of almost all major crises and disasters: helping behaviour of bystanders.

One can often see that whenever disaster strikes people tend to help themselves and others to safety. This contradicts our perceptions that chaos will arise, people will panic, looting takes place and other anti-social behaviour emerges during disaster. Auf der Heide (1989), among others, debunked these widely known 'disaster myths'. Research and evaluations have shown that in case of crises and disasters individual citizens and private organisations get involved with performing certain emergency tasks, alongside or prior to the involvement of the regular crisis and disaster management organisation. This phenomenon is called 'emergent behaviour' (Quarentelli, 1988 & 1995; Drabek, 2005; Drabek & McEntire, 2003). Emergent behaviour can be seen best as an umbrella concept, as will be discussed more elaborately in the next chapter. It can be referred to as organisations performing new tasks in new structures, but it can also be defined as individuals showing helping behaviour without any prior organisation. The concept of emergent behaviour in this thesis is therefore further demarcated to helping behaviour by bystanders in case of a crisis or disaster event. As seen in the case of the attack on Queen's Day, those helping bystanders work alongside the emergency workers with one common goal: to immediately help the victims and thereby resolve the crisis. This interaction, both communication and collaboration, between bystanders and emergency workers will be the topic of this thesis. The goal of the thesis is to provide the crisis and disaster management organisations and more specifically the emergency workers themselves with an insight in how they can best deal with helping bystanders. Often the help of bystanders is functional, however it can also be seen as dysfunctional. The existing literature remains rather inconclusive in how the individual emergency workers can use or increase the functional bystander helping behaviour and how they can stop dysfunctional behaviour, or even better transform it into functional behaviour. Even despite the fact that the body of literature on the emergent behaviour is quite extensive.

Especially in the Anglo-Saxon countries the literature is extensive. Several scholars, whom have investigated several mass emergencies and disasters all over the world, have seen an increase in emergent behaviour as the size and the impact of the emergency or disaster is greater (e.g. Drabek & McEntire, 2003). However further research is needed *"across a wider range of disasters as well as systematic comparison across disaster types"* (Drabek & McEntire, 2003; p102).

Several contextual factors are identified to be influencing the emergence displayed at the scene of the emergency. Scholars have identified both social and physical context factors that influence emergent behaviour of bystanders (Fischer et. al., 2011). Such factors are for instance already existent social relationships among bystanders (Aguirre, Wenger, & Vigo, 1998; Levine, Prosser, Evans, & Reicher, 2005; Levine & Cassidy, 2009). Available resources, such as latent knowledge of individuals or needed physical tools, also influence bystander intervention (Aguirre, Wenger, & Vigo, 1998; Levine & Cassidy, 2009). Latané and Darley (1970) formulated a well-known model of bystander intervention, based on a series of successive decisions a person takes before intervening in emergency situations. Several scholars since then have formulated different theoretical models containing factors influencing one or several of these decisions-steps. These models however do not account for how the emergency worker should interact with bystanders displaying this helping behaviour. The Swedish scholar Alvinius (2013) is one of the few to theorise and test the abilities of the emergency workers to adapt to the demanding conditions shown in crises and disasters and how they collaborate and communicate with helping bystanders.

In The Netherlands the crisis and disaster management organisations are also faced with citizens displaying helping behaviour in numerous crisis and disaster situations and they also do not quite know how to react on them properly (Oberijé, 2007). In the light of recent public discussion in The Netherlands on citizens participation and the efforts in emergency preparedness of the community by improving their resilience, it is relevant to try and predict the kind of emergent behaviour in The Netherlands and to start take this process into account in the crisis and disaster management planning efforts. The Dutch Institute for Physical Safety (IFV) performed a research track between 2006 and 2010 into the helping behaviour of bystanders in crisis situations in The Netherlands. They refer to it as 'civil response' (burgerparticipatie in Dutch). Their aim is quite the same as the one for this thesis; by describing the helping behaviour displayed in The Netherlands they want to add to the knowledge of the interaction between emergency workers and emergent civilians. The problem with their research however is that they focus solely on the practical application of their research and it lacks a rigid theoretical foundation. The approach in their research is focused on relating the behaviour of bystanders to the specific crisis management tasks the emergency workers perform. In other words, they try to force the helping bystanders into the framework of the emergency organisations. The scientific relevance of this thesis is therefore to provide the scientific discussion on bystander helping with a firmer theoretical basis on the interaction between the emergency worker and the helping bystander by using theory on the individual abilities of the emergency worker to use his professional discretion.

Both Dutch and foreign literature conclude that helping behaviour is *"inevitable, natural, neither necessarily dysfunctional nor conflictive, and cannot be eliminated by planning"* (Stallings & Quarantelli, 1985; p. 98). In The Netherlands until a decade ago the crisis and disaster management structure was organised around principles of the military oriented 'C-3 model'; disasters create *chaos* and *command* and *control* are the means to manage the situation (Helsloot & Ruitenberg, 2004). Nowadays a different 'C-3 model' is more common; one of *continuity, co-ordination and co-operation.* Despite the fact that this model has introduced opportunities for new partners to take part in the crisis and disaster management-operations, such as specific experts and liaisons of the vital infrastructure organisations, dealing with emergent civilians has proven to be still difficult (Groenewegen-ter Morsche & Oberijé, 2010). So on the one hand, the government wants civilians to take some responsibilities in the case that crises and disasters strike.

The structure of the crisis and disaster management-operations has been changed to be more facilitative for the involvement of civilians. On the other hand the emergency workers still are somewhat reluctant to fully embrace the helping behaviour displayed in crises and disasters. The underlying problem here is that the policy change toward a more inclusive organisation of crisis and disaster management has not been fully deployed in the crisis and disaster management-planning, -education and –training efforts. The emergency worker arriving on the scene of an incident is prepared for performing his own tasks and relate to other emergency workers. In the interaction with helping behaviour displayed by civilians he has no other guideline than the one telling him to 'include' them in a joint effort to resolve the crisis situation. The emergency worker has to rely on his own judgement and experiences to determine whether or not to involve the helping behaviour. When he decides to involve citizens he immediately undermines his education and training which tell him not to. The societal relevance of this thesis is then to provide an insight into this process of individual adaption in order to come up with recommendations how to promote or demote bystander helping by emergency workers. These insights can be included into education and training programs later on.

Before continuing towards a further analysis of the research problem, it is important to first define what crises, disasters or emergencies actually are and more importantly what the differences are between them in the context of emergent behaviour.

Defining Crises, disasters and emergencies

Although the use of the words crisis, disaster and emergency in daily life is quite common, there is not one clear scientific definition on these concepts. A longstanding discussion among scholars on definition and more importantly the differences between them, has led to the possibility to make some general remark on this topic.

Quarentelli, one of the founding fathers of crisis and disaster management-research, has written and co-written lots of articles and books on defining the matter. In an article from 2000 he notes the differences between an everyday emergency and disasters, followed by the differences between disasters and catastrophes. Differences between disasters and everyday emergencies lie for the greatest part at the organisational level. The emergency organisations have to quickly relate to more and unfamiliar groups. With disasters there is a large convergence of units on the scene and additional (new) partners come into play. This leads to losing part of their autonomy and freedom of action. The organisations have to adjust to this. Additionally the disaster situation leads to the emergence of new norms regarding what is acceptable and unacceptable at the height of the crisis. Therefore an application of different performance standards is imminent. Finally the organisations have to operate within a close public and private sector interface. The need for quick mobilization of private resources for the common good leads to a collapse of the public-private distinction (Quarentelli, 2000). The difference between catastrophes and disasters then, lies at both organisational, community and society level. Within a catastrophe most or all of the community built structures is heavily impacted. Because of this immense scale of destruction it is likely that emergency officials are also affected and unable to undertake their usual work roles. A catastrophe makes for a sudden and simultaneously disruption of most, if not all, community functions. Finally, help from nearby is not possible because the affected area often has a regional character (Quarentelli, 2000).

Quarentelli ends with noting that while differences between emergencies, disasters and catastrophes have an impact for organisations, communities and societies; this does not count for individuals. Individual citizens react in those different situations *"remarkably similar and generally good"* (2000; p. 4).

When the conditions for a catastrophe are projected on The Netherlands, we see that we have not had a catastrophe since the 1953 North Sea Floods which affected a large part of the south-western part of The Netherlands. Not even the Firework disaster in Enschede in 2000 meets the mentioned conditions (Van Duin, 2011).

In the Dutch Security Region's Act of 2010 there is a distinction made between crisis and disasters. Section 1 of the Security Region's Act defines them as followed (Rijksoverheid, 2010):

> **Crisis:** *"a situation in which a vital interest of society is affected or is at risk of being affected"*

> **Disaster:** *"a serious accident or other incident whereby the lives and the health of many people, the environment or significant material interests have been harmed or are threatened to a serious degree and whereby a coordinated deployment of services or organisations from various disciplines is required to remove the threat or to limit the harmful consequences"*

The clear distinction between crisis and disaster in this Act finds its roots in academic literature. All the leading scholars on crisis and disaster management (Rosenthal,1984; Boin & 't Hart 2005 & 2007; Quarentelli 1998) state that disasters are one form of crises. Quarentelli also argued that for the future more focus must be the research of crises (Quarentelli 1998, cited in Van Duin, 2011). This prediction of Quarentelli has proven to be right, at least in the preparation of the emergency services. After the Firework Disaster in Enschede in 2000 and the Pub Fire in Volendam in 2001 the Dutch government ordered a renewal of the Dutch crisis and disaster management-structure. Instead of focussing on eighteen classical disaster scenarios, the emergency services moved towards a more generic approach to the preparation of crisis management (Van Duin, 2011). Van Duin continues in his inaugural speech, for his position of lector in Crisis and Disaster Management at the IFV and the Dutch Police Academy, that a distinction between 'the normal' and 'the exceptional' must be made. By this distinction he means that what an organisation or individual does in the normal everyday situation, is a good prediction of how the organisation or individual reacts in an exceptional situation such as a major crisis or disaster. He connects this with the so called Dynes-typology (1970), which will be discussed more elaborate in the next section. Bottom line in his reasoning is that emergency organisations will be able to adjust their organisations to non-regular tasks or new structures needed in the case of major crises and disasters. But when both a new structure and new tasks are to be performed, emergent behaviour by civilians will be imminent. Civilians take on these roles and therefore have an important role in 'the exceptional'. He calls for increased stimulation of the resilience of the society (Van Duin, 2011).

1.1 Analysis of the research problem

Emergent behaviour has proven to be inevitable and therefore emergency workers must keep in mind that they will encounter it at some point (e.g. Drabek & McEntire, 2003 and Helsloot & Ruitenberg, 2004). Recommendations to include the existing knowledge on emergent behaviour in the crisis and disaster management-planning and –training are being implemented slowly in The Netherlands, as was mentioned in the first section of this chapter.

Additionally, a much heard critique in both Dutch and foreign literature is the need for structuring the involvement of civil response and the behaviour comes with a negative perception of the capabilities of civilians in crisis and disaster management-operations (Helsloot & Ruitenberg, 2004). On the other hand there is an intensified focus on improving resilience of communities in preparation of crises and disasters. These measures focus mainly on the directly affected civilians before the arrival of the emergency services and secondarily on the community surrounding the affected area. In the interaction between emergency workers and emergent civilians there seems to be a problem of trust in the quality of civilian involvement in crisis and disaster management-operations.

The Dutch institute for physical safety IFV (previously called NIFV) performed a research track on resilience and did a study on civil response during crises and disasters. In 2006 they performed a short literature study on the desirability of civil response to crises and disasters and the mechanisms to influence that response. As a second step they employed a survey under emergency workers in 2008. Goal of this survey was to identify the attitudes and expectations of the emergency worker towards civil response. Finally in 2010, a comparative case study was executed on ten incidents in which civil response was witnessed. The overall conclusions of this research track are that indeed civil response activities are witnessed and the emergency services have to deal with them, no matter what. The research provides an extensive overview of what kind of emergent behaviour has taken place in The Netherlands and how civilians and emergency workers react on each other. Recommendations are in the line of letting civilians help because of the gain in operational strength in the first moments when the crisis and disaster management-organisation still scale-up their capacity. Additionally, they argue that civilian response must be part of the crisis and disaster management-education, -training and – exercise (OTO) (Groenewegen-ter Morsche & Oberijé, 2010). Despite the fact that the IFV used a literature review in order to obtain important insights on the concept of emergent behaviour and helping behaviour by civilians in crises and disasters, they have not managed to draw a clear model for the interaction between helping civilians and the emergency workers at the scene of a crisis or disaster. It focuses too much on fitting the helping behaviour of bystanders into the existing crisis management processes.

The literature thus far has come up with two main strains of thought on helping bystanders. On the one hand, it focusses on personal aspects like motivations for helping and (social) mechanisms of bystander intervention. On the other hand there is an extensive amount of descriptions and categorisations which try to fit the displayed behaviour into existing tasks and processes. But, as Kreps and Lovegren Bosworth (1997) mention, there still remains some sort of knowledge gap in the organisational study of crisis and disaster management. Because the IFV is a practically oriented research institute they are not the ones to close that gap. It is up to academic scholars to try to formulate a model of the interaction taking place between the emergency worker on the scene and the helping civilian. A Swedish scholar, Aida Alvinius (2013), is one of the few to investigate the reaction on bystanders by emergency workers on a 'higher' theoretical level. Using the bureaucratic theory, she investigates the adaption of uniformed bureaucracies in crisis and disaster management to their demanding environment through boundary spanners such as the first arriving emergency units on the scene (Alvinius, 2013). Building forth on this framework, this thesis will use the bystander intervention model and related theories to come up with a model of the interaction between the emergency worker and the helping bystander. The focus will be on the larger crises and disasters in The Netherlands in the past two decades.

Because of the recognised capacity problem of emergency workers in the beginning of the acute phase of a major crisis or disaster, it is likely that emergent behaviour will take place to fill this gap. Therefore a further confinement is used on the acute response phase; the period directly after the incident.

1.2 Aim of the research

The aim of this research therefore is to investigate what the influence of the interaction between emergency workers and helping bystanders is on the emergent behaviour displayed at the scene of the emergency. The general research question is formulated as followed:

> *"How can variation in emergent behaviour, displayed at the scene of large crises and disasters in The Netherlands, be explained by the degree of interaction between emergency workers and helping civilians"*

With this general research question this thesis focusses first on providing insight into the mechanism of interaction between the emergency worker and the helping bystander and the effects on the emergent behaviour. Secondly, that insight will help the emergency worker in better judging the helping behaviour he encounters; whether it is functional of dysfunctional and how he can make better use of it.

1.3 Research approach

This thesis will for a large part depend on a thorough literature study. The results of this study are shown in the next chapter and will focus first on emergent behaviour in general and then more specifically on the helping behaviour of bystanders. Next to that a theoretical framework is provided in order to come up with testable hypothesis for the following empirical studies. The theoretical framework consists of three parts. The first part consists of theories which apply to the personal conditions for bystander intervention and subsequently on the interaction between individual bystanders in order to provide conditions under which bystander intervention is promoted. It starts at the discussion of the bystander intervention model deposed first by Darley and Latané (1968). One of the most commonly known concepts surrounding this model is the 'bystander effect'; after discussing the bystander effect, the focus will shift towards two other theoretical models: the Emergent Norm Theory and the Self Categorisation Theory. The second part of the theoretical framework will shed light on the mechanisms in play at the side of the emergency worker and its home organisation. It discusses the work of an emergency worker in the light of the Bureacratic Theory of Weber. Crisis and disaster management organisations can be seen as bureaucratic organisations that have to adapt to demanding circumstances in its environment during crises and disasters. A successful adaption will depend on the quality of the emergency workers in the field. Theories on organisational adaption and the role of professional discretion like the 'street-level bureaucrat' and the concept of boundary spanners are used to model the reaction of the emergency worker to the demanding environment. In the third part of the theoretical framework the two previous parts come together in order to discuss the interaction between the emergency worker and the helping bystanders.

After the discussion of the theory-part of this thesis, the empirical-part will follow. The study is based on a comparative case study of four recent major crises and disasters in The Netherlands: The Turkish Airlines airplane crash near the Airport Schiphol in February 2009, the attack on Queen's Day 2009 in Apeldoorn, the Mall shooting in Alphen aan den Rijn in 2011 and the train collision near Amsterdam Central Station in April 2012.To answer the general research question formulated earlier there are six

sub-questions formulated to guide through the data gathering and analysis process. These questions are discussed in the section below. With each question there is a description on the origin of the question and how it is being answered in this thesis.

Sub-question 1 and 2

The dependent variable in the general research question is the emergent behaviour displayed at crises and disasters in The Netherlands. What conditions provide with functional bystander helping and what conditions make it dysfunctional. The first sub-questions therefore are formulated as followed:

1. *Which variation in emergent behaviour is displayed at large crises and disasters in The Netherlands?*
2. *Which variation in functional and dysfunctional emergent behaviour can be observed at large crises and disasters in The Netherlands?*

These questions are answered partly by the literature study and complemented with the results from the comparative case study. The research from the IFV provides with a good descriptive starting point for the answering of these questions, but that study lacks a theoretical foundation. Therefore it is needed to include the theoretical conditions found in the literature.

Sub-question 3, 4 and 5

The general research question talks about interaction between the emergency worker and the helping bystander as the independent variable in this thesis. Interaction will be used in this thesis to denote the collaboration and communication between the emergency workers and the helping bystanders. The third, fourth and fifth sub-questions are therefore formulated as followed:

3. *How does the communication between emergency workers and helping bystanders take place at the scene of large crises and disasters in The Netherlands?*
4. *How does the collaboration between emergency workers and helping bystanders take place at the scene of large crises and disasters in The Netherlands?*
5. *Which conditions in relation to the interaction between emergency workers and helping bystanders influence helping behaviour being either functional or dysfunctional?*

Both the content analysis of the already existing documents regarding the four selected crises and disaster, as well as the in-depth interviews will contribute to the answering of these three questions. By using both methods the validity of the research will be increased.

Sub-question 6

The sixth sub-question provides input in the discussion of the discrepancy between organisational measures and structures for dealing with emergent behaviour and the individual adaption to the demanding environment. The question is stated as followed:

6. *To what extent are emergency workers prepared for interaction with helping bystanders at the scene of large crises and disasters in The Netherlands?*

Especially the comparative case study provides with results that help answering this sixth question. In the interviews which are part of the case study, specific question regarding the preparation are asked.

A more extensive discussion on the case selection techniques and the justification of the methods used for the content analysis and the interviews are provided later on in chapter four.

1.4 Outline

This thesis is formed around five chapters. Following this first introduction chapter, this thesis then focusses on the theory of emergent behaviour in chapter two. After outlining the history of the research field, the second chapter then turn to formulating the theoretical framework for the empirical analysis later on. By using both sociological and organisational theory, the framework come up with hypothesis on how the emergency worker can influence the functionality of helping behaviour through his interaction with the bystanders. Chapter three will then follow with a discussion on the research methodology. Since the empirical analysis consists of a comparative case study, this chapter first pays attention to the problems a researcher faces in qualitative case study research on crises and disasters and it then discusses the process by which the four cases are selected. The third chapter ends with a description of the data collection and analysis process. Chapter four displays the results of the comparative case study. The four crises and disasters are each discussed in separate sections. Each section first describes the incident and its characteristics. Then the displayed helping behaviour is discussed, both before and after the arrival of the emergency workers. This is followed by a description of the functional a dysfunctional aspects of that helping behaviour and a discussion on the interaction between the emergency workers and the helping bystanders. Each section ends with a evaluation of the influence of the interaction on the functionality of the helping behaviour. Chapter five closes this thesis with a conclusion and discussion on the results.

2 – Theory

Disaster (management) science is a special branch of social science. Especially in the Anglo-Saxon literature there is extensive literature about the behaviour of emergent citizens and about the characteristics of bystander intervention. The Disaster Research Center (DRC) initially established at Ohio University, is one of the main contributors to the literature. The phenomenon of emergent behaviour has been picked-up by Dutch researchers as well. In The Netherlands a special research track was conducted by the Institute for Physical Safety (IFV) on civil response and resilience, aimed at recommending crisis and disaster management-organisations in how to react to these themes.

The remainder of this chapter will be divided into two parts. The first part is discussing the research available on emergent behaviour in both foreign and Dutch literature. It provides an overview of the history of the research field and the main strands of thought in the current literature. The second part of this chapter will focus on laying out the theoretical framework for the thesis. It evolves around three parts; the side of the helping bystander, the side of the emergency worker and finally the interaction between the two.

2.1 Research in Emergent Behaviour

Emergent behaviour is one of the most studied concepts in crisis and disaster management research. First, a brief overview of the history of the research field will be given. Subsequently, the types of emergent behaviour, the possible functional and dysfunctional aspects of it and the conditions under which emergent behaviour is most likely to emerge will be discussed.

2.1.1 History of the research field

The history of the field of crises and disaster management research is an extensive one. Since the 1950s several studies were performed which identified and documented the convergence of individuals and groups on the scene of natural and technological disasters. From different sociological viewpoints this phenomenon was labelled in different ways, but the most frequently used names were '*altruistic community*' (Barton, 1969), '*emergence*' (Parr, 1970) and '*emergent behaviour*' (Bardo, 1978)

Additional focus was given to the study of organisational theory in the research field with the creation of the Disaster Research Center at Ohio State University in 1963. Quarentelli (1966) and Dynes (1970), both scholars at the DRC, created the well-known typology of groups in emergency management based on the tasks performed and the structure of the group. They have worked through hundred factual reports and developed the following four typologies (Drabek & McEntire, 2003), shown in table 2.1.

Table 2.1: Typology of groups in disasters

Structure		Task	
		Regular	Non-regular
Structure	Old	Type I Established organisations	Type II Extending organisations
	New	Type III Expanding organisations	Type IV Emergent groups

Type one, the *'established organisations'*, are the ones having it the easiest in times of crises and disasters. They perform regular tasks in their normal organisation structure. In type two the task is divergent from the normal (Quarentelli, 1966; Dynes, 1970). In exceptional situations an organisation can be confronted with non-regular tasks and therefore must *'extend'* its regular task (Van Duin, 2011). An example of this is a sports centre providing shelter for disaster victims. This type also includes the police dealing with the identification of a great amount of lethal victims, where they are used to only a few in the normal situation. In type three, *'Expanding organisations'* are required to alter their structure. An example is the GRIP-structure[1] guiding the emergency response in The Netherlands. The regular emergency organisation, different layers of government and government agencies, are operating in a different structure during the emergency response. Type four, *'emergent organisations'*, evolve where there are certain shortcomings in the emergency response and some task are not picked up effectively or even not picked-up at all (Van Duin, 2011).

Miletti et al. (1975) evaluated and summarised much of the prior research and categorised these findings into the four phases of the disaster life cycle (e.g. response, recovery, preparedness and mitigation). Drabek (1986) further expanded on this and by adding new findings on the individual, group, organisational, community, society and international levels, he created what is now known as 'Drabek's Disaster Encyclopaedia' *(Human System Response to Disaster)* (Drabek & McEntire, 2003). Many scholars have taken this work of Drabek as a starting point of their sociological research in disasters. Drabek and McEntire (2003) claim that *"unfortunately, the field lacks an updated review of the literature, particularly in reference to emergent phenomena and the coordination on multi-organizational response"* (p. 98). This is the reason they have worked on a renewed literature review.

2.1.2 Types of emergent behaviour
There are multiple types of emergent behaviour visible during crises and disasters. There is display of emergent behaviour from bystanders already on the scene at the time disaster strikes. There is additionally convergence from civilians, groups and organisations which offer their help, either on their own initiative or they are activated by the crisis and disaster management-organisations. In the study of crisis and disaster management it is not practical to look to much at an individual level of behaviour, since policy cannot be customised for each individual citizen.

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[1] GRIP-structure stands for Coordinated Regional Incident-Management Procedure

Section 2.2 however, does begin with an explanation of the bystander intervention model despite the fact that it is an psychologically oriented theory. The bystander intervention model, as well as the other models discussed in section 2.2, does provide with important insights into the influence an individual has on the group processes at hand during crises and disasters. Often organisational researchers tend to neglect other adjacent research fields and thereby disregards important insights which can provide further theoretical refinement of their own research. This also seems to be the case in the study of crisis and disaster management (Stallings, 2006)

There are basically two main strands visible in the research field of crisis and disaster management on types of emergent behaviour. The first strand is based on the motivations people have for displaying emergent behaviour. This has led to five types of emergent behaviour, which are discussed below. The second strand in the research of emergent behaviour is more based on organisational and group characteristics and tries to fit the witnessed emergent behaviour in an organisational category.

Turner and Killian (1987) are among the scholars who discuss the first strand of research in emergent behaviour. They discuss five different types of emergent groups in disaster situation which were identified in a study by Fritz and Mathewson (1957): returnees, anxious, helpers, sightseers or curious and exploiters. The first group, the *'returnees'*, are all those who survived the disaster and for various reasons want to go home. This category also includes residents who were not there at the moment of the disaster and non-resident property owners. There are two reasons for their return; the immediate goals is to locate and help other persons, assessing damage to and protecting private property, and the longer range goals of returning to surroundings that are familiar and re-establishing their social relationships. The second group are the *'anxious'*. They were not in the area of the disaster, but in the area indirectly affected. The separation of family and friends seems to be the most significant motivation for anxiety-motivated convergence. Their whereabouts, safety and wellbeing is the most frequently cited reason for visiting the disaster area. Also the desire to directly help or provide supplies is an important motivator. Next to actually going to the disaster they put an extra strain on the existing communication channels because of an immense information-seeking effort. The third category are the *'helpers'*. Helpers are quite the same as the anxious, but without the concern about loved ones. They are simply volunteers offering aid after hearing of the situation. Fritz and Mathewson (1957) argue that the speed and volume of the helpers is determined essentially by personal identification with the victims in the area of the disaster. Early volunteers are the most likely persons from the contagious zone who have directly witnessed or perceived the effects of the disaster or are confronted with sudden requests of aid from the victims. These early volunteers are the first wave of informal helpers. Successive waves are consisting of external helpers who heard the news. The fourth type is of the sort that policy makers and emergency workers so often emphasise in accounts of disasters: the *'sightseer or curious'*. This group is seen as probably the most problematic category, since they can interfere the quick response of emergency personnel on the scene of disaster. The fifth type are the *'exploiters'*. This type include looters, souvenir hunters, relief stealers and profiteers. As mentioned earlier, this type of behaviour is one of the disaster myths. Fritz and Mathewson (1957) also note that the prominence of this group is often exaggerated.

These five types of emergent groups do show some resemblances to each other. For instance, the returnees and anxious show characteristics of the helpers after they are sure their own families and property is secured. It is also imaginable that the sightseer is struck by the immense need for aid and therefore starts helping.

What we must keep in mind the whole time when we discuss results of studies from the United States of America is that the size and effects of disasters over there are often not comparable to the situations we face in The Netherlands. Mass convergence of citizens offering help from outside the area of the disaster has never been witnessed in The Netherlands (Van Duin, 2011). Nevertheless, the first wave of volunteers in the helper category can be witnessed at almost any incident.

The second strand of research on emergent behaviour is observed in the research of the DRC. It started with their well-known typology of groups in disasters (see table 2.1), which formed the basis for much research on organisations in disasters. Quarentelli (1995) however argues that this typology is in need for modification because it does not always capture the organised response in crises and disasters studied by the DRC. He identifies four new types of emergent groups, shown in table 2.2 below. First *'quasi-emergence'* is witnessed when there are only minor alterations in the structure or function of the organisation, however too much for it to fall under the established organisation type. When the organisation cannot be typified as extending, but the previous functions are maintained and there is a new structure being developed, there is a new group labelled as *'structural emergence'*. Third, *'task emergence'* is used when the group performs slightly deferent tasks, and the structure does not undergo significant alterations. The last new type is *'group emergence'*; there is a new structure and the group performs new tasks, however this lasts only for a short period of time (Drabek & McEntire, 2002).

Table 2.2: Additional Typology of groups in disasters by Quarentelli (1995)

		Task or function	
		Regular	Non-regular
Structure	Old	Quasi-Emergent Behaviour	Task Emergence
	New	Structural Emergence Behaviour	Group Emergence

Drabek and McEntire (2003) also note some other types in their extensive literature review, which are not directly relevant to this thesis. These categories are the 'type V', 'emergence based on latent knowledge' and 'interstitial groups'. However all these new conceptualisations *"help to clarify our comprehension of emergent phenomena they remain somewhat primitive, lacking theoretical refinement and empirical substantiation"* (p. 101). Although there has been research on emergence in different phases or types of disasters, there is still need for additional academic studies across a wider range of disaster types and a comparison across disaster types (Drabek & McEntire, 2003). Kreps and Lovegren Bosworth (1997) mentioned a knowledge gap in the organisational research. This gap, as mentioned earlier, is caused by disregarding important theories from adjacent research fields.

2.1.3 Functional and dysfunctional emergent behaviour

For a long time the crisis and disaster management-efforts were guided through the military oriented C-3 model; chaos will arise and the emergency services have to use command and control principles to dissolve the crisis. This models assumes that citizens will panic in disaster situations, that they are helpless and entirely dependent on the reaction of the emergency workers and that looting and other anti-social behaviour takes place during disasters (Helsloot & Ruiterberg, 2004; Drabek & McEntire, 2003). However assessments and studies of work in the field does indicate something different. Quarentelli (1986) notes that most of the times people do not panic, that looting is a very rare in such situations and that overall exploitive behaviour only takes place when the acute phase is over. Auf der Heide (1989) reaches the same conclusions and stresses that this picture of stereotyping contains many inaccuracies. Fischer (1998) effectively debunked these 'disaster myths' and blames the media for continuing them. Research shows in fact an opposite picture of how people react in crises and disasters. *"Instead of reacting in an anti-social manner, individuals and groups typically become more cohesive and unified during situations of stress"* (Drabek & McEntire, 2003; p. 99). Quarentelli (1996) even calls it *"Prosocial … behaviour"* (p.5). People facing problems in a disaster area are more immune to the so called *'disaster syndrome'*, are more innovative in finding solutions to their problems and are in fact more resilient in the wake of the severe challenges they have faced then that they receive credit for (Drabek & McEntire, 2003).

Thus, the overall approach until a decade or two ago was to make sure that the people in disaster situation were taken care of by the emergency organisations. Emergent behaviour was subsequently labelled as negatively effecting the emergency response. Nowadays, however, the phenomenon seems highly relevant to emergency managers, since it cannot be prevented and it does have some (potential) positive effects. Positive effects can be that there is a quicker and more effective response (Drabek & McEntire, 2003). Groenewegen-ter Morsche and Oberijé (2010) identified the functional and dysfunctional aspects of emergent helping behaviour shown in table 2.3.

Table 2.3: Possible functional and dysfunctional aspects of emergent behaviour

Functional aspects	Dysfunctional aspects
Quick response; Citizens are immediately on the scene	Emergent behaviour often results in an unclear overview of the response
Increase of emergency response capacity	Coordination and guidance costs time and capacity
Availability of specific knowledge or resources	Citizens can interfere with emergency response
Citizens prevent or limit further injury and damage	Citizens interfere in the information streams of the emergency workers
Citizens provide with relevant information	No insight is available on the capacities and quality of the citizens involved
The resilience of the community increases	Citizens cannot asses the dangers and risks properly
Helping is somewhat therapeutic and is an important step towards aftercare	Helping citizens are not trained on the emotional impact of the response

2.1.4 Conditions of the emergent phenomena

Drabek and McEntire (2003) derived from their literature review that emergent phenomena are most likely to occur when first of all the demands are not met by existing organisations. The capacity of the emergency response takes some time to build up. In most cases the first half hour to an hour there is no coordinated emergency response possible (Helsloot, Martens, & Scholtens, 2011). When crises or disasters are of such great nature, traditional tasks and structures will not be sufficient to solve the crisis. There is need for improvisation to deal with such an exceptional situation as Van Duin says (2011). Finally it comes up to the community and the bystanders to decide that they should help. They have to feel that it is necessary to respond to or resolve their crisis situation. For these three reasons it is safe to say that the size and impact of crises and disasters is positively related to emergence (Drabek & McEntire, 2003). Several other factors also seem related to emergence, such as lack of planning or the perception of an emergency situation. Also the socio-economic status plays a role as do many more factors. The problem however with both the international, as well as the Dutch literature is the lack of theoretical sophistication. There are some general recommendations that suggest how emergency workers should keep in mind that emergent helping behaviour will arise during major crises and disasters. Besides that, there has not been much theorising of how they interact with helping bystanders. In the next section an attempt has been made to model the behaviour of interaction between the helping bystanders, the adaption of the emergency organisation through the individual emergency worker and the interaction between the bystander and the emergency worker though the concept of boundary spanning.

2.2 Theoretical Framework

Within this section the theoretical framework regarding the interaction between the helping bystander and emergency worker will be discussed. This framework, with its corresponding hypothesis will form the basis of the empirical analysis in the following chapters.

In order to study the interaction, one must look at the actors at both sides of that interaction. In the first section side of the helping bystander will be discussed. The well-known bystander intervention model by Latané and Darley (1970) will form the basis. After briefly discussing the bystander-effect, the section focusses on two other sociological theories of group behaviour in emergency situations: the Emergent Norm Theory and the Self-Categorization Theory. In section 2.2.2 the side of the emergency worker will be central. Bureaucratic principals traditionally guide the organisation of crisis and disaster management. The principals involved as well as the critique in the literature will be shown. Next the organisational theory of the street level bureaucrat will be used to theorise the work sphere of the emergency worker arriving on the scene of a major crisis or disaster and is confronted with emergent behaviour. These so called boundary spanners must find a solution to deal with this. Finally section 2.2.3 will summarise the theoretical concepts displayed in this chapter and connects the sides of the helping bystander and the boundary spanning emergency worker in relation to expected patterns of helping behaviour. Hypotheses are formulated in order to test the situations in the cases in the empirical part of this thesis.

2.2.1 Helping Bystander

In section 2.1 five categories of emergent behaviour were identified by Fritz and Mathewson (1957; in Turner and Killian, 1987). These were the returnees, the anxious, the helpers, the sightseer or curious and the exploiters. Although the last one does not occur that often. The fact that the scale and impact of the disasters in The Netherlands is seemingly smaller than the disasters in which these categories are identified was also mentioned. It is arguable that in the Dutch case there are bystander intervening and helping and it does not really matter in which category they fall. It is much more relevant to understand the process the individual undergoes before he or she actually intervenes.

Bystander intervention model

Latané and Darley (1970) composed a model of the intervention process. They argue that *"if an individual is to intervene in an emergency, he must make not just one, but a series of decisions"* (p. 31). When an emergency is taking place, the bystander must first *notice* that something is happening. Then the bystander must *interpret* the event as an emergency. When the conclusion is that there is actually something wrong, then the bystander must decide if it is his personal *responsibility.* Perhaps there is already help underway or someone else is better qualified. If the decision is to help, then the bystander must consider what *form of assistance* he can give. Finally, the bystander must decide how to *implement* his action. Figure 2.2 shows a graphical representation of the model.

Figure 2.1: Bystander Intervention Model (Latané and Darley, 1970)

This model formed the basis for Latané and Darley to given an answer to the question why certain bystanders do not respond to an emergency situation. One of the most commonly known mechanisms supposedly involved in this matter, is called the *'bystander effect'*. The bystander effect is explained as the greater the number of bystanders, the smaller the amount of intervention. Literature on the bystander effect has primarily been focused on this aspect.

The presence of others especially influences the interpretation of the incident as an emergency and the decision on assuming personal responsibility (Latané & Darley, 1970). When in the interpretation process the bystanders look at each other in order to define the situation and they notice non-response with the others, then they remain inactive themselves as well. They do not act because they interpret the situation as a non-emergency because of the reaction of others. The presence of others also influences assuming personal responsibility for reacting to the emergency. Latané and Darley (1970) noticed in their studies that there is a *'diffusion of responsibility'*:

> *"If only one bystander is present at an emergency, he carries all of the responsibility for dealing with it; he will feel all of the guilt for not acting; he will bear all of the blame that accrues for non-intervention. If others are present, the onus of responsibility is diffused, and the finger of blame points less directly at any one person. The individual may be more likely to resolve his conflict between intervening and non-intervening in favour of the latter"* (Latané & Darley, 1970; p. 90)

The problem however with the focus on the bystander effect in emergency situations is that it is only part of the story. The bystander-effect paints a rather negative picture of the effect of group behaviour (Levine & Cassidy, 2009). The remainder of this section will discuss two alternate theories on group behaviour in emergency situations. In these two theories the central element is that group behaviour can in fact also be prosocial in nature.

Emergent Norm Theory
The first one is the Emergent Norm Theory (ENT). This theory is one of the theories that tries to explain crowd behaviour in a general sense. They argue that in less stable crowds norm might be vague and when in such a crowd new norms 'emerge' on the spot and the crowd members tend to follow those new norms. Turner and Killian (1957) have developed the ENT in response to the theories proposed by Gustave Le Bon and Floyd Allport. Le Bon argues with his Contagion Theory that the crowd members come under the influence of the 'collective mind' of the crowd. They abandon their personal responsibility and surrender to the contagious emotions of the crowd. So the Contagion Theory states that crowds are the cause of peoples actions. The Convergence Theory on the other hand states that people who want to act in a certain way come together to form a crowd. The most salient part of both these theories is the unanimity of the group behaviour experienced by the people in the crowd. (Turner & Killian, 1987).

According to Turner and Killian (1987) there is a problem in explaining *"how this unanimity in the feelings, imagery, and action of the participants develops"* (p. 26). Neither of the two theories fully grasp the empirical findings. In their Emergent Norm approach the crowd is characterised by differential expression, not by unanimity: some people expressing what they are feeling and some not. Because the behaviour of part of the crowd is then dominant, it is perceived by both expressing and non-expressing members as the sentiment of the whole crowd. This creates the illusion of unanimity (Turner and Killian, 1987).

Divergent views are not there because they are not recognised or simply dismissed as unimportant. This situation suggest that a pattern is perceived. The concept of the development of a norm is, according to Turner and Killian, the explanation of that pattern. The idea then is that crowds start with little unity among the members, and through social interaction in which people look at others for cues and signs indicating the right course of action, they redefine the situation and make sense of the confusion; thus they establish a group norm on how to act (Turner & Killian, 1987). Both positive and negative effects can be derived from the ENT. For instance an anti-social dominant expression in the crowd can lead to violent actions, as can be seen in riots. On the other hand a prosocial dominant expression can lead to helping behaviour.

In the case of crises and disasters, where the old traditional normative guidelines are disrupted, there is a need to collectively interpret the situation and the ENT can provide the theoretical basis for this process (Aguirre et. al., 1998). In 1998 Aguirre and colleagues put the ENT to the test by performing a survey among employees of the WTC in New York at the time of the bombing in 1993. They have found that larger groups lead to a delay in starting the evacuation, as similar to theory of the bystander effect. Pre-existing enduring social relationship also delayed the start of evacuation, because of the 'interruption' of the social interaction process. Aguirre et al (1998) additionally found that there is a positive association between the availability of resources, such as latent knowledge and tools, and the starting of the evacuation. Also direct instructions from emergency personnel is positively related.

Self-Categorization Theory
The second theory relevant to this research is the Self-Categorization Theory (SCT) and originated from the Social Identity tradition. It suggest that people define themselves as part of a group and act according to this categorisation (Levine & Cassidy, 2009). Unlike the bystander-effect, this theory claims that "*the presence of others provides the opportunity for people to define themselves in terms of their social identities and act in terms of the norms and values of those identities*" (p. 212). The theory proposes three dimensions which shape the way the group process impacts on helping. These are the salience of social identities, the boundaries of social identities and the content of social identities.

One of the first findings from the Social Identity approach was the in-group favouritism. This notion and the related idea that people see the in-group members as interchangeable to themselves, leads to the suggestion that people are more likely to help in-group as opposed to out-group. The salience of the in-group brings on the norms and values that result in experiencing emotions and a sense of responsibility that increases the likelihood to help (Levine & Cassidy, 2009). This does not automatically mean that out-group member are not getting help at all. Members of the in-group can be found avoiding prejudice of in-group favouritism by actually helping the out-group. This is also found when the norms of the in-group impose the helping of the out-group. Levine and colleagues also found that group membership is not only relevant for bystander-victim relations but also for bystander-bystander relations. They conclude that the SCT can be used to promote the likelihood of bystander intervention by facilitating the construction of prosocial norms(Levine, Prosser, Evans & Reicher, 2005).

So, the sharing of a common identity will lead to the formation of norms regarding the helping behaviour of bystanders in emergency situations. According to Drury (2004 cited in Levine & Cassidy, 2009) the emergency events themselves can lead to the formation of common identities. Following a study on the London bombings in 2005 they found that survivors who shared the commonality of being a victim viewed the emergency as a threat to their collective safety and reacted in a prosocial behaviour (Drury, Cocking & Reicher, 2007). This creation of new norms under a unusual situation can be seen as a direct link to the more sociological ENT of Turner and Killian, as argued by Vider (2004).

Summing-up the bystander intervention model does play a large role in the actual starting of bystander helping before the arrival of the emergency services. However the model and the associated bystander effect do paint a negative picture of the influence of the group on the individual bystander. First, the presence of others seems to influence the interpretation of an event as an incident due to the non-intervention of others. Secondly, the presence of others diffuses the responsibility of the individual bystander to help. This is also happening when the first emergency workers arrive on the scene. Most helping efforts will be stopped as soon as they arrive. Next to this rather negative picture of the influence of the group on individual bystander helping, there are more positive explanations like the Emergent Norm Theory and the Self-Categorisation Theory. The ENT explains the process of the creation of new norm in situations where existing norms do not suffice anymore and there is a need for collective interpretation of the situation. These events range from riots (asocial behaviour) to bystander helping in large crises and disasters (prosocial behaviour). In search for a new norm on how to interpret and react to the new situations the bystanders interact with each other on the basis of differential expression; some people expressing and some not. In crisis events it seems that larger groups take more time to form new norms and also pre-existing social relationships interrupt the interaction process. On the other side expression of a strong opinion by one or several members of a group does have an positive effect on the formation of new norms. Availability of specific knowledge of resources provides such a strong opinion. Also direct instructions of emergency workers on how to react provides a clear norm for the rest of the group to act accordingly. The SCT additionally contributes with the explanation that individual bystanders define themselves as part of a group and act according to that groups norms. Here the argument is that the presence of others provides opportunities to relate to one another in contradiction of the more negative influences explained earlier. Helping others in need can be an norm existing in that group. In crisis situations there is evidence that the incident in itself creates a common identity and that this will lead to the formation of prosocial helping norms. Finally, the SCT explains that bystander helping can be promoted through the facilitation of prosocial norms.

2.2.2 Emergency Worker

On the other side of interaction we find the emergency worker. Working under unusual conditions in crises and disasters, he is faced with time pressure, limited resources and limited information on the whole situation. In such conditions, he must make the right decisions in order to resolve the crisis at hand. He is not alone in this, since there is an extensive network of organisations involved in the crisis and disaster management. However, in the interaction with a helping bystander, he does have considerable amount of professional discretion in involving the citizen in his crisis and disaster management tasks.

Bureaucratic organisation

Crisis and disaster management-organisations, such as fire services, police and ambulance services, are usually seen as examples of hierarchical and bureaucratic organisations characterised by rationality, structure, predictability, stability, rules, distribution of responsibility, mandate and spheres of authority (Alvinius, 2013). Normally they work not only with different types of incidents, but also on areas of prevention. In the case of a major crisis or disasters, their normal routine to some extent seizes to exist and there is a need for rapid coordination. This put a large demand on the organisations involved (Alvinius, 2013).

Earlier in this thesis there was already a discussion on the manner in which the Dutch crisis and disaster management-organisations are organised in a different structure when facing a major crisis or disaster and that the C-3 model is the basis for this structure (Helsloot & Ruitenberg, 2003). Drabek and McEntire (2003) additionally note that there are two ways to dealing with emergent behaviour. Some scholars and most practitioners favour the C-3 model, whereas many sociologists recognise that the spontaneous emergence of personnel and resources is a given fact and that the crisis and disaster management organisations must use this for the better.

Because of all the issues with an bureaucratic approach, a new C-3 model for the crisis and disaster management-operations is proposed (Alvinius, 2013). This one is based on *continuity, co-ordination* and *co-operation*. By arranging the crisis and disaster management-operations in a different and more generic way, there is room for other organisations in performing crisis and disaster management-tasks and also room for adaption on other emergent behaviour. In The Netherlands they have tried to adapt the established organisations in order to facilitate the transition towards extending and expanding organisation. According to Van Duin (2011), this is done in order to try and limit the need for involvement of emergent organisations in the crisis and disaster management. Drabek and McEntire (2003) as well as Van Duin (2011) believe that this leads to detrimental effects on the preparation of crisis and disaster management professionals since it does not reflect what they actually face when confronted with major crises and disasters. They argue that the preparation must not be based on what assumingly happens, but on phenomena that do happen. Alvinius (2013) argues in her dissertation in favour of adapting organisations and balancing between structure and improvisation. This argument is backed by scholars like Querentelli (2000), Van Duin (2011), Helsloot and Ruitenberg (2004) and Drabek and McEntire (2003).

Street-level bureaucrat

Bureaucracies are typically characterised by hierarchy and rationality. Alvinius (2013) argues that bureaucracies are different from other organisation because

> "task distribution among employees is fixed; there are rules prescribing how work tasks should be carried out; property and rights associated with a position are inherent to the position, not the person occupying it; employment is granted on the basis of technical qualifications; employment provides lifelong career progression creating security; the employee receives a fixed salary based on rank; the employee is protected against temporary coercion, which can only be exercised under certain pre-determined circumstances; the individual has the opportunity to make appeals and lodge complaints" (p. 21).

There are many appraisals to this form of organisation but there are some dysfunctionalities that, especially in extreme demanding situations such as crises and disasters, cause problems. The system is regarded as inflexible and incapable with dealing in high-pressure environments. On the other hand the bureaucratic system does provide with some flexibility in the form of professional discretion of the emergency worker. These so called street-level bureaucrats are in direct contact with the environment and therefore are able to adjust the organisation to demands from that environment. Alvinius (2013) argues that in extreme demanding situations the emergency workers *"may well be the key enabler to achieving successful results"* (p. 30)

Boundary Spanner

Alvinius (2013) calls the emergency workers working at the street-level 'boundary spanners'. This is because they close the bridge between environment and the organisation. In uncertain situations, such as crises and disasters, they use both the organisations structure and guidelines as well as their own judgements to adapt to and cope with the situation. The results of the research by Alvinius show that individuals in the role of boundary spanners are crucial to the adaption and improvisation of the crisis and disaster management organisation to demanding and uncertain situations. The first condition is the individual's ability to bridge the organisational boundaries. They must have the ability to persuade based on their skills, competencies and their behaviour. Therefore, they need to be personable, respectful, reliable, tolerant, diplomatic, caring and committed (Alvinius, 2013). The second condition has to do with their task of collaboration; collectively achieving goals. Collaboration on equal terms is needed in demanding conditions. Alvinius (2013) claims that a combination of hard and soft power is needed as an collaborative tool. Nye (2008) discusses three approaches in using power as a collaborative tool. Through force and threat and through various kinds of reward systems. These two are forms of hard power which have the objective to change people's positions. An example is the mandated use of force by the police in order to get immediate change. The third approach is an form of soft power: through attraction and cooperation. It is in itself a means of power in changing someone else's behaviour. A combination of both soft and hard power, 'smart power', is the best approach. However, it is highly dependable of the context in which it is used. For example, in highly dangerous environments an emergency worker must employ more hard power and order bystanders to leave. On the other hand in the case of more stable and secure incident scene the emergency worker must employ more soft power in order to persuade bystanders to help him.

As seen earlier, there is increasingly more room (and need) for more and different type of actors in crisis and disaster management. There are already lots of other partners involved such as the vital infrastructure and high-risk organisations. There is however still not much room for helping bystanders, or as Alvinius calls them 'spontaneous links' (2013).

The third and final condition to help realise the adaption of the crisis and disaster management-organisations in demanding environments such as crises and disasters lies in improvisation by the boundary spanner and its freedom of action. Additionally, the boundary spanner must recognise improvised roles, including the spontaneous links. From a practical viewpoint there is no opportunity to prepare for this kind of external uncertainty. Therefore, the preparation of emergency workers must be focused on their own tasks and roles. However Alvius (2013) (as well as Kreps and Lovegren Bosworth (1997) and Van Duin (2011) argues that flexibility in this preparation is to be preferred over the traditional C-3 model. Organisations and their personnel must learn to recognise spontaneous links and make sure that they are accepted. Otherwise they are not able to operate in collaboration with each other. The boundary spanner therefore has three tasks here:

1. Balancing between structuring and improvisation in situations where much is at stake;
2. Creating confidence among the involved actors and arrange a sense of symmetry in between partners involved in crisis and disaster management-operations.;
3. Recognising improvised roles such as spontaneous links in order to cope with stressful conditions and bridge a gap between the organisation and the environment.

Especially the last point, recognising the spontaneous links in the environment, points at the ability of the emergency worker to interact with emergent helping bystanders.

Summing-up, the crisis and disaster management-organisations are characterised as almost purely bureaucratic organisations in the normal everyday operations; performing 'standard' tasks in a 'standard' organisational structure. In the response phase of a major crisis or disaster they are however flexible enough to cope with the demanding conditions resulting that incident. Boundary spanners are crucial in this process, they provide with the conditions which help realising this adaption. The first condition is the individual's ability to bridge the organisational boundaries. They must have the ability to persuade other organisations and bystanders into collaborating with them. This needed collaboration is the second condition. The right use of a combination of hard and soft power is needed as an collaborative tool. This is however highly dependable on the context of the situation. The emergency workers has the ability to judge which combination is most appropriate. Despite the fact that more and more partners join in the crisis and disaster management-operations, there is still room for including helping bystanders or as Alvinius calls them, spontaneous links. The third condition in the adaption process lies in the improvisational abilities of the boundary spanner and its freedom of action. He additionally has to recognise improvised roles in the environment such as the helping bystanders. Preparation of the emergency workers on this topic has to focus on flexibility. If the emergency workers learn to recognise the spontaneous links and their organisation accepts them, then their contribution will result in functional helping behaviour.

2.2.3 Interaction model

The interaction between the emergency worker and the helping bystanders has been the subject of a diverse range of theorising. Both sociological and psychological theories say that bystanders are likely to start helping when the need for help is greatest. New norms are evolving between bystanders that facilitate the helping behaviour needed to cope with the emergency. These insights provide with an opportunity for improving the helping behaviour by pointing out the salience of the group identity. The boundary spanning emergency worker has the ability to identify these helping bystanders and pointing out the need for them to self-categorise and start helping. The first part of this section will focus on the expected evolvement of different types of helping behaviour. The second part will focus on the expected conditions or situations under which helping behaviour becomes functional or dysfunctional.

Based on the previous theoretical findings the following model in figure 2.2 is drawn concerning the expected evolvement of the extent of helping behaviour over time.

Figure 2.2: Schematic representation of the extent of helping behaviour by citizens
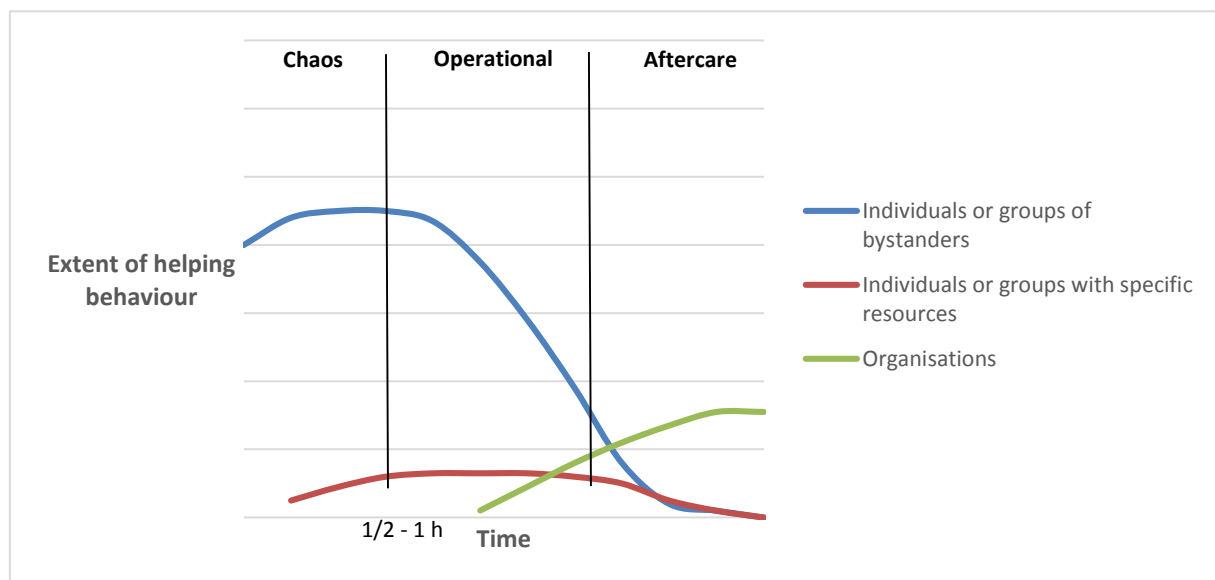
Before going into more detail on this model it is necessary to discuss some assumptions that underlie it. First of all, the time periods that are distinguished are purely indicative to denote the different phases of the incident. The time indication of a half hour to one hour is based on the expectation that on average it takes this much time to establish some sort of coordinated crisis and disaster management-operation (Helsloot, Martens, & Scholtens, 2011). The length of this first chaotic period is subject to all sorts of context related conditions. For example the remoteness of the incident location or the time needed to get a good overview of the needed help. The second assumption that underlies the model has to do with the scale of the extent of helping behaviour. Based on the available theory and the data from previous disasters it is not possible to come up with a quantitative approximation of the extent of helping behaviour. Neither the number of bystanders that helped nor the bystander-victim ratio can be deduced from the data. Despite these problems, the theory does provide insights into the trend of the extent of helping behaviour of the three different categories of helping bystanders over time in the different phases. The mutual relative relationship between the three categories also reflects findings of the theory.

Figure 2.2 reflects the hypotheses regarding the dependent variable; the variation in helping behaviour. The three categories of helping behaviour are derived from the available literature and available evaluations of crises and disasters explained earlier in this chapter. Hereafter the three categories will be discussed and hypotheses and expectations are formulated in order for them to be tested in the empirical part of this thesis.

The first category consists of individual helpers and/or groups of individual helpers which are either formed during the incident or which are based on a pre-existing social group. These are people who witnessed the incident and are in close approximation of the incident location. Also victims themselves, who help others, are part of this category. Based on the motivational types by Fritz and Mathewson (1957), the people within this category are 'returnees' and the first wave of 'helpers'. The conditions that lead to the actual helping can be explained first of all through the Bystander Intervention Model. The incident is of such a large nature that they feel responsible for helping others and thus do so. Because some bystanders are helping, others follow their example. This second process can be explained by the ENT and the SCT. Since the bystanders are in close proximity of one another they influence each other. Through their interaction they create new prosocial norms. This is done through the expression of strong opinions coming from the availability of specific knowledge and/or resources or through the direct instruction of emergency workers. Subsequently, this will lead to a quicker helping response. This creation of new prosocial norms explains the upward curve seen in figure 2.2. This curve eventually reaches an optimum either because of a sufficient number of helping bystanders or the arrival of the first emergency workers. Both the saturation of the helping bystanders and the arrival of emergency workers will lead to diffusion of responsibility and results in a decline of the extent of helping behaviour. Examples of individual helpers are the onlookers that immediately started helping at the Queen's Day attack in Apeldoorn, and regarding groups of helpers one can think of the construction workers who evacuated patients from a nursing home that was on fire in Nieuwengein in 2011. The second category of helping bystanders consists of a convergence of individuals and/or groups that feel that they can contribute to the crisis and disaster management-operations with specific knowledge and/or resources that they have available. After the early volunteers, they are the second and more successive waves of 'helpers' as described by Fritz and Mathewson. They are however not on the scene of the incident at start but hear from it or see the images of the crisis on television. According to the conditions of the Bystander Intervention Model they feel that there is need for a specific type of knowledge or resources and they feel responsible to react and converge to the scene of the incident. Therefore, an upward trend is witnessed in the figure. Again, there is an optimum followed by a decline which was also seen in the previous categories due to sufficient capacity of the emergency workers and the resolved need for the specific resources of bystanders. Examples here are the convergence of a specialised traumatology doctor to the shelter location of the Airplane crash of the Turkish Airlines flight in 2009 near Schiphol and the convergence of a search and rescue K-9 unit at the disaster site of the 2000 Fireworks Disaster in Enschede. The third and final category consist of organisations that provide specific services on request of the crisis and disaster management-organisations. This can be arranged beforehand by the crisis and disaster management-organisations. However, it can also occur when there is a specific need for a certain organisation or service. Towards the end of the crisis the operational phase turns into the aftercare phase. Because eventually the situation has to go back to a normal state, several civic organisations take over the aftercare process and continue the work on the same level but in a normal fashion. Therefore, the 'organisations' curve eventually flattens out.

Examples here are the arrangements that are made in the course of the psycho-social care of the victims and their relatives in the aftercare phase. For instance General Practitioners and Victim Support in The Netherlands are involved in the process. But also ad hoc arrangements with building contractors are common in the case of clearing debris.

The remainder of this chapter will discuss the expected conditions and situations under which helping behaviour becomes functional of dysfunctional. The focus will lie on the effect of the interaction on whether the helping behaviour will be functional or not. In the first phase immediately after the incident occurred, the crisis and disaster management-organisations cannot influence the helping behaviour that is likely to occur. Only some instructions can be given over the phone by the emergency operator. In this phase most helping behaviour is helpful; because of the quick response and the prevention and limitation of further injury and damage. Once the emergency workers start arriving on the scene, most helping bystanders stop their helping efforts. Especially when they are victims themselves. When there are not that many emergency workers on the scene yet, the helping behaviour is functional. In order to effectively help al victims they provide with a needed increase in the emergency response capacity. They can also provide with highly relevant information on either the cause of the incident, the number of victims, immediate dangers and specific information on unconscious victims. This is also an important aspect during the call to the emergency operator. According to the ENT, the emergency workers can stimulate the creation of prosocial helping norms by providing the interaction process with a strong opinion; by instructing them on things they can do. The SCT additionally provides with another possible stimulation of functional helping behaviour. The emergency workers can promote the salience of the identity of the victims and indicate the inclusiveness of the victim to the group of bystanders. For instance emergency workers pointing out that passengers should take care of their fellow passengers and try to keep them awake and responsive.

The discussion of the boundary spanners does also provide with some additional expectations on influencing bystander helping behaviour. They have the ability to provide with conditions which help realise an effective emergency response. In other words they are the ones that can promote functional bystander helping and demote or transform dysfunctional bystander helping behaviour. First, when they succeed in persuading others into collaboration with them in the emergency response, the negative aspects like an unclear overview of the emergency response is limited. This ia because when helping bystanders work together with emergency workers they do not initiate helping efforts on their own. Next to that, the interference with information streams is also limited due to this coordination of the response. This does however require some guidance which costs time and capacity. When the emergency worker uses smart power as a collaborative tool, he can guarantee the functional helping behaviour and make sure that dysfunctional behaviour such as interference with the emergency response is limited. For example, when too much hard power is used to prevent people from helping, they are more likely to start harassing the emergency workers because they get frustrated when they feel that there is too little capacity available. On the other hand when too much soft power is used, the helping bystanders can expose themselves to great dangers and risks. In order to use a right mix of hard and soft power the emergency workers must judge the context of the situation to see what will work best. In this, there is a need for improvisation and freedom of action. When this professional discretionary space is available for the emergency worker, he can better judge the situation and the offered help from civilians. One final condition is important to mention.

When emergency workers are prepared for the interaction with helping bystanders, they will recognise them better and are able to effectively use them. Preparing the emergency workers also sends out a signal that they may use this extra help and thus the organisation accepts the personal judgement of the emergency workers.

3 – Methodology

The research that forms the basis of this chapter is of a qualitative nature. A comparative case study of major crises and disasters is performed in order to provide an answer to the research questions posed in chapter one. The study consists of a content analysis of evaluation reports on crises and disasters in The Netherlands during the past two decades, which show emergent behaviour by bystanders. This analysis is complemented by some in-depth interviews with emergency workers who were among the first on the scene at those incidents to focus more deeply on the interaction process between the emergency workers and helping bystanders.

This chapter will discuss first the challenges a researcher faces when studying crises and disasters; since the course and the outcome of every crisis is different, the discussion on terminology is not conclusive and due to the limited number of crises and disasters there might be a lack of variation in the case selection. The second section will discuss the process by which the cases are selected, followed by a section on the selected cases. The chapter ends with a section on the research methods, discussing the data collection and the data analysis.

3.1 Challenges in studying crises and disasters

The study on crises and disasters situations is a special kind of social science research and is mainly dominated by scholars from the USA, Germany and Italy (Alvinius, 2013). This type of research, with the topic of crises and disasters, is faced with a number of specific challenges (Van Eijk, Broekema & Torenvlied, 2013; Drabek, 2005). The *first challenge* is related to all comparative case studies. It arises when a comparison is made between for instance in this case the interaction between the emergency worker and the helping bystander in different crisis situations. The challenge is that the course of the crisis and the outcomes of the crisis and disaster management-operations are highly contingent on that particular crisis situation. It is, under these conditions, not easy to draw general or generalizable conclusions from the diverse crises and disaster situations of the past decade. The *second challenge* lies in the fact that there is no general consensus on a definition of crises and disaster situations. Next to that, we only observe a crisis or disaster (and subsequently write about and evaluate it) when it has turned in one. There is a disproportionality in the attention of a few severe crises and disasters in the literature (Van Eijk, Broekema & Torenvlied, 2013). The challenge is to come up with a good definition and subsequently letting this definition reflect in a valid sample of crises and disasters. The *third challenge* lies in the selection of crises and disasters in which there was a display of emergent behaviour on the scene of the incident. If the selection of crises and disasters is based on a variation of crises and disaster characteristics, the selection may fall short in obtaining too little variation in emergent behaviour. This lack of variation will make it difficult to draw valid conclusion about the effect of the interaction between the emergency worker and the helping bystander on the variation in emergent behaviour. This is simply because too little data is available to make a decent comparison. On the other hand a selection based solely on the display of emergent behaviour can lead to an unrepresentative picture of helping bystanders in all crisis and disaster types. The next section discusses the process of case selection. In this process the three challenges have been taken into account. The cases are selected in such a way that most problems have been overcome.

3.2 Case selection process

"Case study analysis focuses on a small number of cases that are expected to provide insight into a causal relationship across a larger population of cases" (Gerring, 2007) Gerring also states that this leaves a problem for the researcher: Which cases should he choose? In large-sample research one can select cases through a more or less randomised procedure, by doing that the researcher will reach much more easily a good representation of the entire population and a useful variation on the dimensions of theoretical interest (Seawright & Gerring, 2008). A comparative case study, like the present one, often makes use of a selection based on 'pragmatic considerations' like time, money, expertise and access. These factor pose as good factors in case selection, but do not provide with an methodological justification for choosing case A over case B (Seawright & Gerring, 2008). It is possible that this will lead to misleading results, so even when pragmatic considerations form the basis of the sampling the researcher must know how the case selection reflects the population. Given the problems with both randomised sampling and sampling based solely on pragmatic considerations, the argument for some sort of 'purposive' case selection is strong (Seawright & Gerring, 2008).

Two objectives are important when selection cases in a purposive manner; that is the desire to come up with a representative sample and a useful variation of the dimensions of theoretical interest These objectives are the same as in an large-sample study with a randomised case selection. Seawright and Gerring (2008) among others have derived seven case study types with different purposes and therefore different sampling techniques. The seven types are typical, diverse, extreme, deviant, influential, most similar and most different. Especially the typical and deviant types seem to be of interest considering the purpose of this study. In deciding which of the two fits best, one must consider the third challenge discussed in the previous section. There must be a balance between on the one side a good variation of crisis characteristics and on the other side a good variation in the displayed emergent behaviour. When both conditions are satisfied; valid conclusions can be drawn based on a representative sample which reflect all major crises and disasters in The Netherlands. The aim of this thesis is to gain insight into how the interaction between the emergency worker and the helping bystander influences variation in emergent behaviour. In other words; how the emergency worker can promote functional bystander helping and stop or transform dysfunctional bystander helping. Therefore the cases are selected on a useful variation in emergent behaviour: selection based on the theoretical expectation of functional and/or dysfunctional helping behaviour. This reflects a typical sampling technique. The second challenge of choosing from a valid sample of crises and disasters based on a good definition is also addressed in the case selection. This thesis make use of the authoritative list of crises and disasters in The Netherlands composed by Van Eijk, Broekema and Torenvlied (2013). The first challenge is also to some extent addressed in the case selection by choosing from the authoritative list of crises and disasters and by creating a purposive variation in the independent variable 'emergent behaviour'. The second challenge of coming up with generalizable conclusions from this thesis is addressed more elaborately in the section on the research approach.

3.3 Selected cases

The sample from which the cases for this thesis are selected is based on a cross-comparison of the research by Van Eijk, Broekema and Torenvlied (2013) and two studies of the Dutch Institute of Physical Safety: the research track between 2006 and 2010 and a study from 2013 on bystander helping in incidents with the need for large scale medical aid. Appendix A shows a table with the cross-comparison.

Finally four cases are selected:

- Turkish Airlines crash Haarlemmermeer   (25 February 2009)
- Attack on Queen's Day Apeldoorn   (30 April 2009)
- Mall shooting Alphen aan den Rijn   (09 April 2011)
- Train collision Amsterdam   (21 April 2012)

3.4 Research methods

As mentioned earlier in this chapter, the empirical analysis will consist of comparative case study. This analysis will build first on a content analysis of several documented sources. Although these documents are considered secondary sources they do provide an excellent overview of the emergency response and the bystander helping behaviour that occurred. Additionally some in-depth interviews are held with emergency workers who were among the first arriving on the scene of the four selected crises and disasters. Due to problems with getting into contact with those persons the number of interviews is only limited to at least one for every selected case. The first challenge in studying crises and disasters has for a large part been overcome by this data triangulation; both the content analysis and the in-depth interviews will contribute to the answering of the research (sub)question(s). In the in-depth interviews the focus is placed more extensively on the interaction between the emergency worker and the helping bystander. By doing this, it helps further deepening and broadening the results in order to make them more generalizable.

Data collection

The data collection will then consist of two parts. The first part focusses on the collection of documented sources. Mostly evaluation documents of the Inspectorate of Security and Justice and the Dutch Safety Board are collected. Additionally, public and private research institutes databases are searched on studies regarding the four cases. Internal (operational) documents of the crisis and disaster management organisations are not included in this study because of the limited mentioning of emergent behaviour and the accessibility of those documents. In table 3.1 below, an overview is given of the results of the data collection.

The second part of the data collection focusses on the in-depth interviews. For each case the concerning Security Region is contacted for identifying suitable interview respondents and establishing contact with them. This is done with careful consideration of the possibility that some emergency workers suffer from a 'posttraumatic stress disorder'. Therefore the supervisors of those emergency workers are contacted first in order to discuss this potential problem and come up with a strategy in contacting the emergency workers. In some regions the supervisor preferred that the contacting was done by themselves and in other region direct contact was possible.

Unfortunately there were difficulties contacting the right persons in each Security Region and only after a lot of referrals the right persons were contacted. For each case at least one interview was held with either a responding emergency worker or one of the First Officers (Officieren van Dienst) on the scene.

Table 3.1: Results of data collection of documented sources

Crisis or disaster		Documents	
Date	**Description**	**Organisation**	**Publishing date**
25-2-2009	Airplane crash Haarlemmermeer	Inspectorate of Security and Justice	June 2009
		Dutch Safety Board	July 2010
		Crisislab	April 2011
		Dutch Institute for Physical Safety	June 2013
30-4-2009	Attack on Queen's Day Apeldoorn	National Police Services Agency	August 2009
		Inspectorate of Security and Justice	September 2009
		National Coordinator for Security and Counter-terrorism	September 2009
		Dutch Institute for Physical Safety	November 2010
		Dutch Institute for Physical Safety	June 2013
9-4-2011	Mall shooting Alphen aan den Rijn	Inspectorate of Security and Justice	November 2011
		Dutch Police Academy	January 2012
		Dutch Institute for Physical Safety	June 2013
		Independent journalist Ivo van Woerden	March 2013
21-4-2012	Train collision Amsterdam	Inspectorate of Security and Justice	November 2012
		Fire department Amsterdam-Amstelland	Augustus 2012
		Dutch Institute for Physical Safety	June 2013

The interviews took place in the home organisation of the emergency worker and the interview is guided by an interview protocol (see appendix B). The interview is set up in an semi-structured form; both closed and open-ended questions are asked in a particular order. The interview protocol is drafted based on the theoretical framework and is judged by two independent employees of the Security Region Twente. After the interview is held, a transcript of the recording is submitted for approval by the concerning respondent.

Data analysis

For the analysis of the data from both the documents in the content analysis and the transcripts of the interviews there has been made use of an assessment framework (see appendix C). The assessment framework is also drafted based on the theoretical framework of this thesis and is also judged by the two independent employees who assessed the interview protocol.

The documents for the content analysis are analysed according to the assessment framework; relevant passages regarding the mentioned variables are coded. The same procedure is followed for the interview transcripts. This coding resulted in an data matrix with an overview of the number of times a certain variable is mentioned. This data matrix is then used in the case discussions in the next chapter to highlight the important topics. Additionally, exemplarily interaction situations between emergency workers and helping bystanders are included in the case discussions.

4 – Comparative case study of four major crises and disasters

This chapter contains the results of the content analysis of documented sources and the interviews held with emergency workers of the four selected cases: Turkish Airlines crash in Haarlemmermeer (2009), Attack on Queen's Day in Apeldoorn (2009), Mall shooting in Alphen aan den Rijn (2011) and the Train collision in Amsterdam (2012). For each of these crises and disasters, there are several evaluations and other (descriptive) documented accounts gathered. They come from both public agencies as well as private investigative companies.

The following four sections will each discuss one of the analysed cases. After a short introduction of the case, the section will focus on an analysis of the displayed helping behaviour. It then continuous with the discussion of functional and dysfunctional aspects of the emergent behaviour for each particular case. Thereafter the interaction, communication and collaboration, between the helping bystanders and the emergency workers shown at each selected crisis or disaster is discussed. Each section ends with an evaluation of the witnessed helping behaviour and whether or not it was regarded as functional or dysfunctional. The results from each case study are compared with the expectations that are discussed in section 2.2.

4.1 Turkish Airlines crash Haarlemmermeer; 25 February 2009

On Wednesday the 25th of February 2009, just before 10:30 am, Turkish Airlines flight TK 1951 was on its final approach to runway 18R of Schiphol Airport. Approximately one and a half kilometres before the start of the runway, the plane crashed onto a soggy field. It broke in three pieces and fortunately no fire broke out. Given the circumstances the number of lethal victims is relatively low. The plane carried 135 passengers including the seven crewmembers. Five passengers and four crewmembers did not survive the crash. Almost everyone on-board suffered from injuries due to the High Energy Impact from the crash. Only six people walked away with no injuries.

The location of the airplane made it very difficult for the crisis and disaster management-organisations to get to the scene of the incident. Most passengers left the plane on their own or with the help of fellow passengers. Several commuters from the nearby highway A-9 parked their car on the side of the road and also rushed to the scene in order to join the rescue effort. This incident is selected for this case study because of indications of problems with coordination of the distribution of victims to hospitals and an unclear overview of the response due to the emergent behaviour. Both are important dysfunctional aspects of helping behaviour. For instance, injured passengers walked towards the highway A-9 and stopped motorists asking them to take them to hospital. This way the crisis and disaster management organisations could not properly determine the right number of victims. There even was an account of one passenger who took a ride to the airport in order to catch his connecting flight to the USA. It took the crisis and disaster organisations several days to find out where this person was[2].

4.1.1 Analysis of the emergent behaviour

The cause of the crash and the handling of the crisis by the crisis and disaster management-organisations has received a lot of attention. This is quite normal; the Inspectorate evaluates the quality of the crisis and disaster management-operations of most crises and disasters.

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[2] This account does not show in any document, but was mentioned to me in a conversation with a former public safety administrator of Haarlemmermeer

The Dutch Safety Board has the statutory obligation to investigate the causes of any major aviation incident. The great attention towards the involvement of helping civilians during this crisis event however is not quite normal. Both agencies mention a great deal about the helping behaviour of both fellow passengers and bystanders. The private research institute 'Crisislab' additionally did research on the civil response of the passengers themselves as well as the bystanders. Their interaction with each other and with the arriving emergency workers has been described extensively in a resulting book (Scholtens & Groenendaal, 2011).

Before arrival of emergency services

Immediately after the crash, passengers fled the aircraft through the emergency exits and the cracks in the hull of the plane. Several passengers first motivated and helped fellow passengers in exiting the airplane. Outside of the plane there were some passengers who told their fellow passengers to clear the immediate surroundings of the airplane because a fire could break-out. There were also passengers who stressed the need for them to help the passengers who were still inside the plane. Several of them went back inside to help. Meanwhile, a dozen of bystanders who arrived on the scene and started assisting the fleeing passengers and assist the already helping passengers inside the airplane.

The helping behaviour is first displayed by individual helpers. Both passengers and bystanders are the ones who immediately started helping the victims in need. After the initial first moments there are some small groups formed of bystanders and passengers that start getting the rest of the people out of the plane. These groups, containing individual bystanders, are fleeting in nature; they form on the basis of one particular helping action and after completion the group dissolves into individuals. This is for instance visible in the report of the Inspectorate. They describe a group of bystanders and passengers who use a part of the broken hull of the plane to transport a victim to one of the victim shelters.

Based on the motivational typology of emergent behaviour by Fritz and Mathewson (1957; in Turner and Killian, 1987) the passengers can be classified as 'returnees'. They are themselves victim but their goal is to locate and help other passengers. The helping bystanders can be classified as the first wave of helpers. They are either witnesses of the crash or are confronted with the great number of victims and start helping. There is nothing mentioned about the other types at the scene of the crisis.

Upon arrival of emergency services

After 10 to 20 minutes, the first emergency services started arriving on the crash site. For most of the helping passengers this was reason to abandon their helping efforts and proceed to the nearby farm buildings. Gradually the amount of helping bystanders decreased as more and more emergency workers arrive on the scene. Groups of helping bystanders were not seen any more after that. There are however some individuals who continue to work alongside or even in collaboration with emergency workers; both in the field and in the nearby farm buildings in which a victim shelter was opened.

Characteristics helping bystander

As can be seen above, the helping behaviour displayed at the crash site was initiated by the passengers and bystanders themselves. In fact, most of the rescue efforts were already completed at the time the crisis and disaster management-organisations arrived on the scene.

Only the victims that were severely trapped and pinched-in in the wreckage had to be rescued by the firefighters. After arrival of the emergency workers there is a change in helping behaviour visible. The initial first-aid and rescue efforts were completed and more specialised help is being arranged by the emergency services. The characteristics of the helping bystanders also changes as the number of bystanders decreases. Only the ones with specific knowledge or resources remain helping the emergency workers. For instance, several motorists who stopped at the highway A-9 had the intention to help. Especially since they had specific Emergency Medical Training (EMT) or were trained Emergency Response Officers at the companies they worked for. There was also a retired police officer who saw the plane crash and did not hesitate to start helping the victims. There are also helping bystanders who contributed to the crisis and disaster management-operations with specific resources. An example is a farmer who offered his assistance by driving back and forth from the plane to the victim shelter with his tractor, transporting victims and emergency workers with their equipment. Another example is the opening of victims shelters in the farm buildings nearby.

4.1.2 Functional and dysfunctional aspects

There are quite a lot of functional aspects of helping behaviour visible in this case. One of the most striking ones is that citizens provide with a lot of relevant information. Even before Air Traffic Control knew that a plane had crashed, the emergency services received numerous phone calls of bystanders who witnessed the plane going down. The bystanders provided the emergency operator with detailed information on the exact location of the crash site, that no fire had broken out and on the number of passengers and their injuries. This was highly important information, since the exact location was not clear for all emergency workers. Another functional aspect of the helping behaviour is the quick response of the passengers themselves and of arriving bystanders a few moments later. Especially for the rescue efforts this led to an increase of the capacity of the emergency response. After the initial rescue and evacuation of the airplane, the bystanders with specific knowledge of EMT or other first aid training proved to be very valuable for the emergency workers. In advance of the arrival of the emergency workers and alongside the activities of the emergency workers, helping bystanders contributed in the prevention and limitation of further injury of victims. The opening of the farm building to provide initial shelter for the victims and the transportation with the farm equipment made it much easier for the emergency workers to provide the help the victims needed.

Intermezzo 1: Doctors at the official shelter "de Wilgenhorst"

After the triage in the emergency shelters the less injured people were transported by bus to the official shelter in the sports centre "de Wilgenhorst". In this location there is a possibility for the victims to be registered and reunited with their loved ones. A specialised traumatology doctor accompanied the alarmed medical team. They were sent there to do a secondary triage round of the victims and provide medical support at the shelter. A second doctor was already at the Wilgenhorst and offered his help to the medical team. The two doctors reassessed the arriving victims and diagnosed that most of them had suffered severe trauma due to the High Energy Impact of the crash. They both decided that all of those victims should be send to hospital immediately.

The registration process experienced great difficulties due to this decision. Almost no one was registered and only a few victims were reunited with their families. This decision, made by helping bystanders, was not properly communicated at the crisis and disaster management-organisation and the hospitals were not expecting any new severely injured people.

There are also some dysfunctional aspects identified in this case study. As predicted when selecting the case there were quite some problems with emergent behaviour resulting in an unclear overview of the response. Based on the plans and preparation of the crisis and disaster management-organisations, victims should be registered at the scene of the crisis. In the case of a large number of victims the first officer 'medical aid' (OvD-G) has to direct the victims to suitable hospitals. Several victims however left the crash site without being registered by the emergency workers. They went straight to the nearby hospitals and those hospitals were confronted with too many victims. This additionally contributed to problems with drafting a passengers list that the crisis and disaster management-organisations could rely on in their communication towards the families of the victims and the general public.

The problem of an unclear overview of the response is more specifically visible in the decision that the two doctors made in the official shelter location. They did not have a formal operational role, but with their specific knowledge they took over the emergency response in the shelter. By sending all those victims to the hospital, they unexpectedly overwhelmed them with a secondary wave of victims. Moreover, this decision was not communicated with the rest of crisis and disaster management-organisation. Based on the two situations explained above, one can conclude that the problems in the overview of the emergency response created by emergent behaviour, immediately resulted in an interference of the information streams.

Finally, there is one other dysfunctional aspect of helping behaviour which was displayed in this case. After the arrival of the emergency services there were still helping bystanders inside the plane trying to free the pinched-in victims. The firefighters ordered those people to leave the airplane, since they did not have the proper protective gear and were not trained for the dangerous situations in which the rescue operations continued. Another example of citizens not properly assessing the risks they take was discussed in the report of the IFV (2013). A medic from an arriving ambulance stopped some bystanders who were trying to turn a victim to his back. The possibilities of further injuries and damage to the nerve system is extremely high when this procedure is not done by trained professionals.

4.1.3 Interaction between helping bystander – emergency workers

In the first phase of the emergency response the passengers and helping bystanders were the only ones on the scene. As seen earlier in this section, individuals formed fleeting groups for small specific tasks such as transporting victims toward the shelter. After the arrival of the emergency workers most passengers and bystanders assessed the situation and decided that they were not necessary anymore. A couple of bystanders continued helping and therefore needed to interact with the emergency workers.

Instructions and deliberation

Although most of the bystanders had some sort of emergency medical training and could provide help based on their own knowledge, they all first offered their help to the emergency workers. In turn the emergency workers gave them clear instructions on the tasks they could perform. The farmer that assisted in the transportation of victims and emergency workers on the field, started helping after he heard how he could be of assistance.

Intermezzo 2: Farmer assisting with his equipment

The first officer 'medical aid' (OvD-Geneeskundig) asked a police officer to try and find a way to transport the heavily wounded victims out of the soggy field. One of the onlookers heard this request for help and responded by offering to assist with his tractor with cart. He went home to get his tractor and assisted the emergency workers the rest of the day with driving back and forth between the road and the crash site. He transported the heavily injured victims who were freed from the wreckage to the ambulances and additionally brought the emergency workers and their equipment to the crashed airplane. In the end, during the evening he drove the bodies of deceased victims off the field.

Collaboration conditions

The conditions under which the collaboration between helping bystanders and the emergency workers took place were often hierarchical in nature. This is already visible in the fact that the helping bystanders turned to the emergency workers for instructions. The collaboration was sometimes based on equal terms, however mostly on general activities. With specific medical procedures, the helping bystanders provided some extra hands. Additionally, they were assigned simple tasks which fell within the task description of the emergency workers from which they received the instructions.

The situation in the official shelter is an exception to this; there the hierarchical nature of the collaboration was the other way around. The opinion of the two doctors was leading and their instructions were followed by the emergency workers.

**Boundary spanning activities**

The emergency workers arriving on the scene were confronted with a great number of victims, almost all of them injured. They encountered a lot of helping behaviour of both passengers and helping bystanders. The first emergency workers gratefully made use of the extra capacity of the helping bystanders.

The reports of the Inspectorate and the Safety Board has not made many comments on emergency workers diverging from the structure and preparations made for dealing with such a situation. They do acknowledge that in the case of an event such as the plane crash the plans will not suffice. Improvisation on both the role of the emergency worker as well as its tasks is needed in order to cope with the crisis. Especially in the execution of the tasks there is room for including helping bystanders. This can be seen in the previous sections; emergency workers do allow helping bystanders performing small tasks supporting the emergency worker.

4.1.4 Evaluation of the interaction

When comparing the results of this case study to the expected extent of helping behaviour discussed in chapter 2, one can see that for the large part the helping behaviour consisted of individual helpers. They were either direct witnesses of the crash (e.g. people living nearby or commuters on the highway) or survivors of the crash. Most of the survivors also injured themselves. Since it took quite some time for the emergency workers to arrive on the scene, you see first a bigger increase in helping behaviour than expected. After several minutes there are bystanders arriving at the crash site and started helping, subsequently more follow their example. There are certain bystanders with specific knowledge of EMT who urge others to start helping them as well. This stimulated the creation of new norms that prescribe that they need to help. Also passengers are seen motivating fellow passengers to help others getting out of the plane. Basically a new group identity of airplane crash survivors is formed. Once the emergency workers start arriving on the scene, most of the passengers stop their helping efforts and turn to the emergency workers for help themselves. There is some evidence to suggest that the extent of helping behaviour reached an optimum due to sufficient helper-victim ratio. There are only a few examples of people converging on the scene of the disaster offering their specific knowledge or resources. Only the farmer who assisted with his equipment and the traumatology doctor at the victim shelter. The third category that was discussed in chapter two consists of organisations which are asked by the emergency workers to provide specific services. In this case this only started at the end of the operational phase, when Victim Support The Netherlands took on a large role in the aftercare process. In the figure below the results of the emergent behaviour is visualised.

Figure 4.1: Extent of helping behaviour over time at the Airplane Crash Haarlemmermeer
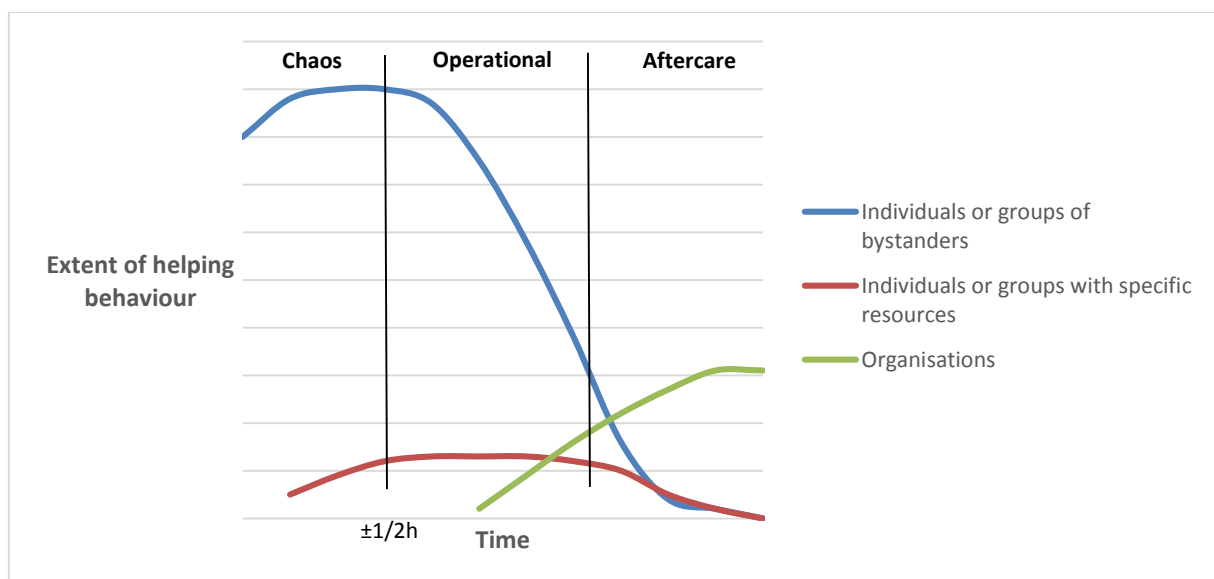
There was a lot of functional helping behaviour visible. It was striking that bystanders provided much needed information on the actual location of the crash and other contextual information. The emergency operators did try to get as much information as possible from the callers. After the arrival of the first emergency workers there was not enough capacity for the emergency response. Emergency workers therefore did stimulate the continuing of helping behaviour by giving clear instructions on what to do. This was mainly outside of the plane and with some bystanders even inside of the plane. The helping behaviour was not so much promoted through pointing out the salience of group membership. The emergency workers had to improvise on their tasks and subsequently let bystanders assist them in supportive tasks. Some of the bystanders who had medical training were allowed to help with the core tasks of the emergency workers. In most examples of helping behaviour the civilians first turned to the emergency worker for instructions. So there was not much persuading needed for the bystanders to start helping, however the emergency workers did need to coordinate the activities of the bystanders to some extent. This does seem like a hierarchical collaboration. After a while the helping bystanders are directed to leave the plane because it was too unsafe for them to work in. This display of hard power is the only one during this case. The lack of the right amount of hard power in the official shelter resulted in an unclear overview of the response. There is mentioning of the right use of soft power in order to collaborate with the helping bystanders, especially in the case of the first aid on the field and in the victim shelter. One final noteworthy thing to mention is that when the emergency workers were 'forced' to improvise and needed to collaborate with bystanders they did have the feeling that they had the acceptance of their organisations but were not explicitly prepared for it.

4.2 Attack on Queen's Day Apeldoorn; 30 April 2009

During the festivities on Queen's Day 2009 in Apeldoorn a man drove his car through the barriers and through a great number of onlookers in an attempt to hit the bus with the Dutch Royal Family. He ran over 17 people, including some small children. Ultimately leading to 10 people injured and seven people died. The driver also died later that day in the hospital. Immediately after the incident several people rushed onto the intersection where the attack happened. They started helping the victims, of whom four suffered from immediate cardiac arrest due to major trauma from the impact. Because of the festivities there were already first aid workers from the Dutch Red Cross and both normal and military police officers on the scene. The crisis and disaster management organisation were on stand-by in case something would happen. Due to this preparation the emergency workers operated in a coordinated manner rather rapidly after the attack.

The quick coordination and the involvement of civilians in that emergency response seem to have played a large role in the limitation of further injury and even furthers deaths. Prevention of further injury and damage is one of the functional aspects of helping behaviour. Coordination of this helping behaviour is however often seen as a dysfunctional aspect since it costs time and capacity. Due to this combination of seemingly functional and dysfunctional aspect this incident was chosen for a case study.

4.2.1 Analysis of the emergent behaviour

As mentioned earlier, the whole nation was shocked due to the horrific images of the attack. After several seconds several civilians and emergency workers start providing first aid and soon the emergency response is working in a coordinated fashion. A thorough investigation followed soon after the attack. Different agencies focused on different aspects.

The National Coordinator for Security and Counterterrorism and the Dutch National Police Service have focussed on the preparation and prevention of possible attacks and the criminal investigation. The Inspectorate focussed on the preparation and response of the crisis and disaster management organisation. They do mention some things on the helping behaviour of bystanders, but focus on the regular processes. The IFV research provides with an important insight in the helping behaviour that was displayed. Because the emergency workers were already on the scene when the attack occurred, there will be no different sections showing helping behaviour 'before' and 'after' the arrival of emergency workers.

The helping behaviour that is witnessed on the scene is mostly done by individual helpers but also comes from first aid workers of the nearby Dutch Red Cross 'first aid stations' and (military) police officers who were at the scene. The first aid workers were hired by the municipality for their help during the festivities and a first officer 'medical' and an ambulance were specially assigned to the event. Most of the seventeen injured people needed immediate help and the capacity of the emergency workers was too small to attend to all victims. Bystanders then started helping on their own initiative and they can be categorised as the first wave of 'helper' types. They performed specific medical tasks; most of them were medical professionals such as doctors, GP's and off-duty paramedics.

Intermezzo 3: Specialised help from medical professionals

Almost all of the helping bystanders that assisted with the medical care of the victims were medical professionals. Several doctors, General Practitioners and doctors in training live in the neighbourhood and were watching the parade. There were also off-duty nurses and paramedics among the onlookers. After the attack they all felt responsible to start helping because it is in their nature. The first aid workers from the Red Cross also felt that obligation.

They formed ad hoc teams that started helping the victims. The bystanders worked in collaboration with the arriving emergency workers. They made use of the equipment of the ambulances and the first aid stations and performed specialised medical treatments.

Next to the help of the medical trained bystanders, there were also several bystanders who performed all sorts of supportive tasks. A motorcycle cop and some bystanders cleared the routes for the ambulances by removing the crowd barriers and others helped police officers in collecting information about the victims. They searched for identification and also for personal belongings, which they then secured and handed over to the police.

Characteristics helping bystander

The helping bystanders involved in the medical treatment of the victims was initiated by themselves. Supportive tasks that were performed were mainly initiated after instruction of police officers or other emergency workers. The helping behaviour continued, also after the arrival of sufficient emergency workers. As mentioned above, there were several bystanders who had specific knowledge of medical interventions. There were however also bystanders who only had some sort of emergency medical training. A good example is the photographer Paul Groeneveld. He started taking pictures of the horrific scene but quickly came to realise that he needed to do something as well.

Saving lives was more important than documenting the event, but moreover he was trained in CPR and therefore could contribute with his skills.

4.2.2 Functional and dysfunctional aspects

As was mentioned in the introduction of this case, the main functional aspect of the bystander helping behaviour was the prevention of further injury and damage. In other words, the direct intervention saved the lives of several victims. In the interview (#4) with an employee of the crisis and disaster management organisation this was specifically mentioned. If the bystanders had not intervened with the victims that needed CPR than they would not have had any chance of survival. Another important functional aspect is the providing of specific information to arriving emergency workers. These arriving emergency workers received not only information on the nature of the incident, but also on personal information of the victims and their injuries. Finally, and perhaps the most obvious one, the helping behaviour provided in an immense increase in the capacity of the emergency response. During interview 4 it was mentioned that despite all the preparations on the side of the emergency workers, they would not have been able to get this much result in such a short period: within one hour all victims were taken to a hospital and the involvement of the bystanders had been a key enabler for this success.

Intermezzo 4: Medical supplies for helping bystanders

A (possible) downside for the great extent of helping behaviour of medical trained bystanders is that the ambulances which first arrived were plundered for medical equipment and supplies of oxygen and infusion (IV) and intubation materials. The personnel of the first ambulance found this extremely dissatisfying and believed that they were interfered in the performance of their jobs. These ambulances were too underequipped and could not be used for transportation of victims to the hospital. The report of the IFV on the other hand discusses the great need for materials and the fact that a paramedic deliberately left her ambulance open so bystanders could take whatever they needed. In interview 4 this issue was also discussed and it was made questionable that this plundering actually interfered with the emergency response. They did however evaluate this issue and use this experience in their newly drafted plan on interaction with emergent behaviour during their work.

Interference with the emergency response is one of the most mentioned dysfunctional aspects of the helping behaviour during this incident. As can be seen above the plundering of the ambulances seems to be causing some dissatisfaction among the paramedics. It is however argued that despite this plundering the overall outcome of the emergency response is positive and it is doubtful that actual interference occurred. Another dysfunctional aspect that was mentioned is the fact that the coordination of helping behaviour costs extra time and capacity of the emergency workers. As can be seen in the next intermezzo, one of the first officers 'medical' made sure that sufficient help was distributed over the victims. Whether the help came from emergency workers or helping bystanders was not important (interview 4), his role prescribes this task of coordination.

4.2.3 Interaction between helping bystander – emergency workers

The interaction between helping bystanders and emergency workers took place on two 'locations' on the incident scene. The first location is the one with the victims, were medical help was needed. The other location involved the surrounding where general supportive tasks were employed to assist the medical emergency response.

Intermezzo 5: Instruction and collaboration in ad-hoc teams

Because of the great number of heavily injured victims the initial emergency response would not have had the capacity needed to deal with this. Because of several medical trained professionals that were on the scene during the attack that gap in capacity could be filled. After an initial triage by the first arriving paramedics and the first officer medical, they realise that ad-hoc teams of both emergency workers and helping bystanders had formed that were helping a specific victim. The first officer than focused on directing arriving emergency workers to the victims that needed the most help. He also continually evaluated the help given to the victims and instructed some on the treatment techniques. He solely focused on the coordination of the emergency response and the distribution of victims to the hospitals.

Instructions and deliberation

As seen in the intermezzos in this case study, the helping behaviour regarding the direct help of the victims occurred relatively on own initiative and the helpers almost all knew how to give the required medical aid. The first officer 'medical' evaluated and corrected the help by giving some instructions to helping bystanders. The paramedics from the first ambulances did instruct helping bystanders to come to them if they needed medical equipment or supplies. As seen in intermezzo 4, these instructions were not followed. Besides the helping behaviour regarding the direct medical aid of the victims there are all sorts of supportive tasks employed by bystanders. Here, more direct instructions were needed from emergency workers. The police officers asked people to hold up sheets around the victims and collect personal information and belongings.

Collaboration conditions

The collaboration with helping bystanders in providing medical aid to the victims occurred on a quite equal basis. Teams of helpers and emergency workers emerged and were supplemented with arriving emergency workers with medical supplies. This helping behaviour is of such good quality that the collaboration continued after sufficient emergency workers arrived. Other helping bystanders are simply asked to continue with keeping victims awake and stable or are deployed at creating a space to work in.

Boundary spanning activities

The number of victims, 17 in total, is not that great a number for a crisis or disaster in The Netherlands. However, in this case the number of immediate life-threatening injuries created the capacity problem for the emergency workers. The need for task improvisation is obvious and the arriving emergency workers let helping people continue and ask others to assist them.

Role improvisation by for instance the first officer 'medical' is also needed to keep an overview of the entire emergency response and coordinate the activities. New arriving ambulances brought extra medical supplies with them and the driver of the first ambulance became more of a logistics coordinator, in order to make sure that the supplies were used effectively.

Within the collaboration and communication between the emergency workers and the helping bystanders the type of power used is often of a soft nature. For instance after the attack the public was asked to clear the area and provide passageways for the arriving emergency workers. The motorcycle cop who asked several onlookers to move the crowd barriers let them take care of it on their own. The selection of helping bystanders on the basis of good faith and partly on familiarity of the helpers by the first officer 'medical'. Once they started helping, the first officer evaluated the tasks that were employed by the bystanders and when dissatisfied he asked another bystander to continue.

4.2.4 Evaluation of the interaction

The chaos phase is a lot shorter than in an average crisis, it takes merely 15 minutes before the coordinated emergency response is in operation. When comparing the first category of individual or groups of helpers to the expectations from chapter 2, one can see an interesting difference due to this quick coordinated response. Again this group consists of individual helpers; people who were looking at the parade and felt responsible to start helping. Many onlookers are severely shocked by what they had just witnessed and only a few, who are medically trained professionals, start helping. Only a few others follow their example. Because of the sufficient amount of 'professional' bystanders and the quick arrival of emergency workers, the responsibility of others to help decreased rapidly. Perhaps because of this the social interaction process has come up with new norms that dictate that everyone must clear the immediate area. The second category, consisting of convergence of helping bystanders with specific knowledge or resources, has not been witnessed during this incident. The incident location was in fact quite easy to overview. The help needed was only with the medical treatment of victims who lied there on the tarmac. Another interesting point in this case is the early involvement of the third category of organisations that are asked by the crisis and disaster management organisation to assist. Because of the festivities the Dutch Red Cross was already on the scene when the attack happened and started helping immediately and provided with much needed medical equipment and supplies.

Figure 4.2: Extent of helping behaviour over time at the Attack on Queen's Day Apeldoorn
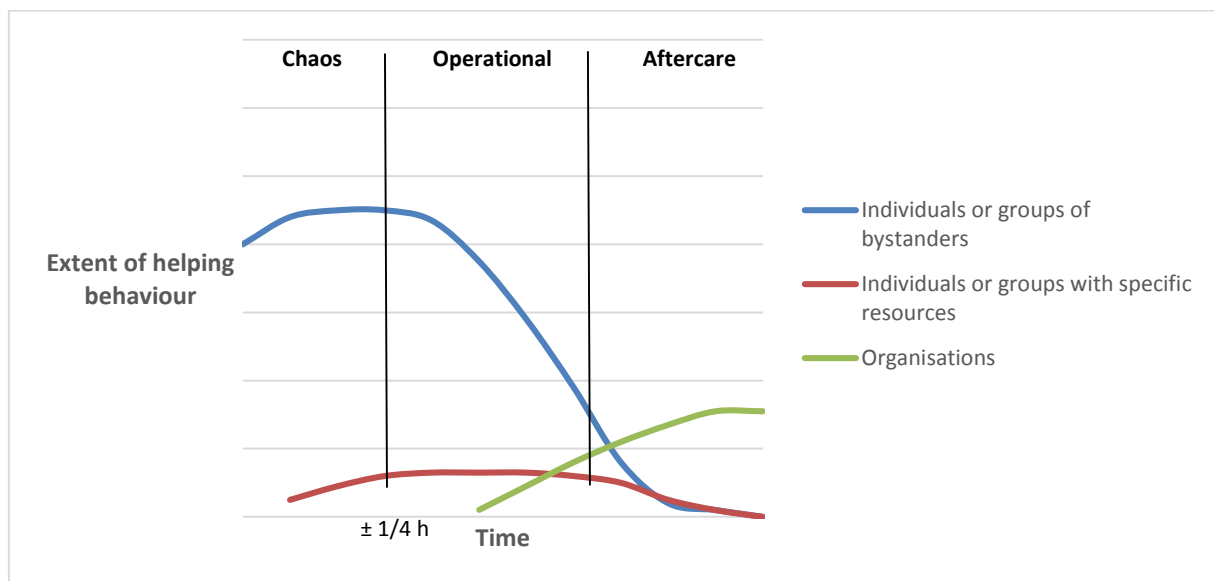
The helping behaviour displayed during this crisis is quite different compared to what was expected and what can be seen in the other three cases. After the arrival of more and more emergency workers the helping bystanders who were giving medical treatment to the victims did not come to a halt. The fact that most of them were medical professionals contributed to this. The emergency workers let the bystanders continue their helping effort because of the immense capacity problem due to the high number of life-threatening injuries. Even extra bystanders were urged to help them. The most functional aspects of the bystander helping behaviour was that the civilians were immediately on the scene and could start the needed medical aid and they posed to be a welcome increase of capacity. The joint coordinated response in the ad-hoc teams resulted in a clear overview of the emergency response and helped keeping the information streams of the crisis and disaster management organisations under control. The helping behaviour was even deliberately enabled to gather relevant information of the victims; bystanders were asked to search for identification documents. Instructions were given where they were needed, but most of the helping behaviour was left to the initiative of the bystanders. Bystanders with supportive tasks were clearly told what they could do and were then left to take care of it themselves. This led to an increase in the capacity of the emergency workers, who then could focus on the treatment of the victims. Coordinating the response by the helping bystanders did not cost much more capacity and time for the first officer 'medical'. The paramedics did notice that it cost them extra capacity. In interview 4 there was however a discussion that perhaps they had to improvise on their tasks and role, and should have taken up a more coordinating role, like with the dispersion of the medical supplies by the driver of the first ambulance later on. Again there was a lot of soft power used as a collaborative tool. The attack made a deep impression and a lot of bystanders offered their help and subsequently were allowed to help. Too little hard power was used to avoid the plundering of the materials from the ambulance. This has led to some interference of the emergency response. Finally, the first officer 'medical aid' has made great use of his professional freedom to make judgement calls diverging from standard procedures. They were not explicitly prepared for this kind of interaction with helping bystanders. Security Region North- and East Gelderland is now drafting a new approach for streamlining the involvement of citizens in the crisis and disaster management operations.

4.3 Mall shooting Alphen aan den Rijn; 9 April 2011

Shooting sprees in public places rarely occur in The Netherlands. The Mall shooting in Alphen aan denn Rijn in the western part of The Netherlands is one of the most recent and severe ones. On April 9th 2011 a 24 year-old gunman arrived at the shopping mall the "Ridderhof". He frantically started shooting his way inside, killing six people and injuring 17 others. At the cash registers of a supermarket he commits suicide. The whole shooting only took three minutes but he created death and devastation among the mall personnel and the shopping public. The first emergency workers were on the scene within 7 minutes after the first emergency call. The first police officers went inside according to a so called AMOK-procedure[3], in order to take down the perpetrator and avoid any more victims. Inside they are quickly directed towards the shooters location by several injured and non-injured people. At the cash registers of a supermarket they were informed by an off-duty police officer that the shooter had killed himself. Meanwhile the first ambulance personnel had entered the shopping mall in order to do a first triage. The remaining people in the rest of the mall were evacuated through the emergency exits of the shops.

This crisis was chosen for the case study because the situation seemed to be one in which the emergency situation causes the disruption of traditional normative guidelines and a need for collective interpretation is high. Clear instructions from the emergency workers can lead to a functional helping behaviour according to the emergent norm theory. Therefore it is interesting to see if the instructions led to an increase in functional helping behaviour. For instance in the AMOK-procedure there are clear guidelines to instruct the people they come across to take cover. Did the people follow these instructions or did they take too great a risk helping fellow shoppers?

4.3.1 Analysis of the emergent behaviour

Public shootings are not often seen in The Netherlands. Therefore the general public and politicians spent a lot of attention on it in the aftermath. The main focus of the public agitation was on the motive of the perpetrator and how he got a weapons license. The agencies have rejected an application in 2005 and he was admitted to a psychiatric hospital in 2006. Nevertheless he was awarded a licence in 2008.

Considering the fact that there are not many examples of such kind of crises in The Netherlands, the emergency workers and the civilians did not have any experiences with this kind of situations. The Inspectorate of Security and Justice has evaluated the response by the crisis and disaster management-organisation. The Dutch Police Academy additionally did a study on lessons learned of the response on the shooting in Alphen. Both studies did not mention a lot of emergent behaviour. The study of the IFV also notes that there is not much documented on civil response during or right after the shooting. This might have something to do with the great endangerment of the active shooter situation. Next to that the physical surroundings have played a large role in the small amount of helping behaviour. However based on the interviews held with the first officer 'police' (OvD-Politie) there actually was considerable helping behaviour, especially in the aftermath: several citizens helped with the sheltering of victims, witnesses and anxious relatives and friends of the victims in a church building nearby (Interview 2).

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[3] AMOK-procedure: The police use this procedure in case of a shooting like the one in Alphen aan den Rijn. In the case of an active shooter, the police is trained in going towards the danger and neutralise the shooter in order to avoid more victims (Adang, 2012).

Before arrival of emergency services

The perpetrator started his shooting spree just outside of the south entrance of the shopping mall. He then continued onwards to the inside of the mall. Both outside and inside he shot several people. The whole event took only three minutes. During the shooting there are several accounts of helping behaviour. This was done by individuals helpers: both customers and shop owners. Shop owners lower their roller shutters and when it is possible they pulled people inside. There are even several accounts of shop owners dragging injured people into their shop. Customers flee also on their own inside the shops. In the larger shops such as the supermarkets and the drug store, the personnel of the shops led the customers into their stockrooms.

Based on the motivational typology, the helping behaviour displayed by the people inside of the mall can be classified as 'returnees'. They are themselves victims, but instead of fleeing they start helping others in need. Inside of the mall there are no accounts of helpers who come from outside of the immediate surroundings of the shooting. Outside however, there are accounts of 'helpers'. In Interview 2 a senior police officer recalls that there are several bystanders who helped inside the shelter location.

Intermezzo 6: Off-duty police officers

On this Saturday morning there were a lot of off duty police officers doing their groceries. Despite the fact that they did not carry a weapon, they all reacted immediately. Dragging people to safety, providing first aid and instructing people what they should do. One of the officers left the considerable safety of a pet shop in order to try and stop the shooter. He 'armed' himself with a broom. He followed the trail of wounded and panicking people towards the supermarket where he discovered that the shooter took his own live near the cash registers. He then continued on evacuating the immediate surroundings and informed the arriving police officers of the death of the shooter. They then start evacuating the whole mall.

Upon arrival of emergency services

The first two police officers arriving on the scene decided for themselves that they had to go in and take down the shooter at all cost. The following arriving units all went in with the same intentions and additionally to help the injured victims. It was only until the first officer 'police' (OvD-P) arrived on the scene, that the whole shopping mall was closed down by the police; nobody other than emergency workers were at that point allowed inside the mall (Interview 1).

Helpers from outside were not able to go inside. There were however multiple people inside who helped victims and assisted the emergency workers. For instance the off duty police officers mentioned in intermezzo 6. One of them had a leading role in providing arriving colleagues details of the shooting and the number and locations of victims. He had also started evacuating the other customers. He directed them inside the shops and instructed the shop owners that they had to register the customers first before letting them out through the emergency exits. He continues to play an important role in the following criminal investigation activities.

Next to the off-duty police officers there were other individual helpers who tried to help victims the best they could. For example: just after the shooting a nurse entered the mall with her husband for some grocery shopping. When confronted with several severely injured victims she quickly triaged some victims. She then started helping the one person who she thought still had a chance of surviving. After ambulance personnel took over the victim she was not allowed back inside, so her helping efforts stopped at that point. This is typical for many other returnees that helped fellow customers. Once 'their victim' was transported out of the mall, their efforts came to an end. All heavily injured victims that remained in the mall awaiting professional help were taken to hospital within one hour after the shooting started. On that point there still were wounded persons at the shelter location and some of the victims reported themselves to a nearby regional hospital.

Characteristics helping bystander

Most helping behaviour shown above is done by people who were on the scene and witnessed the shooting and therefore are victims themselves. All of them helped on an individual basis. The shop owners can be characterised as an pre-existing social group. They have a thriving shop owners association and due to the proximity of each other's shop they have a close connection. They did not form a group when they started helping however. Instead they just helped the people inside and just outside of their own stores. Most of the helping was done on own initiative, some people were encouraged by other helping bystanders to help them.

As mentioned above, inside the mall there were no helpers allowed. So when the emergency workers arrived they took over from the bystanders. In the shelter however there were helping bystanders from the category helpers. The building manager was asked by a police officer if he could open the shelter and start registering and divide the victims, witnesses and anxious relatives. The manager thus contributed to the crisis and disaster management-operation with specific resources; the opening of the building.

> **Intermezzo 7:** Next to the great number of off-duty police officers there were also other professionals present in the shopping mall at the time of the shooting. For instance a prison guard, a former military officer and a nurse. Next to that there were some company Emergency Response Officers from the drug store and both supermarkets who acted immediately. The common characteristic of these people is that they are all trained in providing either first aid or had EMT. A lot of the first response was done by these persons because they are not only trained on the actual helping tasks but more importantly they are trained to come into action.

4.3.2 Functional and dysfunctional aspects

The most prominent functional form of helping behaviour is in preventing and limiting further injury of people in the mall. Several shop owners, personnel and fellow customers have dragged others out of the line of fire or helped injured people who rushed to safety. Another functional aspect of helping behaviour lies is in providing relevant information on the route the perpetrator followed and the location and number of victims. Next to this the professionals who were off-duty in the shopping mall formed a welcome increase in the response capacity and contributed with their specific knowledge.

A major dysfunctional aspect of helping behaviour is the wrongful assessment of danger and risks. Many customers actually stared down the barrel of the automatic rifle of the shooter when they were pulled inside the stores. Another more horrific story is that of a woman who wanted to protect her customers and stood in the entrance of her store preventing the shooter from entering. She was shot several times and died. Once the first couple of police officers entered the shopping mall they encountered lots of people who were helping others. They clung to the police officers begging them to help the person they were with. The first officers however did have the objective to take down the shooter first, thus they were interfered in their response (Interview 1). Also outside lots of anxious people wanted to get inside to try and find their missing relatives or friends. This led to several discussions with police officers (Interview 2)

4.3.3 Interaction between helping bystander – emergency workers

As mentioned earlier the shooting took only three minutes. In that time many helping civilians dragged people to safety. After the arrival of the emergency workers the mall was quickly closed down and no one other than emergency workers were allowed back in. So only victims and witnesses who were inside the mall during the shooting were helping others. Because the needed capacity of the response by the crisis and disaster management-organisations was quickly realised there was not that great a need for helping behaviour. The study of the IFV in 2013 also concludes that not much emergent behaviour was witnessed. However based on the interviews held with the first officer Police (OvD-P) and a community police officer, extensive interaction between emergency workers and helping civilians can be discovered.

Instructions and deliberation

The earlier mentioned off-duty police officers and the nurse knew what they could contribute and without the presence of emergency workers they just started helping. They did not receive any instructions. The off-duty officer who arrived at the dead shooter took charge of the situation and ordered the remaining bystanders to go back inside the shops and await further instructions. In Interview 1 it was explained that the first officers going inside the mall gave some short direct instruction to helping bystanders to continue with their efforts to keep the victims awake and stop the bleeding. These people continued without complaining. In Interview 2 the officer explained that he and his colleague initiated the opening of a shelter in a nearby church building. Here he gathered some bystanders and asked them if they would help with the registration and sheltering of the lightly wounded victims, witnesses and anxious relatives and friends. Without much further instructions he let the bystanders take care of the rest. At that time there was not enough capacity available to do it himself.

Collaboration conditions

Most helping efforts inside of the mall was done by emergency workers that were there at the time and did not fall into a specific crisis and disaster management-role. They knew what the procedures were and fitted into the existing structure. The other civilian helpers did receive direct instructions and waited with the victims for professional help, doing what they could. There is no mentioning of emergency workers actually working side by side with helping bystanders. Outside of the mall, in the shelter this actually is the case. As more and more emergency workers arrive in the shelter, they continue to work with the helping bystanders. Helping bystanders do need to be instructed on what they could do, so there was a kind of hierarchy here.

Boundary spanning activities

Because of the active shooter situation there was imminent danger for both emergency workers and the people still in the direct area. This put a lot of strain on the first officers on the scene. The first officer Police (OvD-P) got extra help from the District commander who converged on the scene because he felt that his help there was needed. Also the offered help from the off-duty officers was accepted. Improvisation was needed on both roles and tasks. Even the fire department that responded helped out with all sorts of police tasks.

In the first moments the emergency workers only used hard power to get everyone out of the mall and towards safety. After they were sure that the shooter was dead they started treating the mall as a restricted crime scene. The remainder of the people inside were ordered to exit the building with the exception of the people that were helping the injured victims. There was a quick response of ambulances in order to take care of the victims. Within one hour after the first arrival of emergency workers, all injured victims were transported to a hospital. There was not that great a need for boundary spanning activities. Outside and in the shelter this need was greater. The officer that initiated the opening of the shelter made a clear judgement call to work together with civilians, because they were overwhelmed with the great number of people they encountered. He made that judgement solely based on gut feeling and experience that he had in previous encounters with civilians. Additionally he argued that once they start helping you see immediately if the helping bystander is fit for the job.

4.3.4 Evaluation of the interaction

In comparison to the expected extent of helping behaviour discussed in chapter 2, the majority of helpers were already inside of the mall during the shooting. They acted individually. Outside, one group of helpers was active in the shelter location. Due to the extremely dangerous situation during the shooting, helping bystanders did not urge others to join them. Also, after the shooting had stopped most still fled. The dominant view that helped influence the creation of new norms did only come from the emergency workers themselves and consisted for the large part of the message that they should stay with the victims and try to stop the bleeding. The helping behaviour then gradually got smaller as more and more victims were taken to hospital and the help of the bystander was not needed anymore. The second category, that of convergence of helpers with specific knowledge or resources, was also lower. This has possibly something to do with the fact that the whole surrounding of the mall was closed down by police and in Interview 2 it was mentioned that no one was allowed in, not even if they could contribute in a helpful manner. The third category was also not so much visible. It consists of organisations that were asked to respond with their specific services. The only organisation that falls outside the traditional crisis and disaster management-organisations is the Victim Support in The Netherlands. They were activated already during the operational phase for their help in the victim shelter.
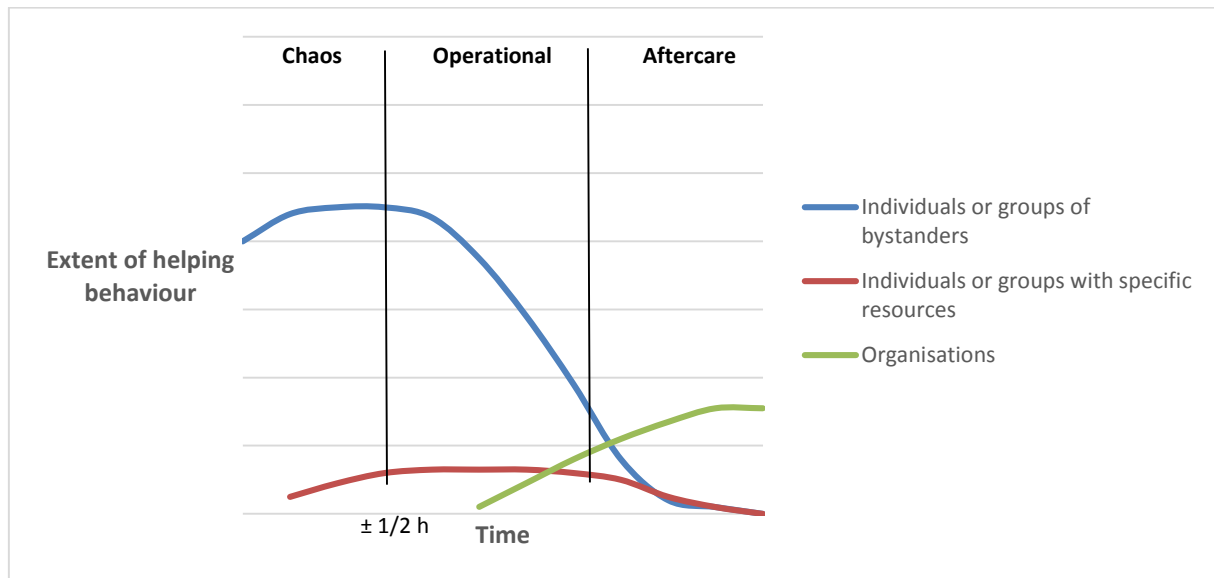
Most functional behaviour took place during or immediately after the shooting in the form of direct response to prevent further injury and victims. After the emergency workers arrived they received a lot of helpful information on the location of the shooter. Again there was not enough capacity to immediately start helping the victims so the helping bystanders did good work with staying with the victims trying to bridge the gap until more emergency workers would arrive. The bystanders were urged to continue their helping efforts; and by that were confirmed that they did the right thing. Inside the mall there was not much more bystander helping. In the victim shelter there was additional helping. Here the officers did not need to persuade the bystanders into helping. A simple request was always enough, because often people felt that they should do something but are afraid of the reactions of the emergency workers. The police officer interviewed (#2) argues that when you use soft power and just politely ask people, you create an environment that others also feel free to join in the helping process. The preparation for dealing with civilians is quite extensive for police officers because in the everyday situation they need to be accessible in order to function properly. With large crises and disasters there is a difference between officers visible, largely due to differences in experiences but also in character.

4.4 Train collision Amsterdam; 21 April 2012

On Saturday afternoon the 21th of April 2012, two trains are involved in a collision just outside Amsterdam Central Station, near the Westerpark. One Intercity train and a regional train somehow ended up on the same track, with a head-on collision as a result. Despite the fact that the two trains were not driving at full speed, the impact was quite severe. Over 190 people of the total of 425 passengers were injured, 24 of them severely. The next day one of the severely injured passengers died at the hospital.

The first ambulance arrived at 06:34 PM, just ten minutes after the impact. They immediately start the triage and they decide that the T1[4] victims should be transported to the hospital as soon as possible. They left the T2 victims in companion with less injured fellow passengers. At 06:45 PM the first ambulance heads for the hospital with a severely injured patient. At 06:42 the first officer 'medical' (OvD-G) arrived and started coordinating the medical aid on the scene and the distribution of victims to the hospitals. This incident is selected for this case study because of the indication that the emergency workers actively made the decision to involve civilians in the medical care and monitoring of the victims in the trains. This resulted in functional bystander helping behaviour in a situation that needed extra capacity of the emergency response in order to bridge the time the emergency workers needed to help and evacuate all victims.

4.4.1 Analysis of the emergent behaviour

There was an extensive amount of attention paid in the news media regarding the emergent behaviour of the passengers and the involvement of the residents of the neighbouring Spaarndammerbuurt. For example there were passengers that stayed with heavily injured persons that were sitting next to them in the train, even though they did not know each other. Next to that several neighbours took care of the less injured persons by providing them with coffee and a chair.

Intermezzo 8: Helping behaviour by residents of the neighbourhood 'Spaarndammerbuurt'

After the noise impact of the collision, the residents of the Spaarndammerbuurt knew immediately that this would result in lots of injured people. Despite the fact that they could not reach the people in the trains in order to help them, they did perform certain supportive tasks at the street level and within the wounded shelter (gewondennest), such as providing drinks and seating for the less injured passengers. A barbershop nearby stayed open so victims and emergency workers could use the toilet. There are also accounts of residents helping with small medical tasks, such as stopping small bleedings and comforting startled people.

Before arrival of emergency services

The incident location was closed-off to the surrounding area because of the fact that the train stood on an overpass and the sides of the slope to the overpass are closed with noise barriers. Due to this, there are no bystanders in the form of 'helpers', who accessed the incident location. So before the arrival of the first emergency workers, the passengers had to rely on themselves for help, so all helpers in this stage can be seen as 'returnees'. According to both the Inspectorate and the interviewed first officer 'medical, they did take care of one another in a surprisingly good manner. Within the chaos that you encounter in such situations, there was a certain calmness according to the first officer (Interview 3). There was great solidarity among the passengers and they comforted one another. It was like new social identity was formed. The same thing happened for instance among the victims of the 2005 bombing in London.

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[4] Triage system in the Netherlands; T1 – Acute danger for life and in need of immediate medical aid. T2 – Severe injury and in need of constant observation and rapid treatment. T3 – Minor injury and treatment when practical. T4 – No or small change of survival.

In both trains there were some people with professional knowledge regarding medical aid. There was for instance a nurse from the emergency department of a hospital in Amsterdam among the passengers and she immediately started helping. She identified herself and urged the people in the train to remain calm. She then started providing first aid and meanwhile triaging the people in her surroundings. In the same coupé of the train, there was a paramedic who also started to give medical treatment the best he could without any medical supplies.

Upon arrival of emergency services

After ten minutes the first ambulance arrived and took up the role of first ambulance; they are responsible for the first triage and distribution of other arriving ambulances to the victims that need it the most. In cooperation with the fire department and the team 'Service and Security' of the Dutch Railway (NS) they start evacuating the trains. All non-injured and T-3 victims are ordered to leave the train and await further instructions on the side of the track.

Because of the great amount of victims in both trains, the capacity of the emergency response in the first moment was not enough. Therefore the first responding emergency workers worked with the triage system in order to give their attention to the victims that needed it the most. Since there was already some sort of common identity among passengers and they were taking care of each other, the emergency workers made use of this.

Intermezzo 9: Urging victims to take care of on another

During the first triage, most of the T-3 victims were told to leave the train. However if they encountered T-1 and T-2 victims the emergency workers asked people nearby to help the emergency response by staying with the victims and keeping them awake. The emergency workers told those people to stay with their fellow passengers and emphasised the need for them to help. The first officer 'medical' explained in interview 3 that they were really honest and clear towards the lesser injured people and their helpers. They simply explained that they did not have the capacity to help everyone at once and that it could take a while before that person would be brought to hospital. He found it rather surprising that their instructions were followed and that no one complained.

After the arrival of the first fire department crew, the nurse offered her help in assessing the victims and giving instruction on how to evacuate them safely without further injuring the victim. She also worked together side by side with the Air Medical Service team. She was allowed to use their equipment and medication. Also in the rescue efforts to free the train operator, there were helping bystanders who offered their help in opening the train cockpit. After opening it, there was a passenger who offered his assistance because he was a medical professional.

On the street level there were neighbours who helped in transporting the victims to the wounded shelter (see intermezzo 9) and in giving shelter to the less injured people in a nearby nursing home. Here the location manager quickly made room in the canteen of the home and the Emergency Response Officers of the nursing home offered medical assistance.

Characteristics helping bystander

As can be seen above, helping behaviour inside and surrounding the train has only been displayed by fellow passengers. At street level there were some helping neighbours and the nursing home organisation has contributed with both specific resources and their expertise of taking (medical) care of people. Most of the helping behaviour was done on an individual basis, there is however mentioning of the connectedness of the neighbourhood. Their help can be typified as coming from a pre-existing social group. Most activities were started by own initiative, for instance the helping of fellow passengers. After intervention by the emergency workers they were confirmed in what they were doing and apparently did a good job. So this helping behaviour continued. As can be seen earlier, most of the helping with medical task was done by either professionals who happened to be there or people with knowledge as Emergency Response Officer or had some sort of firs aid training.

4.4.2 Functional and dysfunctional aspects

One of the most prominent functional aspects in this case is the increase of the emergency response capacity. Due to the large number of victims and the difficulties of accessing the incident location, the emergency workers needed quite some time to get a good overview and come to a coordinated response. Also the evacuation of victims from the trains brought extra difficulties. First there was an immense step down getting out of the train onto the tracks and then most victims had to be brought to street level with one of the two tower ladders from the fire department. Extra hands were much appreciated, so the emergency workers could first focus on T-1 victims. Next to the increase in capacity the passengers could give relevant information regarding the victim they were with. Also the off-duty paramedic could provide the first ambulance with relevant information regarding location of victims and nature of their injuries. Finally the contribution of helping bystanders in the form of specific knowledge and/or specific resources was mentioned several times as a functional aspect. For instance the available knowledge of the nurse from the emergency department and the professional caretaking in the shelter inside the nursing home.

Of course there were also some dysfunctional aspects mentioned. First and foremost, helping behaviour resulted in an unclear overview. Especially due to T-3 victims leaving the incident location on their own or with the help of others without being registered first.

Intermezzo 10: Self-referral of victims who left without registering

After the evacuation of the lesser injured people, there were some who left the scene of the incident without being registered. Spontaneous sheltering took place in a nearby hotel and police station. There are even some who went to the hospital on their own and this self-referral led to problems with maintaining overview of the situation and problems in the information streams of the crisis and disaster management organisation because they were not registered. The taxi drivers were also quickly on the scene to0. As this was noted by the incident command team, they ordered all victims back at the incident location for registering and a needed medical check-up in the wounded shelter. The same as with the airplane crash of Turkish Airlines, these people might also have suffered trauma due to the High Energy Impact.

The first officer 'medical' (OvD-G) mentioned in interview 3 that there were also discussions between emergency workers in the wounded shelter. Some of them wanted to let helping neighbours take care of the lightly injured victims. Others had the opinion that they should be kept out because coordinating their efforts costs too much capacity and time and they would get too little for it in return. Finally, it was mentioned in the same interview that ensuring safety is one of the most important criteria for the involvement of civilians in the emergency response. Therefore helpers were not allowed on the tracks, the situational context helped with ensuring this.

4.4.3 Interaction between helping bystander – emergency workers

The emergency workers encountered two different kinds of helping bystanders on two quite separate locations. First inside or near the trains, where they interacted with helping bystanders who were victims themselves. The second location is on the street where the wounded shelter was located and inside the official shelter in the nursing home. The approach the emergency workers followed, was different between these locations.

Instructions and deliberation

Around the location of the trains the emergency workers used clear instructions in order to evacuate non-injured and light injured people from the train. They were ordered to round-up at the sides of the track and await further instructions. The first office 'medical' was quite surprised that this group followed instructions and that they helped each other getting out of the train. In the case the emergency workers encountered a T-1 or T-2 victim they asked surrounding people to stay with the victim and explained what they could do and why they were needed.

At street level the police had set roadblocks in order to keep people out of the location where the wounded were sheltered. There was some discussion on whether to use the help offered by neighbours, but as was told in Interview 3, some paramedics used their authority to enforce a closed working area. Finally, in the official shelter the location manager was asked if his organisation could take care of the sheltering of the passengers. He then took care of his 'own' process.

Collaboration conditions

In the official shelter there was not much direct collaboration. Of course the registration and psychosocial medical aid took place in the shelter, but these processes were somewhat separated. The personnel of the nursing home, complemented with some neighbours, took on the general care rather independently of the crisis and disaster management organisation.

Around and inside the train the most important condition for collaboration was in fact the guarantee of safety for the helpers. That is one of the main reasons why there were not helpers from street level allowed on the tracks. Inside the train the most collaboration took place with the professionals who happened to be there. They did however turn to the emergency workers for instructions and specific tasks. In some cases the emergency workers let these professionals take the lead in the collaboration, for instance the nurse who gave advice to the fire department regarding the handling of the victims.

Boundary spanning activities

Inside the train the people took care of one another before the arrival of the emergency workers. They did not need to persuade them into helping, however they did confirm the helpers that they did a good job and stimulated this by giving directions in how they could best help. Here one sees a good mix of soft and hard power; people who do not contribute are ordered to evacuate and others are asked to continue the good work. In their collaboration with the off-duty professionals they judged the offered help on the basis of good faith. You trust that they are sincere and once they started working together they noticed that their help was useful. This judgement is based on experience and familiarity with these kinds of situations.

4.4.4 Evaluation of the interaction

Again in this case the greatest part of the helping behaviour is employed by individuals. When compared to the expected extent of helping behaviour it does show lots of similarities. Before the arrival of the emergency workers several passengers took care of injured fellow passengers. Some sort of common identity was formed, since people that did not know each other prior to the incident helped each other. This corresponds with the Self-Categorisation Theory and the commonalities with the London Bombings in 2005. Because no one other than emergency workers had access to the incident location, the curve is not as high as expected. The optimum again is for the large part caused by the evacuation of the train. The decline of the curve of helping bystanders is not as steep as expected since the emergency workers urged people to stay with 'their' victim because it took quite a while before they could all be evacuated. Next to this, the helpers on street level started their helping as soon as the first T-3 and non-injured people came down of the overpass. The second category consisting of convergence of individuals or groups with specific knowledge and/or resources is also quite small compared to what was expected in chapter 2. Since the direct surrounding of the incident location was closed off by either noise barriers or road blocks, the access for converging helpers was limited. However there were some passengers who independently left the area in order to find help. They encountered the taxi drivers and also the sheltering in the nearby hotel. This was however quickly terminated by the crisis and disaster management organisations. Finally, the third category of organisations that were activated by the crisis and disaster management organisation is also to a small extent visible. The opening of the official shelter is one of them. This category only came into play after the crisis and disaster management organisations were fully operational. The figure below shows the extent of helping behaviour in this incident.

Figure 4.4: Extent of helping behaviour over time at the Train Collision Amsterdam
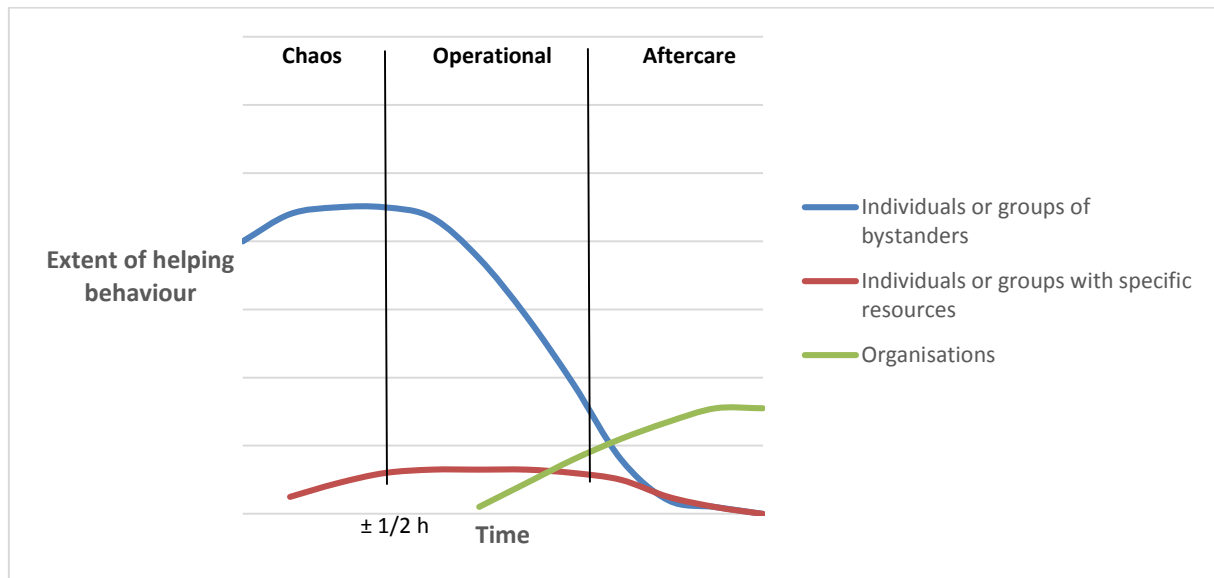
Functional helping behaviour took already place even before the arrival of the emergency workers; people took first care over each other and people with certain first aid skills started working immediately. They could also provide with relevant information on the whereabouts of the victims once the emergency workers start arriving on the scene. Because of the lack of capacity, the first emergency workers promoted the helping behaviour by pointing out the salience of the identity of fellow passengers and asking the passengers to keep up the good work. They also gave additional instructions on how to expand the activities of the helping bystanders. All other persons who were not contributing were ordered to leave the trains. By doing this the emergency workers employed both hard and soft power as collaborative tools in an effective manner. Once the indication of problems with the overview of the emergency response came to the attention of the incident command, they acted quickly and ordered people back to the shelter and they explained their decision to those passengers, creating goodwill. Finally, there were some discussions of allowing people in the wounded shelter that wanted to help. Some paramedics did not allow this and showed their authority without explaining their motive. For the main part they did not expect the helpers to be effective and they also wanted to leave out curious people and journalists.

5 – Conclusions & Discussion

This last chapter focusses first on the conclusions of this research by answering the research questions that guided this thesis. The cases are analysed in an overarching manner in their relation to the expectations derived from the theory. This thesis then closes with a discussion on the achievement of the pre-set aim, the recommendations resulting from thesis and the possibilities of extracting the results onto a wider range of crises and disasters.

5.1 Conclusions

The aim of this thesis has been twofold. The first was to contribute to the scientific discussion with a theoretical refinement of what we know about emergent behaviour of bystanders. Secondly, it aimed to give emergency workers important insights into how they can influence the helping behaviour they encounter and how they can make better use of it. To this end the central question that runs through this thesis is stated as: *"How can variation in emergent behaviour, displayed at the scene of large crises and disasters in The Netherlands, be explained by the degree of interaction between emergency workers and helping civilians".* This central question is further operationalised in 6 sub-questions. These questions will each be answered in the following sections, which will finally lead to the answering of the central question.

The first question asked which variation in emergent behaviour is displayed at large crises and disasters in The Netherlands. In all four cases the helping behaviour of bystanders came mostly from individual helpers. Some groups were formed in order to employ a specific task, but they were all of fleeting nature. In all four cases there were people with specific knowledge of medical emergency response. These were medical professionals like off-duty paramedics, doctors, nurses and General Practioners. Additionally, civilians were present who were Company Emergency Response Officers or who had emergency medical training. In most cases bystander provided the emergency response with specific resources, for instance the farmer who assisted with his tractor in the transportation of victims and emergency workers at the Turkish Airlines crash in 2009 or the church congregation in Alphen aan den Rijn, who opened their building for the sheltering of victims and witnesses of the Mall Shooting in 2011. According to the *Emergent Norm Theory,* the helping bystanders who have specific knowledge or resources available, provide with the expression of a strong opinion that influence the extent of helping behaviour. Providing a strong opinion speeds up the social interaction process which creates new norms in exceptional situations like crises and disasters. This process was only witnessed in the case of the Turkish Airlines crash; the helping bystanders urged passengers to start helping them getting everyone out and provide first aid to the injured people. In the Queen's Day attack there were sufficient numbers of helping bystanders with professional medical training to take care of the injured victims in addition to the first emergency workers. There was no further need for extending the helping behaviour with other bystanders. During the Mall Shooting the danger was so great that the bystanders who were helping were mostly acting on their own and did not involve others in the process. So this first expectation does not provide the explanation for the upward trend of helping behaviour seen at all four cases. However, before the arrival of the first emergency workers this mechanism can be used to extra stimulate bystanders to start helping in addition to the already increasing number of bystanders. In the case of crises and disasters in the transportation domain A common identity evolves among passengers who are themselves victims. This new identity dictates them to help each other. In the case of the train collision, the helping bystanders with Emergency Medical Training (EMT) encountered that a common identity was formed among the passengers of the train.

This identity dictated them to help and care for fellow passengers. At the plane crash this behaviour is seen to a smaller extent; immediately after the crash passengers did help getting each other out of the plane. Several bystanders additionally pointed out the salience of their common identity and subsequently urged the passengers who were outside of the plane to start helping their fellow passengers.

In line of the first question, the second sub-question was aimed at analysing which variation in functional and dysfunctional emergent behaviour can be observed. The main functional aspect of helping behaviour as seen in the four cases is the increase in capacity in the first phase of the incident. Especially the increase in capacity of the emergency response by bystanders with specific knowledge of emergency medical training is a much heard functional aspect. The capacity of the emergency response in this first phase is not sufficient due to either the great numbers of victims (Plane crash and Train Collision) or multiple severely injured victims (Mall Shooting and Queen's Day attack). Bystanders without EMT also contribute to the increase in the capacity of the emergency response. By taking on all sorts of supportive tasks, the emergency workers can focus on the specialised tasks. Another major functional aspect of bystander helping is that bystanders are on the scene immediately. In the case of the plane crash, most of the evacuation and rescue efforts had already been completed by passengers and bystanders. At the Queen's Day attack and the Mall shooting the severely injured people were kept awake and helping bystanders tried to stop the massive bleedings. Hence, bystanders can prevent or limit further injury and damage because they are already on the scene. Furthermore, the bystanders provide a large of relevant information even before the arrival of the emergency workers. In the case of the plane crash the calls to the emergency centre provided with valuable information on the location and details of the crash site. On the arrival of the emergency workers, the bystanders additionally provide valuable information that helped the emergency response. During the Mall Shooting they pointed out where the shooter went and where the victims were located. At the Queen's Day attack and the Train collision the bystanders provided arriving emergency workers with detailed information on the nature of the incident and the injuries of the victims.

Dysfunctional aspects of the bystander helping behaviour are also witnessed in the case studies. The main concern of most emergency workers is the safety of the helping bystanders. Citizens cannot asses the dangers and risks properly. The main reason not to allow helping bystanders onto the track in the case of the train collision was the concern about the safety of the bystanders. The same applies in the case of the plane crash; eventually all bystanders are ordered to leave the plane since they do not have the right protective gear to work in such an environment. Other dysfunctional aspects seen at the plane crash is the occurrence of an unclear overview of the emergency response and the interference in the information streams because of helping bystanders and emergency workers each did their own thing without working together. As a result several victims left the crash site without being registered. They either went on their own to a nearby hospital or even continued their original travelling plan. In the case of the train collision, there were also passengers leaving the scene of the incident without being checked by a paramedic and properly registered. When the first officer 'medical' found out about this he immediately ordered them back to the shelter. He motivated his reaction with experiences of colleagues at the Turkish Airlines crash. Coordination of the helping behaviour is, according to the literature, time consuming and it costs valuable capacity of the already limited emergency response. This is however not reflected in this comparative case study. In all cases the helping bystanders offered their help first to the arriving emergency workers. The emergency workers make a split second decision whether to use or decline this offer.

All interviewed emergency workers indicated that for that decision they mostly use their gut feeling and personal experiences. They feel that when in such serious situations the offered help is mostly sincere and the bystanders can handle what they say they can handle. Additionally they argue that when working with those bystanders you can quickly see if they indeed can cope with the assigned tasks. In the case of the Queen's Day attack and the train collision the first officers 'medical' argued that it is their job anyway to coordinate the emergency response. Finally, there is one more dysfunctional aspect mentioned to some extent in all of the four cases; interference with the emergency response. Violence against public officials is an important topic in current political and public debate. In these four cases there was however no mentioning of violence. Due to the immense impact of these crises and disasters there is consensus about what to do and everyone acknowledges the seriousness of the situation. However there were some other forms of interference visible. At the Mall Shooting the first police officers were repeatedly distracted by helping bystanders who urged them to help 'their' victims. The objective of the first officers was however to quickly take out the active shooter. Next to these situations inside the mall, there were anxious people at the police line who wanted to go in and try to find their loved ones. In the Queen's Day attack case the interference with the emergency response was visible in the plundering of the first two ambulances. All medical equipment and supplies were taken by bystanders who were helping the victims. Paramedics experienced this as a severe interference because those ambulances could not be used for transportation of victims to the hospitals.

The third and fourth sub-questions deal with the interaction between the emergency worker and the helping bystander: How does the communication and collaboration take place at the scene of the incident?. The communication between the emergency worker and the bystanders begins during the call to the emergency operator and during the arrival of the first emergency workers. They provide with a first picture of the situation in order to alert the right number of emergency workers and to make a first plan of action. Additionally, in almost all cases bystanders came to ask what they could do and they identified themselves, telling who they are and what they could contribute. Often there were clear instructions given to helping bystander on what they could contribute. In all the cases this led to an increase and prolongation of the bystander helping. This was expected according to the *Emergent Norm Theory*: besides the fact that bystanders with specific knowledge could speed up the social interaction process, emergency workers can so too. At the crash site of the airplane they instructed bystanders to go towards the shelters for medical treatment and this speeded up the evacuation of the surrounding of the plane. In the case of the mall shooting and the train collision the emergency workers used clear instructions that led to more helping behaviour. These instructions were along the line of "keep the victims awake" and " try to stop the bleeding". As mentioned earlier in this chapter, during the train collision the emergency workers also made use of the fact that a new identity was formed amongst the passengers of the trains. According to the *Self-Categorisation Theory* emergency workers can promote prosocial helping norms by pointing out the salience of the identity of the victims and the need for them to help their 'own'.

Most of the collaboration of the emergency workers is about helping bystanders with specific knowledge or resources. The collaboration in these situations is quite extensive and can be seen as a joint collaboration. During the plane crash, the emergency workers first focused on their own processes and they worked separately of the helping bystanders. This created the problems of an unclear overview of the emergency response.

Later on in the response, this changed when a more active collaboration was established with the remaining helping bystanders who brought specialised help to the table. For instance the farmer with his equipment, but also company Emergency Response Officers and off-duty medical personnel helped out on the field and in the victim shelters. In the case of the Queen's Day attack this coordinated response was applied from the start. Next to the collaboration with specialised helping bystanders, the cases also show collaboration on supportive tasks, especially in the first chaotic phase of the incident, when the total capacity is focuses on the aid to the victims. An important condition for the collaboration with bystanders is the guarantee that the bystanders remain safe. Judging if a bystander is fit for the job is done primarily in good faith and based on the experience of the emergency workers. Along the way, the emergency workers checked to see if the bystanders were doing as expected of them.

The fifth sub question asked which conditions in the interaction influences helping behaviour being functional or dysfunctional. First of all a clear instruction given by the emergency workers provides a strong opinion in the social interaction process of the bystanders. Secondly, in cases with transportation incidents pointing out the salience of the common identity of the passengers will increase the bystander helping of fellow passengers. Next to these already mentioned sociological theories that influence the extent and duration of helping behaviour, there are some other conditions based on organisational theory. According to the theory on boundary spanners, the emergency workers should persuade bystanders into collaboration. Active collaboration will increase the possibility to regain a good overview of the emergency response and will prevent interference in the information streams of the emergency workers. The ad-hoc teams as seen during the Queen's Day attack will provide in a micro scale coordination of activities. The linking of bystanders and emergency workers will result in functionally operating teams. This way there is no need for extra coordination over the helping behaviour because of the local alignment of activities and tasks. In order to persuade bystanders into helping, a right mix of hard and soft power must be used by the emergency worker in the interaction. Too much hard power might lead to violence against the emergency workers and obviously this will lead to interference in the emergency response. Too much soft power may lead to disproportional risks being taken by helping bystanders. In the cases of the plane crash and the Mall Shooting hard power was effectively used in order to keep bystanders out of harm's way. Additionally soft power was used on safer locations, mostly in the shelter locations concerning the general care of the victims. The soft power approach also led to some problems. During the emergency response of the Queen's Day Attack there was interference in de emergency response caused by the plundering of the ambulance despite the fact that the paramedics told bystanders to ask them for supplies. During emergency response of the plane crash there was also interference on the information streams of the crisis and disasters management organisations because of the actions of the doctors in the official shelter. The emergency workers in the shelter trusted the judgements of these professional helping bystanders, however by letting them make their own decisions the rest of organisation did not know what went on there. A direct combination of both hard power and soft power approach in the interaction is visible in the case of the train collision. Most unharmed and lightly injured passengers were urged to evacuate the train immediately. This decision was however very well explained and motivated and it did not affect the helping behaviour between fellow passengers. The final sub-question helps to show the discrepancy between what the organisation prescribes how the emergency workers react on helping bystanders and how they react in reality.

None of the emergency workers at the scenes of these crises and disaster were prepared for interaction in the emergency response with bystanders. Police officers and paramedics do have some general training in communicating with citizens, but no specific focus on crises and disaster situations. The balancing act between hard and soft power requires a different approach in every other incident. This is solely based on the emergency workers own experiences. This of course differs from person to person. Point is that the emergency workers need professional discretionary space in order to get a balanced approach in the collaboration with helping bystanders. Preparation for this encounter will provide them with valuable knowledge and experience on how to recognise bystanders who could functionally contribute. As a result, they will make better use of this additional capacity. Additionally, preparation sends out a clear signal to the emergency workers that their organisations trust and accepts them in making the right judgements on using the offered help of bystanders.

Finally, in regard to the central research question, this thesis argues that indeed helping behaviour is largely functional and above all inevitable. To a considerable extent, variation in emergent behaviour can be explained by the degree of interaction between emergency workers and helping civilians. Most of the helping behaviour is employed by individual bystanders who have some sort of knowledge on EMT. Collaboration with these helping bystanders occurs very often and with good results. If active collaboration is not pursued it will most likely result in an unclear overview of the emergency response and interference in the information streams of the crisis and disaster management organisations. Helping behaviour would still take place independently of the emergency response and this causes the problems in the overview. Coordination of the helping behaviour is a commonly heard dysfunctional aspect. Time and capacity costs can be kept at a minimum when this coordination takes place on a micro level. Coupling the helping bystanders and an emergency worker in ad-hoc teams will result in an effective joint collaboration. Additionally, when the emergency workers provide bystanders with specific instructions on how they can contribute the extent of their helping behaviour, it may increase and be prolonged. The right mix of hard and soft power must be employed by the emergency workers in order to increase the functional aspects and eliminate or decrease dysfunctional aspects of helping behaviour. The emergency worker must make use of his discretionary room to apply a balanced mix of the two.

5.2 Discussion

The thesis has set out to first contribute to the scientific discussion on helping behaviour and second to provide a valuable insight for emergency workers on how to make better use of emergent behaviour. By using both organisational and sociological theory, this thesis provides in the deepening of understanding of the mechanisms in play regarding the interaction between emergency workers and helping bystanders during major crises and disasters in The Netherlands. For instance, the sociological Emergent Norm Theory explains how bystanders interpret the situation during crises and disasters and how this process eventually leads to helping behaviour. This kind of theoretical sophistication is much needed in the current (Dutch) literature on helping behaviour. Without the knowledge on the underlying process, there is a considerable danger of drawing detrimental conclusion on witnessed behaviour and additionally providing with the wrong recommendations. The expectations derived from the theory have, to some extent, all confirmed. In some cases the expected mechanisms were not witnessed. For instance, the expected increase of the extent of bystander helping behaviour by pointing out the salience of the group identity of the victims and bystanders is only witnessed at the train collision.

Here the helping bystanders and later also emergency workers pointed out to the injured passengers that they should look out for each other. By doing this, they have pointed out their common identity and additionally gave instructions on how they should help.

Based on the results of this thesis it is arguable that emergency workers should give clear instructions to bystanders on how they can contribute in the emergency response. This relieves the strain on the capacity of the first arriving emergency workers. When possible, the emergency workers should pursue a joint collaboration with the bystanders who offer them their help. Forming ad-hoc teams of both emergency workers and helping bystanders will not cost extra capacity and time for the coordination. Finally, preparing the emergency workers for their encountering with helping behaviour will most likely help them recognising functional helping bystander and it will help them make better use of them. This comparative case study provides some important insights in the mechanisms of emergent behaviour and provides valuable clues for emergency workers on how they can use the offered help from civilians. However, further research is needed in a wider range of crises and disasters in order to generalise the results of the research to all crises and disasters-types. It would also be useful to analyse what the differences are between normal incident response and the exceptional situations that are under study in this thesis. The normal situations should theoretically not need emergent behaviour since the established structures would suffice. However, a considerable amount of evidence of helping behaviour visible in every day incidents is available.

There are certain limitations to the generalizability of the results and conclusions in this thesis. All qualitative research based on a limited number of case studies faces the difficulty to attain a good external validity. This difficulty applies even more with the study of crises and disasters, since the nature and course of every incident is different. In order reach externally valid conclusions, this thesis used purposive sampling techniques for the selection of the cases. A balance was sought between a good variation on crisis characteristics and a good variation in emergent behaviour. Unfortunately, during the case selections some pragmatic considerations had to be made. All the cases had to have mentioning of emergent behaviour in the documentation, otherwise the analysis of the processes under study were not possible. The internal validity of the research came under pressure due to several difficulties of the data collection. A lot of attention was given to the research methodology, prior to the data collection phase. Despite the measures of data triangulation and peer-reviewing of the data collection procedures, the real problems came from the actual collection of the data. Initial plans to make use of interviews performed by the IFV were terminated by the fact that these interview transcripts were not available anymore due to achieving problems at the IFV. Next to that, it has proven very difficult to come into contact with emergency workers who were on the scene of the crises and disasters under study. This was partly because of the summer holiday period, but largely due to the fact that people worked with irregular working schedules and/or did not respond to e-mails and telephone calls. Eventually, four interviews were held with emergency workers. These interviews provided the much needed information on the actual interaction between them and helping bystanders. For the case of the Turkish Airlines crash a study performed by Crisislab replaced the interview, since there study provided a rich insight into this interaction. Apart from the data collection and analysis, the literature study plays an important role and contributes to the deeper understanding of the witnessed helping behaviour. The analysis of the documents and interviews was done with the use of coding, where the main conditions were identified and included in the results and the intermezzo's. The literature study process was also meticulously documented in order to came to a transparent and reliable theoretical framework.

The aim of this thesis has been achieved; an important insight is given in the possibilities of influencing the helping behaviour as so often seen at major crises and disasters in The Netherlands. Is shows some important lead as to how the emergency worker can increase functional helping behaviour and limit dysfunctional behaviour through his interaction with the bystanders. Additionally, emergency workers can use the result to better understand their own possibilities in dealing with aggression and violence. The crisis and disaster management organisations should subsequently allow the collaboration with helping bystanders is such exceptional situations. They must create trust among the emergency workers by preparing them for their encounter with those bystanders. On the other hand, the bystanders with specific emergency medical knowledge should realise that they are in fact the ones that can make a difference. By deliberately looking for collaboration with the emergency workers, they open up the way towards a better coordinated joint emergency response. Finally, this thesis proves to be the first step within Dutch scientific research on helping behaviour during crisis and disasters that also focusses on a thorough theoretical foundation. Further quantitative research is needed to test the hypotheses in this thesis more elaborately. Nonetheless, the first step is taken in bridging the knowledge gap in the organisational study of crises and disasters by combining organisational and sociological theory to model the boundary spanning interaction between emergency workers and helping bystanders.

References

Adang, O. (2012). AMOK-trainingen of niet? *Tijdschrift voor de Politie, 74*(5), 20-21.

Aguirre, B., Wenger, D., & Vigo, G. (1998). A Test of the Emergent Norm Theory of Collective Behavior. *Sociological Forum, Vol. 13*(No. 2), 301-320.

Alvinius, A. (2013). *Bridging Boundaries in the Borderland of Bureaucracies - Individual Impact on Organisational Adaption to Demanding Situations in Civil and Military Contexts.* Karlstad: Karlstad University Studies.

Auf der Heide, E. (1989). *Disaster Response: Principles and Preparation and Coordination.* St Lois, MO: The CV Mosby Company.

Bardo, J. (1978). Organizational response to disaster: a typology of adaption and change. *Mass Emergencies, Vol. 4*, 145-149.

Barton, A. (1969). *Communities in Disaster: A Sociological Analysis of Collective Stress Situations.* Garden City, NY: Doubleday an Company.

Boin, A., & 't Hart, P. (2005). *The Politics of Crisis Management.* Cambridge: Cambridge University Press.

Boin, A., & 't Hart, P. (2007). The Crisis approach. In H. Rodriquez, E. Quarentelli, & R. Dynes (Eds.), *Handbook of Disaster Research* (pp. 42-55). New York, NY: Springer.

Darley, J. M., & Latané, B. (1968). Bystander intervention in emergencies: Diffusion of responibility. *Journal of Personality and Social Psychology, Vol. 8*(No. 4), 377-383.

De Korte, R. (2012). Rust en strakke organisatie maken treinbotsing geen ramp. *Sitrap, 12*(4), 10-11.

Drabek, T. (1986). *Human System Response to Disaster: An Inventory of Sociological Findings.* New York, NY: Springer Verlag.

Drabek, T. E. (2005). *Sociology, Disasters and Emergency Management: History, Contributions, and Future Agenda.* Denver, CO: University of Denver.

Drabek, T. E., & McEntire, D. A. (2003). Emergent Phenomena and the sociology of disaster: lessons, trends and opportunities from the research literature. *Disaster Prevention and Management, 12*(2), 97-112.

Dynes, R. (1970). *Organized Behavior in Disaster.* Lexington, MA: Lexington Books.

Fischer, P., Greitemeyer, T., Kastenmüller, A., Krueger, J., Vogrincic, C., Frey, D., . . . Kainbacher, M. (2011). The Bystander-Effect: A Meta-Analytic Review on Bystander Intervention in Dangerous and Non-Dangerous Emergencies. *Psychological Bulletin, Vol. 137*(No. 4), 517-537.

Fritz, C., & Mathewson, J. (1957). *Convergence Behavior in Disasters; A Problem in Social Control.* Washington D.C.: National Academy of Sciences-National Research Council.

Gerring, J. (2007). *Case study research: Principles and practices.* Cambridge, UK: Cambridge University Press.

Groenendaal, J., 't Padje, B., & Noijen, M. (2012). Flexibele hulpverlener ontmoet zelfredzame burger bij treinbotsing Westerpark. *Sitrap, 12*(4).

Groenewegen-ter Morsche, K., & Oberijé, N. (2010). *Burgers bij de bestrijding van rampen: betrokken, beschikbaar, bekwaam.* Arnhem: Nederlands Instituut Fysieke Veiligheid Nibra.

Helsloot, I., & Ruitenberg, A. (2004). Citizen Response to Disasters: a Survey of Literature and Some Practical Implications. *Journal of Contingencies and crisis management, Vol. 12*(No. 3), 98-111.

Helsloot, I., Martens, S., & Scholtens, A. (2011). *Basisboek regionale crisisbeheersing.* Arnhem: Nederlands Instituut Fysieke Veiligheid.

Inspectie Openbare Orde en Veiligheid. (2009). *Koninginnedag 2009 Apeldoorn.* Den Haag: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.

Inspectie Openbare Orde en Veiligheid. (2009). *Poldercrash 25 februari 2009.* Den Haag: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties.

Inspectie Openbare Orde en Veiligheid. (2011). *Schietincident in 'De Ridderhof' Alphen aan denn Rijn.* Den Haag: Ministerie van Veiligheid en Justitie.

Inspectie Veiligheid en Justitie. (2012). *Treinbotsing Amsterdam 21 april 2012; Een onderzoek naar de slachtofferregistratie en de grootschalige geneeskundige hulpverlening.* Den Haag: Ministerie van Veiligheid en Justitie.

Korps Landelijke Politiediensten; Dienst Nationale Recherche. (2009). *Onderzoeksrapportage Koninginnedag 2009.* Driebergen: KLPD.

Kreps, G., & Lovegren Bosworth, S. (1997). Response to David F. Gillespie's review of Organizing, Role Enactment and Disaster: A Structural Theory. *International Journal of Mass Emergencies and Disasters, Vol. 15*, 309-313.

Latané, B., & Darley, J. (1970). *The unresponsive bystander: why does not he help?* New York, NY: Appleton Century Crofts.

Levine, M., & Cassidy, C. (2009). Groups, Identities and Bystander Behavior: How Group Processes Can Be used to Promote Helping. In S. Stürmer, & M. Snyder (Eds.), *The Psychology of Prosocial Behavior: group processes, intergroup relations and helping* (pp. 209-222). Oxford, UK: Blackwell Publishing Ltd. .

Levine, M., Prosser, A., Evans, D., & Reicher, S. (2005). Identity and Emergency Intervention: How Social Group Membership and Inclusiveness of Group Boundaries Shape Helping Behavior. *Personality and Social Psychology Bulletin, Vol. 31*(No. 4), 443-453.

Mertens, C., Duyvis, M., & Oberijé, N. (2013). *Burgerhulp bij grootschalige geneeskundige hulpverlening.* Instituut Fysieke Veiligheid: Arnhem.

Mileti, D., Drabek, T., & Haas, E. (1975). *Human Systems in Extreme Environments.* Boulder, CO: Institute of Behavioral Science, University of Colorado.

Nationaal Coördinator Terrorismebestrijding. (2009). *Onderzoek functioneren Stelsel Bewaken en Beveiligen Koninginnedag 2009.* Den Haag: NCTb.

Nye, J. (2008). *The Power to Lead.* Oxford: Oxford University Press.

Oberijé, N. (2007). TIEMS 2007; 14th Annual Conference. *Civil Response After Disasters: The use of civil engagement in disaster abatement* (p. n/a). Arnhem: NIFV.

Oberijé, N., & Tonnaer, C. (2008). *Hulpverleners en burgerpaticipatie.* Arnhem: Nederlands Instituut Fysieke Veiligheid Nibra.

Onderzoeksraad voor de Veiligheid. (2010). *Hulpverlening na vliegtuigongeval Turkish Airlines, Haarlemmermeer 25 februari 2009.* Den Haag: Onderzoeksraad voor de Veiligheid.

Parr, A. (1970). Organizational response to community crises and group emergencies. *American Behavioral Scientist, Vol. 13*, 423-429.

Quarentelli, E. (1966). Organisations under stress. In R. Brictson (Ed.), *Symposium on Emergency Operations, System Development Corporation* (pp. 3-19). Santa Monica, CA.

Quarentelli, E. (1988). Disaster Crisis Management: A summary of reseach findings. *Journal of Manangement Studies, 25*(4), 373-385.

Quarentelli, E. (1995). *Preliminary paper #226: Emergent Behaviors and Groups in the Crisis Time of Disasters.* Newark, DE: University of Delaware: Disaster Research Centre.

Quarentelli, E. (2000). *Preliminary paper #304: Emergencies, Disaster and Catastrophes are different Phenomena.* Newark, DE: University of Delaware: Disaster Research Centre.

Rijksoverheid. (2010). *Act of 11 February 2010, containing provisions for the fire services, disaster management, crisis management and medical assistance (Security Regions Act).* Den Haag: Rijksoverheid.

Rosenthal, U. (1984). *Rampen, rellen, gijzelingen; crisisbesluitvorming in Nederland.* Amsterdam: De Bataafsche Leeuw.

Scholtens, A., & Groenendaal, J. (2011). *(Zelf)redzaamheid tijdens de Poldercrash.* Den Haag: Boom Lemma Uitgevers.

Scholtens, A., & Groenendaal, J. (2011). *(Zelf)Redzaamheid tijdens de Poldercrash.* Den Haag: Boom Lemma uitgevers.

Seawright, J., & Gerring, J. (2008). Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options. *Political Research Quarterly*, 294-308.

Stallings, R. (2006). IRCD Business Meeting at the World Congress of Sociology. *Presidential Address On Sociological Theory and the Sociology of Disasters: Moving from Periphery to Center* (p. n/a). Durban, South Africa: International Research Committe on Disasters .

Stallings, R., & Quarantelli, E. (1985). Emergent Citizen Groups and Emergency Management. *Public Administration Review, Vol. 45*(Special Issue: Emergency Management: A Challenge for Public Administration), 93-100.

Starmans, I., & Oberijé, N. (2006). *Burgerparticipatie bij rampen en zware ongevallen.* Arnhem: Nederlands Instituut Fysieke Veiligheid Nibra.

Turner, R., & Killian, L. (1987). *Collective Behavior.* Englewood Cliffs, NJ: Prentice-Hall.

Van Duin, M. (2011). *Lectorale Rede: Veerkrachtige crisisbeheersing: nuchter over het bijzondere.* Arnhem: Politieacademie & Nederlands Instituut Fysieke Veiligheid .

Van Duin, M., Tops, P., Wijkhuis, V., Adang, O., & Kop, N. (2012). *Lessen in crisisbeheersing; Dilemma's uit het schietdrama in Alphen aan denn Rijn.* Den Haag: Boom Lemma Uitgevers.

Van Woerden, I. (2013). *Het drama van Alphen.* Amsterdam: Meulenhoff b.v. .

Appendix A – Case selection

Crisis or disaster		Mentioned in		
		WODC study 2013	IFV study 2006-2010	IFV study 2013
Date	Description	List of crises and disasters	Evidence of emergence of all sorts	Evidence of emergence in large scale medical aid
13 May 2000	Firework disaster Enschede	✓	✓	✓
01 January 2001	Pub fire New year's Eve Volendam	✓	✓	✓
26 August 2003	Levee Breach Wilnis	✓	✓	
25 November 2005	Power outage Haaksbergen	✓	✓	
17 July 2006	Extreme heat during Four Days Marches Nijmegen		✓	✓
12 December 2007	Power outage Bommeler- and Tielerwaard	✓	✓	
25 February 2009	Airplane crash Haarlemmermeer	✓		✓
30 April 2009	Attack on Queen's Day Apeldoorn	✓	✓	✓
2009-2010 (several occasions)	Dune fires Schoorl and Bergen		✓	
09 April 2011	Mall shooting Alphen aan den Rijn	✓		✓
21 April 2012	Train collision Amsterdam	✓		✓

Appendix B - Interview Protocol
Inleiding

Noteer de datum en tijd (24 uursklok).

A   datum: ....

B   Tijd: ....

[BEGIN MET JE VOOR TE STELLEN EN JE COLLEGEKAART OP TAFEL TE LEGGEN].

(lees voor): Mijn naam is Tony Hoogendoorn en ik wil u graag in het kader van mijn masterstudie Public Safety vragen stellen over uw werkzaamheden tijdens de <incidentnaam> in relatie tot interactie tussen hulpverleners en helpende burgers tijdens de acute fase van de ramp/crisis.

(lees voor): Heeft u voordat we beginnen nog vragen? (noteer antwoord)

(lees voor): Wanneer ik u vraag naar uw situatie, gaat het uitdrukkelijk om uw PERSOONLIJKE SITUATIE. Er zijn dus geen goede of foute antwoorden mogelijk. Het gaat om uw eerste spontane reactie en u moet niet te lang nadenken.

Ik wijs er nogmaals met nadruk op, dat de informatie die u verstrekt hoogst VERTROUWELIJK behandeld zal worden. Informatie zal ook nooit doorgegeven worden aan denrden.

Het vraaggesprek zal ongeveer drie kwartier in beslag nemen. Ik zou in het interview de volgende drie onderdelen die alle drie ongeveer een kwartier zullen duren, met u bespreken:

- Als eerste begin ik met een algemene introductie waarin ik u zal vragen over de aard van uw werk, om een indruk te krijgen van uw werkzaamheden ten tijde van de ramp/crisis.

- Daarna wil ik u vragen stellen over het helpgedrag van burgers dat u mogelijk bent tegengekomen tijdens deze ramp/crisis. Wat u aantrof bij aankomst en hoe u mogelijkerwijs gebruik heeft gemaakt van die burgerhulp.

- Tenslotte wil ik specifiek ingaan op de interactie tussen hulpverleners en de helende burgers. Hoe er vorm is gegeven aan den samenwerking en de communicatie.

Om er zeker van te zijn dat ik uw antwoorden goed overneem zou ik het gesprek graag opnemen. Gaat u hiermee akkoord?

→ *NOTEER ANTWOORD*

→ *Als akkoord, zet opnameapparatuur NU aan*

(Lees voor): Heeft u nog vragen?

Vragenlijsten voor hulpverleners	Opmerking
Algemeen	
1 Naam	
2 Leeftijd	
3 Geslacht	
4 Hulpverleningsorganisatie	
5 Functie (tijdens ramp en momentee)	
6 Wat was uw rol en welke taken heeft u vervuld	Taken laten toelichten
7 Hoe lang was u al werkzaam in die functie toen u werd geconfronteerd met dit incident	
8 E-mailadres	
9 Telefoonnummer	

Hulpgedrag van burgers en samenwerking	
Aankomst en eerste inzet	
10 Wat trof u aan toen u ter plaatse kwam	sfeer?
11 Waren er bij uw aankomst burgers aanwezig?	Zo ja, hoeveel burgers en SLO's / welk type: Returnees, Axious, Helpers, Curious, Exploiters, Fans?
A Zo ja, wat deden deze burgers op het moment van aankomst	
B Indien zij aan het hulpverlenen ware, welke handelingen voerden zij uit?	Waren er voldoende helpende burgers t.o.v. het aantal SLO's? (Verhouding hulpvraag/helpers)
C Wat was uw eerste reactie bij het aantreffen van deze burgers en hoe ging het vanaf daar verder?	Heeft u contact gehad? Hoe verliep dat contact? (Uitvragen/hiërarchisch?)
D Wat was de reactie van andere hulpverleners toen zij ter plaatse kwamen?	Hebben zij contact gehad?
E Hoe kijkt u nu terug op uw eigen reactie?	

Burgerhulp en samenwerking tijdens het incident		
12	Heeft u tijdens het vervolg van het incident nog gebruik gemaakt van burgerhulp?	Als nee, waarom niet?
A	Wanneer en waarom kwam het in u op om burgers bij de uitvoering van de handelingen te betrekken?	
B	Heeft u hulp van burger gevraagd of boden zij deze hulp spontaan aan?	Spontaan (was de hulp noodzakelijk); Op eigen verzoek (hoe ging dit); Was het moeilijk om mensen te vinden)
C	Bij welke handelingen heeft u de burgers betrokken?	
D	Hoe verliep de samenwerking tussen hulpverleners en burgers?	Goed; niet goed? (Waarom?)
13	Indien er materiaal nodig was bij de handelingen, hoe kwamen de burgers aan het materiaal benodigd voor de handeling?	
14	Heeft u zelf ook materiaal nodig gehad bij het uitvoeren van een handeling, dat u niet voor handen had? Hoe bent u hier aangekomen?	

Specifieke mechanismen interactie hulpverlener en burger		
Achtergrond en selectie		
15	Was u op de hoogte van de achtergrond van de betrokken burgers?	Indien ja, hoe kwam u achter deze achtergrond
A	Welke achtergrond hadden deze burgers	
16	Kennis: BHV, EHBO, eerdere crisis	
17	Achtergrond: medisch, chauffeur, huisarts, bouwvakker etc.	
18	Relatie tot slachtoffer	
19	Heeft u een selectie van burgers gemaakt	Zo ja, zie volgende vraag. Nee, waarom niet?
A	Hoe heeft u die selectie in de praktijk uitgevoerd	

20	Heeft u naar uw idee optimaal gebruik gemaakt van de vaardigheden en kennis van de burgers?	Ja, Waarom; nee, waarom niet

21	Heeft u burgers instructies gegeven?	
A	Welke instructies gaf u (aan wie) en hoe deelde u deze mee?	Welke en hoe medegedeeld?; speelde benadrukken van de In-groep hier nog een rol?
B	Werden de instructies opgevolgd en op de juiste wijze uitgevoerd?	Door wie wel/niet?; Niet, Waarom; Toezicht en controle gehouden?

Coördinatie en overleg

22	Was er tijdens de uitvoering van de werkzaamheden sprake van coördinatie of aansturing van burgers?	Ja, hoe ging dat en wie deed dat?; nee, waarom niet?
23	Was coördinatie/aansturing op dat moment noodzakelijk?	Waarom wel/niet
24	Is er onderling overleg geweest tussen hulpverleners en burgers over de stand van zaken?	Ja, hoe ging dat?; nee, waarom niet?
25	Hoe was de verhouding tussen de hulpverlener en de burgers	Hiërarchisch; symbiotisch?
26	Op welke manier en met welke middelen heeft er communicatie plaats gevonden tussen de hulpverleners en burgers?	

(Neven)effecten

27	Hebben handelingen van de burgers een belemmering/meerwaarde opgeleverd bij de operationele uitvoering van de processen?	Meerwaarde, waarom?; belemmering, waarom?
28	Zijn er door handelingen van burgers neveneffecten opgetreden bij andere processen?	Ja, welke?
29	Is er door handelingen van burgers schade aan mens, dier, milieu en/of materieel voorkomen/toegebracht?	Welke?

30	Hebben burgers de informatievoorziening omtrent de oorsprong, omvang en/of gevolgen van de ramp belemmerd/bevorderd?	

Knelpunten en meningsverschillen		
31	Zijn er tussen burgers en hulpverleners en tussen hulpverleners onderling meningsverschillen geweest bij/over de door burgers	
A	Hoe werden deze meningsverschillen opgelost?	Zo ja, hoe?; zo nee, waarom niet?
32	Zijn er knelpunten geweest bij de uitvoering van handelingen door burgers?	
A	Hoe zijn deze opgelost	Zo ja, hoe?; zo nee, waarom niet?

Leerervaringen en verbeterpunten		
33	Op welke aspecten heeft hulp van burgers volgens u meerwaarde/nadelige invloed	
34	Op welke onderdelen kan hulp van burgers bij een volgend incident op een betere manier worden uitgevoerd?	
35	Heeft u nog andere ideeën om de hulpverlening te verbeteren door hulp van burgers?	
36	Wat zijn volgens u noodzakelijke randvoorwaarden om hulp door burgers succesvol te laten verlopen/een meerwaarde te laten hebben?	

Planvorming en vrije ruimte		
37	Was er ten tijde van de ramp een richtlijn/beleidslijn/plan op hoe om te gaan behulpzame burgers?	
A	Bent u op enige andere wijze geïnstrueerd hierover?	
38	Was u toentertijd bekend met de inhoud	

39	Is er vanuit de organisatie een verschil aangegeven tussen het betrekken van burgers bij normale incidenten en dergelijke rampen/crises?	Zo ja, welke verschillen zijn er
40	Had u van te voren een mening over burgerhulp tijdens een ramp/incident?	Zo ja, welke?
41	Heeft u de instructies uit de organisatie gebruikt	
42	In welke mate ervaart u vrijheid in uw werk in het nemen van een beslissing om af te wijken van de richtlijn/dagelijkse gang van zaken	
43	Op welke wijze stuurt uw organisatie aan op het naleven van de richtlijn?	
A	Is er vertrouwen vanuit de organisatie dat u de juiste afweging maakt?	

Afsluiting

Lees voor: Dit is het laatste gedeelte van het interview. Hier wil ik u de ruimte geven voor het maken van opmerkingen die u van belang acht voor het onderzoek naar de omgang met hulpvaardige burgers.

Wilt u nog opmerkingen maken met betrekking tot het interview?

IK WIL U GRAAG HARTELIJK BEDANKEN VOOR DIT INTERVIEW! WIJ STUREN U NA AFLOOP VAN HET ONDERZOEK HET ONDERZOEKSVERSLAG OP.

Appendix C – Assessment framework

Categorie	Variabele	Code
1. Algemene informatie		
A. Volgnummer codering		
B. Datum		
C. Incident naam		
D. Evalutatieorganisatie		
E. Veiligheidsregio		
F. Gemeente		
2. Crisiskenmerken		
H. Soort Crisis	H1. Natuurramp/crisis	2.1.1
	H2. Verkeer en vervoer	2.1.2
	H3. Infrastructuur	2.1.3
	H4. Nutsvoorzieningen	2.1.4
	H5. Volksgezondheid	2.1.5
	H6. Veterinaire crises	2.1.6
	H7. Technologische crises	2.1.7
	H8. Verstoringen Openbare Orde	2.1.8
	H9. Terrorisme	2.1.9
	H10. Buitenlandse crises	2.1.10
I. Vitaal belang	I1. Territoriale veiligheid	2.2.1
	I2. Economische veiligheid	2.2.2
	I3. Ecologische Veiligheid	2.2.3
	I4. Fysieke Veiligheid	2.2.4
	I5. Sociale en politieke stabiliteit	2.2.5
J. Bestuurlijke opschaling	J1. GRIP 0	2.3.1
	J2. GRIP 1	2.3.2
	J3. GRIP 2	2.3.3
	J4. GRIP 3	2.3.4
	J5. GRIP 4	2.3.5
	J6. GRIP Rijk	2.3.6
K. Karakter crisis	K1. Flitscrisis (Flash)	2.4.1
	K2. Sluimerend (Slow-onset)	2.4.2
L. Kwaliteit beoordeling crisisbeheersing	L1. Heel Negatief	2.5.1
	L2. Overwegend Negatief	2.5.2
	L3. Overwegend Positief	2.5.3
	L4. Heel Positief	2.5.4
3. Getoond Emergent gedrag (Diplayed Emergence)		
M. Individual or group behaviour	M1. Individuele helper	3.1.1
	M2. Groepen met individuele helpers	3.1.2

	M3. Converg. van individueen met specifieke kennis/middelen	3.1.3
	M4. Converg. Van groepen met specifieke kennis/middelen	3.1.4
	M5. Organisaties/groepen met specifieke kennis gevraagd door hulpdiensten	3.1.5
N. Motivatie typen	N1. Returnees	3.2.1
	N2. Anxious	3.2.2
	N3. Helpers	3.2.3
	N4. Sightseer or curious	3.2.4
	N5. Exploiters	3.2.5
	N6. Orde verstoring	3.2.6
O. Type of emergent groups	O1. Quasi emergent behaviour	3.3.1
	O2. Structural emergence	3.3.2
	O3. Task emergence	3.3.3
	O4. Group emergence	3.3.4
	O5. Type V	3.3.5
	O6. Emergence based on latent knowledge	3.3.6
	O7. Intersitial groups	3.3.7
P. Quantity of bystanders	P1. Te veel	3.4.1
	P2. Goed	3.4.2
	P3. Te weinig	3.4.3
4. Karakteristieken Helpende bystander		
Q. Afkomst bystanders	Q1. Individeel	4.1.1
	Q2. Gevormde groep	4.1.2
	Q3. Bestaande sociale groep	4.1.3
	Q4. Vanuit organisatie	4.1.4
R. Begonnen met helpen	R1. Eigen initiatief	4.2.1
	R2. Na instructie of vragen hulpverlener	4.2.2
S. Termijn samenwerking/activiteit bystander	S1. Totdat hulpverleners arriveren	4.3.1
	S2. Vanaf dat hulpverleners arriveren	4.3.2
	S3. Doorlopend	4.3.3
T. Karakteristieken bystanders	T1. BHV/EHBO-diploma	4.4.1
	T2. Professional zonder formele rol	4.4.2
	T2. Eerdere ervaringen met crises	4.4.3
	T3. Bezit van andere specifieke kennis	4.4.4
	T4. Bezit van specifieke middelen	4.4.5
5. Functionele en dysfunctionele aspecten helping bystanders		
U. Functionele aspecten	U1. Quick response; citizens are onscene	5.1.1
	U2. Increase of capacity emergency response	5.1.2
	U3. Specific knowledge or resources	5.1.3
	U4. Prevent further injury and damage	5.1.4
	U5. Provide relevant information	5.1.5

V. Dysfunctionele aspecten	V1.Results in an unclear overview of response	5.2.1
	V2. Coordination and guidance costs time and capacity	5.2.2
	V3. Interference with emergency response	5.2.3
	V4. Interference with information streams of emergency workers	5.2.4
	V5. No insight in capacities and quality of the citizens	5.2.5
	V6. No proper assesment of dangers and risks by citizens	5.2.6

6. Interactie hulpverlener-burger		
W. Overleg	W1. Directe instructie hoe te handelen	6.1.1
	W2. Burgers kenbaar gemaakt wat ze kunnen doen om te helpen	6.1.2
	W3. Benadrukken van de In-groep van SLO's	6.1.3
X. Voorwaarden voor samenwerking	X1. Hierarchische samenwerking	6.2.1
	X2. Gelijkwaardige samenwerking	6.2.2
	X3. Burger leidend in samenwerking	6.2.3
	X4. Slechts op afgebakende taken binnen eigen proces	6.2.4
	X5. Alleen toestaan taken buiten eigen proces	6.2.5
Y. Aanpassingen procedures door individuele hulpverleners	Y1. Improvisatie op taken	6.3.1
	Y2. Improvisatie op rol	6.3.2
	Y3. Improvisatie tegengegaan	6.3.3
Z. Voorwaarde voor benutten vrije ruimte	Z1. Vertrouwen door leidinggevende getoond	6.4.1
	Z2. Acceptatie door organisatie	6.4.2
	Z3. Voorbereidt in opleiding	6.4.3
AA. Type power gebruikt	AA1. Hard power getoond	6.5.1
	AA2. Soft power getoond	6.5.2
	AA3. Combinatie van hard en soft	6.5.3

7. Evaluatie		
AB. Noodzaak benutten helpende burgers	AB1. Groot	7.1.1
	AB2. Gemiddeld	7.1.2
	AB3. Klein	7.1.3
AC. Bureaucratische kenmerken	AC1. Burgerparticipatie in planvorming en/of OTO-programma na de ramp	7.2.1
	AC2. Poging burgerparticipatie in te kaderen binnen crisisprocessen	7.2.2