

Crisis-induced learning in public sector organizations

Edward Deverell



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Crisis-induced learning in public sector organizations

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(med en sammanfattning på svenska)

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Crisis-induced learning in public sector organizations

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To Gordana and George

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Edward Deverell

Executive summary

How do public organizations manage crises? How do public organizations learn from crises? These seemingly basic questions still pose virtual puzzles for crisis management researchers. Yet, the interest of the academic and practitioner realms in crisis management has grown in recent years. In this doctoral dissertation Edward Deverell sheds light on the problems regarding the lack of knowledge on how public organizations manage and learn from crises, with a number of critical knowledge gaps in contemporary crisis management as the starting point.

In the last few decades the interest in crisis management as a scholarly field has grown. This developing field is composed of an increasing number of loosely connected social science scholars concerned with issues of extraordinary events, their repercussions and the way in which they are managed by authorities, organizations, policy makers and other key actors. However, there are several lacunae to be dealt with in the emerging field of crisis management research. This dissertation sets the spotlight on four of these limitations of the crisis management literature to date.

First, influential scholars within the field call for increased structuration and feasible models to help us understand and explain various important factors influencing the crisis management process. In this dissertation I try to bridge this gap by developing theory on crisis response *and* learning. Crisis response signifies organized activities undertaken by a stakeholder when a community of people – an organization, a town, or a nation – perceives an urgent threat to core values which must be dealt with under conditions of uncertainty. Crisis-induced learning refers to purposeful efforts, triggered by a crisis event and carried out by members of an organization working within a community of inquiry, that lead to new understanding and behavior on the basis of that understanding.

Second, organizations play a key role in crisis management. Surprisingly enough, however, crisis management research have only occasionally built theory on how organizations respond to crisis. So far, the literature tells us more about crises as events than on how these events are actually managed. One reason is the focus within crisis management research on highly unusual, big catastrophic events and industrial accidents. Therefore, this dissertation explores crisis episodes that affect specific organizations rather than entire communities or national governments. In addition, the dissertation brings together debates on crisis management and crisis-induced learning from a public management and organizational perspective.

Third, crisis management researchers have to date dealt mostly with acute crisis response and issues of preparedness, while the issues of crisis aftermaths and crisis-induced learning are still relatively unknown. However, although this study recognizes the importance of crisis planning and sense-making, this should not lead to a relative neglect of the issue of learning from crisis. Crisis-induced learning is important as crises are rare events with huge repercussions. Thus crises are opportunities to draw lessons in order to improve future management and crisis response, and to mitigate the risk of future crises.

Fourth, the relatively few studies that have dealt with crisis-induced learning have focused on learning after the crisis (intercrisis learning), while theory on learning during crisis (intracrisis learning) is not as developed. My interest in both inter- and intracrisis learning obligates me to study crisis response and crisis learning in conjunction. This means studying how organizations respond to crises and how they learn during and from these episodes. By focusing on processes of crisis response and learning under pressure – rather than pre-crisis planning, threat perception, risk management and preparedness – the dissertation looks into how organizations and their members manage the challenge of crises and how they take on, make use of and implement lessons learned from one crisis to the next.

The lacunae outlined above are theoretical points of departure for this dissertation's interest in the extent to which public organizations learn from crises. Accordingly, the overall objective of the dissertation is to increase understanding of crisis response and crisis learning in public organizations. In doing so, I conduct an abductive study of how public organizations respond to crises and how they learn during and after these events. The term 'abductive' refers to a research strategy which is characterized by continuous movement back and forth between theory and empirical data.

The first step of the research process was grounded in the empirical world. The empirical contribution is a careful process tracing and case reconstruction of six cases involving Swedish public sector organizations. In the methodology chapter (Chapter 3) I describe the basis of the empirically bounded case study

approach and case reconstruction and process tracing method. Six case studies of organizational crisis management and learning were selected for further analysis. The case studies were based on a variety of sources including post hoc accident investigations, articles, organizational documents and 129 extensive semi-structured interviews with key crisis managers. The process tracing and reconstruction efforts led to case narratives, which were then dissected by identifying dilemmas and critical decision-making occasions that were studied in more detail. The following cases are explored in the dissertation: The Swedish energy utility Birka Energi's management of two cable fires that caused large-scale blackouts in Stockholm in March 2001 and May 2002; The city of Stockholm's management of the 2001 blackout and the repeated incident in 2002; The Swedish Defence Research Agency's (FOI) management of hoax anthrax letters in 2001; and three Swedish media organizations' (the Swedish public service radio Sveriges Radio, the Swedish private TV station with public service tasks TV4, and the Swedish public service TV station Sveriges Television) management of news work and broadcasting challenges on 11 September 2001 (and to some extent following the murder of the Swedish Foreign Minister Anna Lindh in September 2003).

As the case selection reveals, all organizations under study are not pure government organizations. Rather three organizations (Birka Energi, Sveriges Radio and Sveriges Television) are publically owned corporations, while one (TV4) is a privately owned media organization. Accordingly, this dissertation claims that ownership is not the only measure of 'publicness'. Media organizations, for instance, are of great importance for democratic societies. The term 'public organization' is thus in this dissertation not used in the sense of equating to government, but rather in reference to the degree of which political authority and influence impacts on the organization.

The theory generating approach that this dissertation takes on implies that the case studies are 'heuristic' case studies. The dissertation aims to promote new hypotheses for further research rather than to produce generalized knowledge. To this end the case studies are further analyzed by specific theoretical approaches suggested by prior research. This second step of the research process is dealt with in some detail in the literature review. The literature review in Chapter 2 aims to bring an injection of organizational studies into the field of crisis management research. The review presents relevant studies from the fields of crisis management studies, organization studies (with special attention given to organizational learning theory) and public administration and management. The review puts forth a twofold argument: There is a need of increased knowledge not only about crises and how they develop, but also about how they are actually managed by public organizations. However, prior crisis management research with bearing on public management organizations are mostly

based on either political executive foreign policy decision making or on very specific high reliability organizations operating in the pre-crisis phase. Hence, organization studies and public management studies should play a greater part in crisis management research.

The review also provides an overview frame for the study by highlighting relevant research. The chapter discusses the problems of defining, categorizing and operationalizing key concepts such as crisis, crisis management and organizational learning.

In the third step of the research process, the case studies are further analyzed using theoretical approaches aimed at proposing propositions on how public sector organizations may respond to crises, and how they may learn from their crisis experiences. These analyses have been carried out with an aim to produce stand-alone articles aimed for publication in international scholarly journals. Thus this dissertation differs somewhat from the typical public administration dissertation as it is comprised of an analysis of several articles, as opposed to a monograph. The journal articles are published or accepted for publication in the *Journal of Contingencies and Crisis Management*, the *Journal of Homeland Security and Emergency Management*, *Public Management Review*, and *Risk Management*. The articles are reprinted in four empirical chapters (Chapters 4-7), which make up the core of the dissertation. Introductory and concluding chapters aimed at bringing the discussion together have then been added.

I present the first empirical analysis in Chapter 4. It looks into how organizational culture affects strategy and adaptability in crisis management. The key research question is: *What mechanisms affect organizations' ability to restructure in order to cope with acute crisis management challenges?* In the study I propose a typology of temporal organizational responses to crises in public perception. The typology is based on organizations' abilities to change strategy and adapt their managerial and operational levels to deal with crises. The empirical data used to construct the typology covers three organizational crisis responses: 1) The utility Birka Energi's response to a cable fire that caused a thirty-seven hour blackout in Stockholm in 2001; 2) The TV station TV4's response in terms of how to reorganize and broadcast during the 11 September 2001 terrorist attacks; 3) FOI, the Swedish National Defence Research Agency's response to the anthrax letter scare of 2001 and 2002. The different organizational outcomes featured by the typology reveal distinct aspects of organizational crisis management. According to the typology, the Fully Adapting Organization (TV4) manages to adapt both its strategy and its managerial and operational levels to deal with the crisis. The Semi-Adapting Organization (FOI) changes its strategy but lacks the capacity to change managerial and operational levels according to the new strategy. The Non-Adapting Organization (Birka Energi) does not grasp the importance of strategy change in the first place. Based on three inductive case

studies, the study concludes that organizational culture plays an important role in this process where the Semi-Adapting Organization and the Non-Adapting Organization were dominated by strong expert cultures which proved to be less inclined to change. In contrast, the Fully Adapting organization had deliberately fostered an organizational culture in which flexibility – understood as the capacity to readily adapt to changing demands – was a cornerstone.

The second empirical analysis is presented in Chapter 5. It deals with the issue of flexibility and rigidity in crisis response and crisis learning at two Swedish public organizations. The point of departure for the study is that the relationship between crises, organizational crisis management response and learning has to date been understudied. In an effort to broaden theoretical knowledge on the relation between crisis and learning, the study analyzes the crisis responses of two public organizations during a sequence of two failures. The empirical data is grounded in thorough process tracing and case reconstruction analyses of how the utility Birka Energi and the city of Stockholm managed two comprehensive blackouts in March 2001 and in May 2002. The key research question is: *How does organizational rigidity and flexibility affect public organizations' crisis response and crisis learning?* A framework of rigidity versus flexibility in response is utilized in the analysis. The findings are then discussed in relation to their implications for the nexus between crisis and learning. The study concludes by raising four propositions for further research.

The third empirical analysis is presented in Chapter 6. This study aims to contribute to the debate on organizational learning from crisis by shedding light on the phenomenon of crises as learning triggers. In the study I pose the following key research question: *How can we analyze organizational learning during and after crisis and what criteria should be part of the analysis?* In an effort to unveil patterns of how organizational crisis-induced learning may appear and develop, I suggest a conceptual framework based on conceptual categories and answers to four fundamental questions: what lessons are learned (single- or double-loop)?; what is the focus of the lessons (prevention or response)?; when are lessons learned (intra- or intercrisis)?; is learning carried out or blocked from implementation (distilled or implemented)? In the analysis section I explore the practical applicability of the framework by using the same empirical case studies as in Chapter 5. The final section suggests four propositions for further research.

The last empirical study is presented in Chapter 7. There I construct a framework of management, learning and implementation in response to crisis. My point of departure is a proposition from previous crisis management research which posits that previous experience can shape crisis response as a way of repeating former routines or as a precondition for improvisation. The key research question is: *How do organizational management structures affect*

crisis response, learning and implementation? In the study I argue that flexibility is closely connected to the way organizations learn – in behavioral or cognitive modes. Moreover, these learning modes are connected to the role of managerial groups, where I differentiate between centralized and decentralized top managerial groups. In addition, two case studies of how two bureaucratic media organizations (Sveriges Radio and SVT) managed and learned from extraordinary news events – most notably 9/11 and the assassination of the Swedish Foreign Minister Anna Lindh – are conducted. The findings show how the decentralized managerial group learned in a behavioral fashion, by creating new formal policies and structures, while organizational members in the centralized managerial group relied on individual cognitive structures as a way of ‘storing’ lessons learned. The study ends by discussing the findings from a crisis management perspective, where I propose that the two modes of learning profoundly affect the crucial issue of flexibility in organizational crisis response.

The concluding Chapter 8 discusses and contrasts the findings and propositions generated from the four separate empirical analyses. Here the role of organizational structure and culture are highlighted by revisiting specific organizational factors that seem to impact on organizational crisis management and learning processes, such as previous experience, flexibility and rigidity in crisis response and learning, and centralization and decentralization. These factors were also outlined in the literature review. Further empirical evidence of how the factors affect crisis response and crisis learning in organizations was found in the four empirical analyses.

In addition, findings from the empirical studies also related to different types of learning processes such as intra- and intercrisis learning and single- and double-loop learning. Consequently these concepts are also deliberated upon in the concluding sections of the dissertation. As a final attempt to bring the propositions and arguments together, a framework of the crisis management and learning process is proposed. In regard to this venture, it is important to acknowledge the limitations of the framework, and of the dissertation as a whole. As it is only based on data from six cases of Swedish public organizational responses to crisis, the framework is merely a visual schematic of a number of propositions to be further tested and validated by further research. However, the framework also has a few virtues. It is an attempt to approach the ambiguous nature of crises and crisis management processes. The framework may also assist in providing more sensible and practical conceptualizations, and thus bring us closer to definitions that remain close to everyday operations of practitioners involved in crisis management. This dissertation thus makes an effort to bridge the gap between crisis management scholars and practitioners. This is also an overall goal guiding research activities at the National Center for

Crisis Management Studies (CRISMART) at the Swedish National Defence College, where the research behind this dissertation has been conducted.

Keywords: Crisis-induced learning, crisis management, organizational learning, public organizations, case studies, flexibility, centralization.

Chapter 1

Introduction

The fundamental topic of attention for this dissertation is crisis management and the extent to which public organizations learn from crisis episodes. By management of crisis episodes I refer to the responses of public organization to for example pandemics, large-scale blackouts, terrorist bombings or natural disasters such as earthquakes, tsunamis, floods, and hurricanes. In later decades crisis management has shifted from an underdeveloped and disparate set of policy issues into a policy domain of its own right with an established position high on the agenda of politicians, officials, mass-media and academia. Along with this shift we have seen, in the practitioners' realm, extensive investments in pre-crisis planning, crisis agency government structure and high-tech intelligence and surveillance aimed at providing early warning and at nipping risks and potential crises in the bud.

Meanwhile, scholarly interest in issues of crisis and crisis management has risen. Crisis management studies have advanced into a specific field (Smith and Elliott, 2006). An intuitive assumption would lead us to expect that these experiences would affect crisis response in a positive way. However, despite costly, time consuming and resource intensive efforts, governmental and organizational real life experiences of crises as well as research findings suggest that politicians, officials and the organizations they represent repeatedly fail to meet public demands when crisis strikes. This calls for a deeper exploration of the relation between crisis response and learning.

So far research on crisis and learning holds that preservation trumps reform in the wake of crisis (Boin, McConnell and 't Hart, 2008. See also Dekker and Hansén, 2004; Bannink and Resodihardjo, 2006). This is unfortunate as learn-

ing from major failures and crisis experiences is essential for creating robust, safe, and reliable organizations and societies as well as for preventing a repeat of the crisis (Argyris and Schön, 1978:5). Hence, it is of great theoretical and practical importance to increase knowledge about why some individuals and organizations learn from crisis experiences and others do not. Further, the importance of crisis-induced learning lies in the fact that crises are relatively rare and unwanted events with large consequences. Hence, it should be of the essence to draw from these episodes lessons to improve future management.

Besides the general importance of increasing knowledge about crisis response and crisis-induced learning on a theoretical level, which was emphasized above, two specific crisis episodes triggered the writing of this dissertation. The first event took place in Stockholm on 11 March 2001. Early that morning, a high power cable in a cable tunnel in northwest Stockholm caught fire. This was the impetus for one of the biggest blackouts recorded in Sweden to date. This blackout also became the first crisis management case study I conducted as an analyst at CRISMART. For thirty-seven hours, eight city districts with 50,000 residents and 700 companies employing an additional 30,000 people were without power. The blackout was a bona fide crisis management challenge, especially for the power company and the city's command and control unit. A mere fourteen months later history was repeated as the same districts once again were subjected to a blackout due to a fire in the same cable tunnel. This time the blackout lasted for fifty-four hours. Under normal circumstances studying a highly abstract phenomenon such as crisis-induced learning is problematic for several reasons, including the difficulties to isolate and measure learning and to apply the concept to empirical cases (Levy, 1994; Stern, 1997; Berends et al, 2003). The repeated crisis event was a rare opportunity to study crisis response and learning before and after crisis episodes. In addition, many other variables could be held relatively constant as the two crises covered the same organizations while only limited time had passed between the events. In fact, in most cases the same organizational members were involved in both crisis management processes.

The 2001 and 2002 blackouts triggered my interest in the issue of crisis and learning. Around a year and a half later my concern for the relation- between crisis and learning was re-emphasized by another crisis event. The 26th of December 2004 started out like any other Christmas holiday. That changed as reports on the devastating earthquake off the coast of Sumatra came in. As a Swede, reports on tsunamis striking the shores of Thailand had a direct effect. One was concerned for friends and colleagues who were among the estimated 30,000 Swedish tourists in southern Thailand during the time (Mediemagasinet, 2005). For the Swedish government offices, however, a coordinated response to this appalling international natural disaster and national crisis was delayed.

Hours went into days before a proper crisis management response was produced. As a crisis management scholar I was baffled by the tardy response. How could it be? After all, since the September 11, 2001, terrorist attacks crisis management and preparedness issues had been hot topics. In Sweden a number of commissions had been initiated to suggest improvements of national authorities' crisis management capacities (e.g. SOU 2001:41). Meanwhile Sweden had handled its share of crisis management challenges, like for instance the assassination of the Prime Minister Olof Palme in 1986, the sinking of the ferry Estonia in 1994, the Gothenburg riots during the Swedish EU Presidency in 2001 and the murder of the Foreign Minister Anna Lindh in 2003. In the wake of these events, many organizational and legal changes were made to improve the national crisis management system (e.g. lag 2002:833; Prop. 2001/02:158; Prop. 2001/02:184). But when this large-scale disaster occurred, governmental and public organizations again responded sluggishly.

Although I do not use the case of the tsunami explicitly in this dissertation as a case study, that crisis management episode further triggered my thoughts about the relations between crisis and learning. If public organizations would learn from their crisis experience, should they not improve their crisis management capacities from one crisis to the next? Since crises bring large consequences and costs, it should be an important social issue worthy of further investigation to explore the relation between crisis and learning. In doing so, I had to move beyond the idea of learning as merely a post-crisis activity. Crises challenge organizations' capacities and competencies to such an extent that the everyday organization and ways of doing things will in many cases not be sufficient to manage the situation. This, in turn, means that there is a need to examine innovation and learning not only after crisis, but also during crisis. To really understand the relation between crisis and learning, then, it seems necessary to bring crisis response into the crisis learning equation. This means studying how organizations respond to crises and how they learn during and from such episodes, which in turn raises a number of issues pertaining to the difficulties of applying the concept of organizational learning empirically. On the bright side, however, individuals and organizations constantly make use of experience when solving problems. Thus on ontological grounds there should be good expectations for investigations. Empirical knowledge exists waiting only to be mined.

As has already been indicated, this dissertation will critically discuss and examine issues related to the difficulty of learning from major and high in consequence events and thereby improve how such events are handled in the future. By focusing on processes of crisis response and learning under pressure – rather than pre-crisis planning, threat perception, risk management and preparedness – the dissertation looks into how organizations and their members manage the challenge of crises and how they take on, make use of and implement lessons

learned from one crisis to the next. The dissertation brings together debates on crisis management and crisis-induced learning from a public management and organizational perspective (these fields are discussed in more detail in Chapter 2).¹ It also provides new empirical knowledge about how six Swedish public organizations managed crisis episodes, and proposes explanations as to what extent they learnt from their experiences. Moreover, the dissertation suggests theoretical approaches for the study of organizational crisis management and learning. The basis of these approaches is outlined in the literature review, which in turn is aimed at finding gaps in the crisis management literature and providing injections from public management and organization studies into the field of crisis management.

Aim and research questions

This dissertation deals with the previously under-researched nexus between crisis and learning. The focus is broadly placed on the phenomenon of crises, crisis response and learning from crises on the organizational level. The empirical scope is circumscribed to include crisis-induced learning in six cases of Swedish public sector organizations. The theoretical scope, however, is broader. Accordingly, the aim of the dissertation is to increase the theoretical understanding of crisis-induced learning in public organizations by studying, comparing and contrasting a number of organizations faced with different types of crises. To achieve this aim, I pose the following research questions: How do public organizations respond to crises? And: How do public organizations learn from crises? To shed light on these general questions, I conduct a series of studies that touch upon different parts and aspects of the questions. These studies are presented in a chronological order in terms of what part of the crisis management and learning process that they pertain to.

Plan of study

This dissertation is not a traditional social science dissertation as it does not follow the monograph study design. Instead I have produced a compilation of separate although thematically related articles that bring up specific issues regarding the common theme of crisis response and crisis-induced learning in public sector organizations. Hence, the empirical core of the dissertation (Chapters 4-7) is made up of four articles that are separately submitted and published (or accepted for publication). In essence this has constituted a distinct

1 In line with Egeberg I refer to an 'organizational perspective' as a viewpoint that 'highlights the role of a decision maker's organizational context' by paying attention to among other things the organization's culture and structure (Egeberg, 2003:116).

yet complementary and occasionally also partially overlapping attempt to conceptualize and empirically assess the relationship between crises, organizations and learning.

The dissertation consists of eight chapters. Following the introductory chapter on the aim and research questions is the literature review (Chapter 2). Here the field of crisis management research is outlined and key concepts of the dissertation are defined. In the literature review I also argue for the value of injecting crisis management research with influences from the fields of organization studies (including organizational learning theory) and public administration and management. Chapter 3 deals with issues of research design and methodology. Here the abductive research strategy and case reconstruction and process tracing method is deliberated upon.

Chapters 4-7 present the empirical contributions constituted by four separate articles. Chapter 4 deals specifically with the initial phase of crisis management. Here I examine how organizational culture impact on the abilities of organizations to change strategy and adapt the strategic and operational levels to cope with crises. Chapter 5 takes a more comprehensive view on the processes of crisis lead-up, crisis management proper and crisis aftermath. More specifically, it considers how organizational rigidity and flexibility affects public organizations' crisis response and crisis-induced learning. Chapter 6 reflects on the theoretical and methodological challenges of this kind of research. It asks: How can we analyze organizational learning during and after crisis and what criteria should be part of the analysis? Finally, Chapter 7 explores how organizational management structures affect crisis learning and implementation of lessons learned. Findings from the studies are compared and contrasted in Chapter 8. This chapter also revisits the propositions presented in the empirical chapters related to theory development on crisis response and crisis-induced learning. Chapter 8 thus discusses the conclusions and the propositions generated from the theoretical and the empirical studies according to a number of central themes previously outlined in the literature review.

While I am the only author behind the studies presented in Chapter 5 and 6, I co-authored the studies in Chapter 4 and Chapter 7 with my CRISMART colleague Eva-Karin Olsson. For this reason it should be made explicit who contributed to what in these chapters. Regarding Chapter 4, both authors designed the study, formulated the objectives and the methods. Both authors performed the literature review and the analysis. Three case studies are included in the study. Olsson collected empirics and performed the first case study. Castenfors, Deverell and Olsson collected empirics to the second case study. Deverell and Olsson performed the second case study analysis. Deverell collected empirics and performed the third case study. Deverell and Olsson reflected on the discussion and results. Regarding the study presented in Chapter 7, both authors

designed the study, formulated the objectives and the method. Deverell performed the literature review and both authors performed the analysis. Two case studies are included in the study. Both authors collected empirics for the first case study and performed the case study analysis. Olsson collected empirics and performed the second case study. Both authors reflected on the discussion and results.

Chapter 2

Crisis response and crisis-induced learning in public organizations: What do we know?

Introduction

Case study researchers are typically critiqued for letting subjective judgments guide the data collection instead of developing 'a sufficiently operational set of measures' to build upon (Yin, 2003: 35). In order to develop such measures, key concepts utilized in the analysis need to be clarified and defined. Part of the aim of this literature review is to draw analytical tools from previous studies to generate propositions on the crisis response and learning process. These concepts are more thoroughly discussed in the empirical studies presented in Chapters 4-7.

In looking for and explaining relevant concepts, this chapter draws on three interrelated strands of research. I draw on 'crisis management studies', which relate to how specific types of events are categorized, understood and managed. I argue in favor of bringing in more influences from the literatures of organization studies and public management to the field of crisis management. These two literature streams relate to the object of study and are instrumental in explain-

ing patterns of public organizations' crisis management and learning processes. Thus in this review I claim that in order to advance our knowledge of how public organizations manage and learn from crisis events, there is an increasing need for crisis management studies to bring the study of public organizations back into the equation. Later in this review, I will more elaborately lay out the grounds for this claim. First, however, a note on the delimitations regarding the units under study: This dissertation is an attempt to direct analytical attention toward the study of crisis response and learning from an organizational perspective. In order to more fully understand crisis management processes in public organizations, I focus on the organizational, structural and cultural features and how they affect the managerial output.

The chapter consists of three basic parts. The first part of the chapter provides an overview of the growth of scholarly knowledge within the cross-disciplinary field of crisis management studies. Here I describe the major strands of the scholarly field referred to as crisis management studies. I also outline the main focus of attention of the various streams and I present definitions of key concepts. The second part of the chapter identifies knowledge gaps within the crisis management literature. This section sets the stage for a call for an injection of organizational studies into the crisis management literature. In this part of the review I turn the spotlight to a number of factors suggested by previous literature to be of importance in understanding crisis management and crisis-induced learning and in explaining contrasting outcomes.

The roots of crisis management studies

Like many other cross-disciplinary academic fields, crisis management studies are contested. Some scholars refer to the field as 'ill-defined' and represented by 'academics that are scattered over many disciplines' (Boin, 2004b:167). Others lament that the crisis management literature has failed to 'develop appropriate frameworks for the study of crises' (Mitroff, Alpaslan and Green, 2004:175). Mitroff et al (2004) claim that crisis management researchers deal with a set of highly ill-structured, interactive and interdependent problems. It has even been questioned whether the field is in fact an academic field in its own right (Boin, 2006:94). Nonetheless, the complexity embedded in modern society make crises unavoidable (Perrow, 1984; Beck, 1992). There is an increasing need to improve our understanding of crisis management processes; how to effectively plan for crises, act during them, and learn from them. The academic community has risen to the occasion. Systematic research of crisis management is increasing within many academic disciplines. This provides a strong basis for a specific field of crisis management studies (Smith and Elliott, 2006).

The history of crisis management research is long. In the 1940s studies were made on natural disasters with a focus on management of collective stress (Quarantelli and Dynes, 1977). In international relations, research focused on brinkmanship, conflict and war (Rosenthal, 't Hart and Charles, 1989). The first wave of modern crisis management studies related to the public sector was based on executive decision making as part of US management of foreign policy crises, often with a focus on the president and his closest aides, bureaucracies and intra- and interagency interaction (Paige, 1968; Allison, 1971; Hermann, 1972, George, 1980; see also Hermann, 1963; Jervis, 1976; Khong, 1992). These studies provided many insights on the role of leadership in crisis. Political structures, presidential personality and high politics were also emphasized as explanatory factors. The specific settings, however, made it difficult to generalize the findings to other settings and organizations within the public sector.

A contemporary school of thought with bearing on crisis management was developed within the field of psychology. Much of this research was generated as a cognitive reaction against behaviorist psychology and the classic model of decision making, which precluded that decision makers had access to relevant information and that decisions were taken according to the most rational choice and best alternative (Kaufman and Kaufman, 1998). Cognitive psychology put the microscope on subjectivity and representativeness in crisis decision making and how individual constraints to assessing and processing information, such as beliefs, expectations, mental shortcuts and analogies, impose themselves on crisis decision making (Bruner, 1957; Stern, 1999; Janis, 1982). These individual and group psychology approaches to crisis management also emphasized the relation between the crisis characteristics of threat, urgency and uncertainty and psychological reactions such as stress, denial and paralysis. Especially interesting in this regard is how stress narrows the scope of attention and the capacity to processes and make sense of complex information (Kahneman and Tversky, 1974; Hermann, 1979; Staw et al, 1981; Svedin, 2009).¹

Apart from the crisis management researchers within the fields of international relations and psychology much of the early theory on crisis management was developed from studies of highly devastating natural disasters (Fritz, 1961; Quarantelli, 1978; Britton, 1988; Rodriguez, Quarantelli and Dynes, 2006) or

1 Since research in psychology is a pillar of studies on crises and crisis management, a note on why this research only plays a limited role in this dissertation may be required. My focus on the organizational level leads to a relative neglect of the individual decision maker level and the group level of analysis. Moreover, the post hoc case reconstruction method (which will be described in Chapter 3) has guided my data gathering to post crisis accounts. Theory grounded in the crossroads between psychology and crisis management would have been utilized to a greater extent if the focus had been on in depth analysis of individual decision makers under stress, based on for instance participant observation.

from large-scale industrial accidents (Perrow, 1984; Shrivastava, 1987; Roux-Dufort, 2007). Researchers at the Disaster Research Center (established at Ohio State University in 1963) focused on mass and group response to disaster. These scholars, for example, developed theory on disaster response and identifying typologies of organizations and groups in disaster management (Dynes, 1970) and on how pre-existing behavior, values and social problems impact on disaster response (Quarantelli and Dynes, 1977). The disaster researchers also collected and analyzed large amounts of field data from disaster areas (Rodriguez et al, 2006).

Regarding the latter-mentioned traditional origin of empirical data, significant empirical studies used to theorize on crisis management often derived from major industrial accidents (Roux-Dufort, 2007). Thoroughly examined examples are the Three Mile Island incident (Perrow, 1984), the Exxon Valdez oil spill (Birkland, 1997), and the poisonous gas disaster in Bhopal (Shrivastava, 1987; Pauchant and Mitroff, 1992). The question, however, is what these studies may tell us about crises that are not highly specific and extraordinary industrial accidents or natural disasters (Roux-Dufort, 2007). From a practical perspective, less rare events like organizational crises and crises of public perception (Seeger, Sellnow and Ulmer, 1998) should be an even greater challenge than the very rare industrial accident or natural disaster. This perspective emphasizes the need for research to focus more on organizational crises as they pose critical challenges for today's managers.

Notwithstanding crisis management studies' attention on industrial accidents, some crisis management theories have also been constructed from empirical data on laboratory experiments (Hamblin, 1958), simulation exercises (Hermann, 1969) and corporate crises and turnarounds (Argenti, 1976; Slatter 1984). These events are different from those in focus in this dissertation. This dissertation focuses on acute and rapidly emerging real time crises rather than risk management and creeping crises,² which is covered in much of the literature on corporate crises and corporate decline (see e.g. D'Aveni and MacMillan, 1990). Nonetheless, theories grounded in empirical data from industrial accidents and natural disasters have been strong and this has led crisis management research to build knowledge on industrial accidents rather than on organizational crises.

Indeed, there is a need for an increased focus on organizations in crisis management studies. In line with the core claim of this dissertation, disaster research and corporate crisis literature have at times tried to bring crisis management

2 Creeping crises are slow burning crises that may take years to erupt and to solve. Environmental crises like for instance global warming are examples of creeping crises (t Hart and Boin, 2001).

and organizational studies together. For instance, organizations are expected to minimize consequences of crises (Carley and Harrald, 1997; Dynes, 1970). Mitigation may be carried out by organizations as emergency responders or in terms of organizations as structures for resources allocation, coordination and management (Shafritz and Ott, 2001). So far, however, the concept of crisis has been poorly integrated in organizational theory (Roux-Dufort, 2007). Most organization theory studies related to crisis management deal with pre-crisis issues of resilience, preparedness and planning, rather than the phase of acute crisis management and crisis-induced learning (Pauchant and Mitroff, 1992).³ In general, influential literature on the crossroads of organizations and crisis management is based on the study of very particular organizations, so-called High Reliability Organizations (Weick 1987; Roberts, 1989; Laporte and Consolini, 1991; Klein, Bigley and Roberts, 1995; Carroll, 1995), which makes finding from these studies hard to apply to 'ordinary' organizations with public service tasks.⁴ Criteria that make up High Reliability Organizations even have the potential to be dangerous if applied in 'ordinary' organizations (Weick and Sutcliffe, 2007; Weick, 1987).⁵

Contemporary crisis management studies

Contemporary democracies, governments and organizations are increasingly challenged by catastrophes, disasters and other major threats to public health, safety and security. Incidents like the 2009 Australian bushfires, Hurricane

3 Notable exceptions are for instance Turner (1976; 1978). Turner introduced the concept 'full cultural readjustment' and became one of the first to bridge the gap between the emerging disciplines of organizational learning and crisis management.

4 According to Weick and Sutcliffe (2007), HRO's are preoccupied with failure, reluctant to simplify, sensitive to operations, committed to resilience and deferent to expertise (Weick and Sutcliffe, 2007:9-16). Many organizations, particularly public administrations, cannot draw such dividing lines between operations and management as the HRO's that the authors relate to. A modern public administration cannot for instance relate to the 'front line' as 'where the real work gets done' and relate the 'big picture' more to the 'situational' side than to the 'strategic' side (cf. Weick and Sutcliffe, 2007:12).

5 Empirical evidence from complex organizations such as NASA shows that disasters can occur as a result of lessons learned (Chiles, 2001). In 1960, a test pilot came close to asphyxiation in a vacuum chamber. The lesson that was learned from this incident was to give the astronauts pure oxygen to breathe. In 1967 during a simulation at Cape Canaveral, three astronauts died in a blaze in the Apollo capsule. Due to the lessons drawn seven years earlier, the capsule that the astronauts were sitting in was filled with pure oxygen. It only took a small spark to turn the capsule into a fireball (Murray and Cox, 1989). The near miss led to learning that in turn led to disaster (Boin, 2008). In a similar vein, Snook (2000) in his analysis of the 1994 accidental shooting of American Black Hawk helicopters over Northern Iraq found evidence showing how comprehensive safety measures at the US Air Force, that were established to prevent failures, could contribute to disasters (Snook, 2000).

Katrina and the breach of New Orleans' levees in 2005, the 2004 Southeast Asian tsunami, SARS in 2002 and the large-scale terrorist attacks of November 2008 in Mumbai, 11 September 2001 in New York and Washington, 11 March 2004 in Madrid, and 7 July 2005 in London, are examples of crises in this regard. Many crisis management researchers delimit their empirical interest to such disasters and catastrophes. However, I believe that incidents, which from a social perspective are not quite as dramatic, are also worth delving into for empirical findings and for theory development. Smaller incidents and near misses may not affect whole societies or lead to wide-ranging and collective stress. Even so, they may affect the public perception of government, organizations and authorities (Seeger et al, 2003).

This dissertation refers to crisis management studies as the emerging literature of social science approaches to extraordinary events, their repercussions and the way in which they are dealt with by accountable actors and organizations. This literature brings together social science researchers interested in crises and crisis management from fields such as public administration, management, sociology, political science, psychology among others. In the following sections I delve into the field of crisis management studies, I define key concepts and I describe in some detail selected literature relevant for the present dissertation.

Defining crisis and crisis management

Crisis signify trying times for organizations and their members. Crises challenge organizational behavior, structures and cultures, as day-to-day organizational operations and procedures are pushed to the limit and dilemmas are brought to a head. For an organizational unit that is not included in the loop it may be a first step towards becoming defunct. Although there are probably almost as many definitions of crisis as there are crisis management researchers, many share a relative agreement about what criteria are necessary for a crisis. I draw on a definition by Dutch crisis researchers utilized in a large number of case studies carried out within the frameworks of crisis research programs in the Netherlands (Crisis Research Center at Leiden University), Sweden (CRISMART, the Center for Crisis Management Research and Training at the Swedish National Defence College) and the U.S. (Transboundary Crisis Project at Syracuse University) (Stern and Sundelius, 2002). These studies emphasize the politico-institutional side of crisis management. Institutional crises undermine public crisis management capacities and they challenge the legitimacy of national governments (Boin, 't Hart, Stern and Sundelius, 2005; Boin and 't Hart, 2000). A good deal of the studies from the above mentioned research programs define a crisis as 'a serious threat to the basic structures or the fundamental values and norms of a social system which – under time pressure and highly uncertain circum-

stances – necessitates making crucial decisions’ (Rosenthal, ‘t Hart and Charles, 1989:10). It is noteworthy that the definition emphasizes the collective perception among members of the responding unit. In addition, crisis management case studies conducted under the guidance of this definition are likely to share a common denominator in the challenges to individual and organizational coping capacities (Sundelius, Stern and Bynander, 1997). Though this definition is in many respects useful, the fact that it relates to the national government and social system levels rather than the organizational level means that it needs some adaptation in order to be applied in this dissertation.

Except for the difference in the object of study, institutional crises share the main characteristics of organizational crises of public perception (Seeger et al, 2003). Crises of public perception affect organizations in a profound way. This crisis type is based on the crisis management actors’ perception of the event in terms of a surprise, threat to organizational values, and short decision time (Seeger, Sellnow and Ulmer, 1998; Seeger et al, 2003). The Tylenol case of 1982 and 1986 is one of the most quoted examples of a crisis of public perception. In this case, cyanide was deliberately injected into Tylenol drug bottles in the US causing nine deaths, major product recalls, financial loss and serious blows to public perception for the producer (Pauchant and Mitroff, 1992; Seeger et al, 2003).

The element of surprise is the main characteristic separating the Rosenthal et al (1989) definition from the Seeger et al (2003) definition (cf. Hermann, 1972). Seeger et al (2003) based their definition on Hermann’s (1969:29) crisis model of high threat to valued goals, short decision time and surprise. This model shaped much of the initial thinking in crisis management research (Billings, Milburn and Schaalman, 1980). However, the surprise aspect became contested at an early stage. Hermann even critiqued his own model using simulations to find out that surprise had very limited effect on response (Hermann, 1972). Subsequently, crisis researchers noticed that most crises are not bona fide surprises. Rather, in hindsight signals and signs of unfolding crises tend to be plentiful. Crises and disasters are then not bolts from the blue (Turner, 1978). Rather they may even be anticipated by some parties. The so-called period of incubation, characterized by information and communication difficulties regarding vaguely defined problems, might last for years before the crisis onset (Turner, 1978; Pidgeon, 1991). Moreover, lack of contingency planning rather than surprise seems more apt to be part of the crisis model as demonstrated by Billings et al’s (1980) close scrutiny of 177 industrial and educational organizations in Ohio that experienced restrictions in natural gas supply during the winter of 1976-77.

Elements of surprise are still part of the crisis definition within the sub-field of crisis communication. Seeger et al (1998:233) define a crisis as an ‘unex-

pected' 'non-routine event' (Seeger et al, 1998:233. See also Seeger et al 2003; Ulmer, 2001). The claim that crises are non-routine receives support in most crisis research camps. Smith (2006a:7) for instance emphasizes that crises are damaging events⁶ that cannot be managed according to the organization's regular structure, which invariably makes the events unexpected. Accordingly, rather than defining crises in terms of surprise, I – in line with the Dutch and Swedish crisis management scholars previously mentioned – emphasize the notion of uncertainty as a defining characteristic of crises (related both to the understanding of the situation as such as well as the appropriate organizational response to deal with it) (Rosenthal, Charles and 't Hart, 1989; Stern and Sundelius, 2002). For the sake of this study, then, rather than pertaining to the institutional or social system level, I use a definition suggested by the above mentioned schools of thought that has been tweaked to adhere to the organizational level. Thus, in this study, a crisis is said to occur: 'when a community of people—an organization, a town, or a nation—perceives an urgent threat to core values [...] which must be dealt with under conditions of uncertainty' (Boin and 't Hart, 2006: 42, italics added. see also Rosenthal, Boin and Comfort, 2001).

Defining crisis-induced learning

In a review of organization learning theory and crisis, Seeger, Ulmer, Novak and Sellnow (2005:81) conclude that: 'Crisis events, even though they are relatively infrequent and non-normative, may be experienced richly throughout the organization in ways that precipitate learning and change.' But while regular learning occurs cumulatively over time, organizations learning from crisis do so 'in categories', one crisis at a time (Carley and Harrald, 1997:313). Just as crises are unusual, specific and out of the ordinary (Boin et al, 2005; Stern and Sundelius, 2002; Boin and Lagadec, 2000) in comparison to everyday routine activity, crisis induced learning is specific and different from ordinary experiential learning. For instance there are significant values at play when it comes to crisis induced learning. Public officials involved in crisis response and crisis evaluation need to deal with time shortage, uncertainty and at times conflicting values in the emergency phase. This becomes even more notable in politically-dominated times of evaluation and assessment, which are fuelled by factors such as framing, accountability, blame allocation, and exploitation ('t Hart and Boin, 2001; Boin, 't Hart and McConnell, 2009). The present dissertation therefore argues that we do need specific theories for crisis response and crisis-induced learning.

6 Although crises are understood as damaging, devastating and unwanted events, most crises are likely to lead to opportunities for some – not all – actors involved in their management (Boin, 't Hart and McConnell, 2009).

However, theory on crisis and learning is not well developed, and the relation between the phenomena is not well understood in the literature (Carley and Harrald, 1997:317; Boin, 2006). To date the relation between crisis and organizational learning has not been sufficiently examined (see Boin et al, 2005:134). This claim finds support in for example a recent study by Nohrstedt who emphasizes that how and why some individuals and organizations learn and reform in the crisis aftermath is still fairly unknown (Nohrstedt, 2007:7). Moreover, even the broader question regarding how and to what extent activity and experience leads to improved capacity has been little explored (Goldstein and Hilliard, 2007:1; Roux-Dufort, 2000). That said, previous research has offered a few empirically plausible and general propositions. A number of these propositions refer to political learning that takes the form of policy change and reform.

van Duin (1992) analyzed the aftermath of seven major accidents in the Netherlands from the 1960s and 1970s, including railway accidents, hotel fires and industrial accidents. He found 'governmental learning' to be a slow and creeping incremental process. van Duin further proposed that comprehensive double-loop lessons tend to thwart smaller single-loop learning lessons, and that when the cause of the accident was blamed on human error, as was the case in the railway accidents, it 'hindered more integrated research on organizational factors' (van Duin, 1992: 321-322). van Duin (1992:324) also found that accidents in his cases were 'seen as unwanted events with no history.' At the same time, and quite contradictory, his analysis indicated that policy learning that leads to structural change is rarely a result of one specific accident. Rather, learning and reform were also influenced by many previous similar human error mistakes, industrial near misses or fires in public buildings (van Duin, 1992:325). In this sense, van Duin's findings are consistent with previous research on policy reform in the wake of disasters positing that such change is only on rare occasions directly linked to disaster. Instead the essence of structural change after disaster is in most cases already manifest in the pre-disaster period (Quarantelli and Dynes, 1977:34). Crisis-induced lesson drawing is thus according to this perspective characterized by linking old solutions to new problems.

Dekker and Hansen (2004) explored the effects of politicization following crises and how it may affect the learning capacity of public organizations. Their study told the tale of a Swedish and a Dutch case of politicization of the police and prosecution service. The Swedish case showed little or no traces of structural learning, while the Dutch one was characterized by a high degree of learning. From careful analysis of official documents and commissions, the authors found that politicization may facilitate learning in the public sector if politicians commit to structural solutions and monitor the institutionalization of lessons carefully. They further argued that the context and level at which problems were

deliberated and solutions suggested was of great importance. For instance, in the Dutch case a window of opportunity emerged to couple suggestions with ongoing social and political trends. The authors also emphasized the value of achieving political consensus on the aims and scope of lessons learned.

In a more recent study, Hansén (2007) conducted a longitudinal analysis of policy making effects after crises. Hansén's study spanned three decades and focused on intraorganizational political learning in the parts of the public sector dealing with issues of law and order. He selected three Swedish crises (a hijack in 1972, an embassy seizure in 1975 and the assassination of a prime minister in 1986) for scrutiny. The analysis showed evidence of swift policy reform and new judicial acts following the first incident; status quo and policy stability after the second crisis – which was by far the most violent – and substantial reform of the counter terrorism sector following the third incident, although that crisis was not an actual act of terrorism. Hansén concluded that crises and the hard work of policy entrepreneurs may lead to policy change after crises. Such change, however, takes place within the dominating and rigid policy beliefs kept by advocacy coalitions.

Besides the limited number of studies that deal specifically with applying crisis learning to empirical cases, there are many theoretical studies on how organizations learn in general, as suggested by organizational learning theorists. Organizational learning theory is recognized as a fruitful way of explaining the relation between information and knowledge and organizational behavior and change (Dekker and Hansén, 2004:216). However, conceptual confusion still characterizes research on organizational learning (Berends, Boersma and Weggeman, 2003; Popper and Lipshitz, 1998; Dodgson, 1993). Confusion is likely to remain as the organizational learning stream continues its strong leaning toward abstract reasoning and conceptual work, rather than engaging in empirical applications of the concept (see Dekker and Hansén, 2004; Bapuji and Crossan, 2004; Lähteenmaki, Toivonen and Mattila, 2001).

To define experiential crisis-induced learning in organizations, this study draws on definitions used in research on organizational learning (Argyris and Schön, 1978) and public crisis management (Boin et al, 2005:117; Dekker and Hansén, 2004). Various thinkers on organizational learning agree that organizational learning entails both cognition (change in states of knowledge) and behavior (change in organizational outcome) (Fiol and Lyles, 1985:803; Argyris and Schön, 1974; Carley and Harrald, 1997). Learning agents must understand what they did not previously understand, and then they have to act on the basis of that understanding. New cognition and novel behavior will result in cognitive or behavioral change as discussed in the studies mentioned above. However, an alternative viewpoint could also see learning outcomes as confirmations that investments lead to results and that systems work. Such learning would call for

continuity rather than change. It all becomes even more problematic when cognitive and behavioral factors are to be analyzed, not least since they are closely related in practical outcomes. Notwithstanding the fuzzy boundaries between different types of learning, this dissertation defines ‘crisis-induced organizational learning’ as *purposeful efforts, triggered by a crisis event and carried out by members of an organization working within a community of inquiry, that lead to new understanding and behavior on the basis of that understanding.*⁷ The learning cycle is completed when lessons become incorporated into the organization’s structures (e.g. formal rules and formal standard operating procedures) or cultures (e.g. shared norms, values and informal procedures) and thereby impinge on how crises are subsequently managed (Argyris and Schön, 1978; Boin et al, 2005; Dekker and Hansén, 2004).

Defining crisis strategy

The organization is the principal unit of analysis here. However, both organizational learning and crisis management is according to the definitions presented here primarily driven by key individuals such as top managers and leaders acting on behalf of the organization (Argyris and Schön, 1978). As D’Aveni and MacMillan (1990:640) put it, top managers are ‘organizational stewards’ as they ‘are the product of the input of many individuals.’ During crises, the role of the top manager as ‘interpreter or framer of meanings’ becomes prominent, not least from a communication perspective (Seeger et al, 2005:84). Moreover, as Boin et al (2005:126) put it: ‘Whether lessons learned are actually implemented depends to a considerable extent on the management strategy that is adopted to deal with the crisis.’ Hence, a management devoted to learning and change – or at least a sufficient number of powerful agents – should be necessary to maintain collective learning (Levy, 1994:300; Vaughan, 2003:203; Boin et al, 2005:126).

Top managers thus play an important role throughout the process of organizational crisis management and learning, as they are the ones formulating strategy during crises and in their immediate aftermaths, Strategy is also a key concept of this dissertation utilized especially in Chapter 4. When defining the concept of strategy, I draw on Mintzberg’s definition of strategy ‘as a mediating force between the organization and its environment’ (Mintzberg, 1993:13). This includes organizational decisions that relate to interpretations of the external environment. However, while Mintzberg refers to strategies as decisions and interpretations that are relatively consistent, my interest in crisis response and

⁷ Note that I use the concept of understanding, which does not mean that the information, the problem or the solutions leading to the understanding were novel (see Birkland, 2006:31f; May, 1992).

crisis induced learning directs my focus to the temporary adaptability of top managers and organizations. A basic premise of this dissertation is that such temporary adaptability on the managerial and the operational level is of great advantage for organizational crisis responses. The reason is that since crises are out of the ordinary, managers are required to produce 'outside of the box' thinking and behavior that differs from the everyday and routine way of working. This calls for a more action-based notion of strategy which highlights the path dependent nature of planning (Farjoun, 2002:569).

Knowledge gaps

This section outlines five significant knowledge gaps within the crisis management and crisis learning literature. The present dissertation intends to bridge these gaps and address these shortcomings. My intention is to add more knowledge to the field of crisis management and crisis learning through case studies carried out according to careful process tracing and case reconstruction of organizational crisis response and learning, and by drawing on literature on organizations and public management.

The first identified gap holds that there is a bias toward studying big catastrophic events in crisis management studies (Roux-Dufort, 2007). The magnitude of the crisis event seems to be of importance for post hoc learning and reform. However, this hypothesis is based on estimation rather than systematic research. Working with case studies, Birkland (1997:150) found that 'the seriousness' of the event determines the attention received. A disaster like 9/11 for instance triggered changes in aviation security, screening, bioterrorism and law enforcement powers (Birkland, 2004). But this does not mean that the implemented changes will preclude a repeat of a similar attack. In addition, it may be easier to learn from events that are not catastrophic (Birkland, 1997). Smaller and politically less sensitive crises may be more fitting teachers than catastrophes like the 9/11 terrorist attacks and Hurricane Katrina. Such large-scale events are not politically favorable for questioning organizational norms and procedures. This dissertation therefore analyzes a number of non-disasters or catastrophes in order to generate knowledge on organizational crisis and learning.

Second, many influential early works that laid foundations for the literature on crisis management were more concerned with crises as such than with crisis management per se (Roux-Dufort, 2007). Conceptually, the debate engaging crisis management scholars is mostly about how to define the concept of crisis, while the concept of management within crisis management studies remains rather obscure. Basic chronological process models of crisis management consider stages before during and after the actual trigger event. More sophisticated models have also been suggested. Comfort (1988) divided the crisis manage-

ment process into phases of mitigation, preparedness, response, and recovery. Another interesting process model of crisis management was developed by Boin, 't Hart, Stern and Sundelius (2005). They based their model on five critical challenges that face managers in the actual crisis management process – sense-making, decision making, meaning making, terminating, and learning. Notwithstanding these contributions, most scholars of terrorism, disasters, riots, economic breakdowns and the like still seem more concerned with the empirical study of events, causes, triggers and consequences than with how events are actually managed by decision makers, stakeholders and organizations. For instance Mitroff and Pauchant, defined the aim of the field of crisis management studies as: 'It endeavors to understand how and why large-scale *human-caused* crises occur and what, if anything can be done to prevent major crises' (Mitroff and Pauchant, 1990: xii, emphasis in original). In another seminal study Shrivastava (1987) analyzed the industrial accident in Bhopal in 1984 when toxic release from Union Carbide's production plant killed at least 3,000 people. Shrivastava focused most of his attention on causes and consequences rather than the actual management of the disaster.⁸ Studies that focus on the actual event (many times highly unusual industrial accidents) are bound to teach us more about crises than crisis management (Roux-Dufort, 2007). This has led theory on crisis responses and how critical incidents are actually handled by officials, decision-makers and stakeholders to be less developed than that of crisis causes and effects. The present dissertation makes an effort to bridge this gap. Following for example Dynes (1970) and Slatter (1984), I focus on how organizations respond to crises and thus how crises are managed. In doing so I make use of literature on 'traditional' management and organization theory, which is advantageous to increase knowledge on how crises are managed.

Third, studies that do take a process approach to crisis management by looking into more than causes and consequences tend to examine the management of crises according to a chronologic rationale of the three stages of incubation, onset and aftermath (Boin et al, 2005:10). So far, research on crisis management has to a large extent been concerned with the 'during' and the 'before' phase. 'During' relates to operational and acute crisis management and decision making under pressure often with a sociological focus on disasters and major accidents (Quarantelli and Dynes, 1977; Quarantelli, 1978; Rodriguez et al, 2006). 'Before' relates to system design and emergency planning with an emphasis on techniques to master risks and hazards and building organizational resilience (Smith and Elliott, 2007:519; Lalonde, 2007:95). Somewhat surpris-

8 Shrivastava did, however, refer to interesting findings relating to corporate crisis management such as strategies of stonewalling the media, shifting blame on subsidiaries and the dangers of applying a narrowed and technical framing of events (Shrivastava, 1987).

ingly, the aftermath of learning and reform has not yet attracted the same scholarly interest. In the words of Smith and Elliott (2007: 519): 'To date, the study of crisis management has focused upon crisis causality, prevention, response and turnaround with limited consideration given to organizational learning from crisis.' Hence, a number of studies deal with how organizations respond to crises (Smart and Vertinsky, 1977; Rosenthal, Charles and 't Hart, 1989; Regester and Larkin, 1997; Rosenthal et al, 2001; Stern, 1999; Pearson, Roux-Dufort and Clair, 2007). But only a few studies also refer to how crisis management affects the implications for learning from crisis events (Birkland, 1997; 2006; Boin et al, 2005; 't Hart and Boin, 2001; Carley and Harrald, 1997; Boin et al, 2008), which this dissertation aims to do. In a related note, there are only a few overviews that bring together literature on crisis and learning from a public management perspective (see Stern, 1997; Stern and Sundelius, 1997; Birkland, 1997; 2006; Nathan and Kovoov-Mistra, 2002; van Duin, 1992. See also Smith and Elliot, 2006; 2007 for more recent additions).

The fourth knowledge gap within the crisis management and crisis learning literature is related to the point made above about the importance of studying crisis learning. The processes of incremental policy reform (cautious change in small steps) and the management of lessons learned are firmly rooted in the crisis aftermath. But lessons are likely to first be observed and grounded also in the emergency phase. Therefore it is important that this stage is not discarded if we really want to learn more about the relation between crisis and learning. Research on learning in the heat of crisis, so called intra-crisis learning – 'learning that seeks to improve response during a single crisis episode', is even scarcer than research on inter-crisis learning – 'learning from one crisis and making changes to prepare for another' (Moynihan, 2008:352, see also Dror, 1988; Lagadec, 1990). This dissertation therefore attempts to examine processes of both intra- and intercrisis learning to develop theory on the two crisis learning types. The studies presented in Chapters 5 and 6 deal specifically with this topic.

The fifth point that I wish to draw attention to here is the lack of agreement in the literature regarding the role of crises as learning triggers (dealt with especially in Chapter 6). Scholars diverge on the connection between crisis and learning. The literature provides optimistic and pessimistic views of the role of crises as stimulants to learning processes. Some authors propose that learning from major failures or disasters should come automatically in order to prevent a repeat of the crisis (Knopf, 2002; Schwartz and Sulitzeanu-Kenan, 2004; Dekker and Jonsén, 2007:22). Organizational learning scholars provide more problematizing, albeit relatively optimistic views (see Fiol and Lyles, 1985; Seeger et al, 2003; Common, 2004; Schwartz and Sulitzeanu-Kenan, 2004) and in the policy agenda and policy change literature (see Cobb and

Elder, 1983; Sabatier, 1993; Birkland, 1997; Kingdon, 1995). These views are contrasted against scholars with a highly pessimistic take on the capacity of organizations to learn in the crisis aftermath (Boin et al, 2005: 118-120) or concerning the ability of organizations to learn in general (Argyris and Schön, 1996:188).⁹ Pessimistic approaches are found in the crisis management literature (see Smith and Elliott, 2007:519; Elliott and Smith, 1993; Fortune and Peters, 1995; Toft and Reynolds, 2005; Carley and Harrald, 1997; Sagan, 1993; Turner and Pidgeon, 1997; Pidgeon, 1997), in studies on policy change (see Rose, 1993; Khong, 1992; Hacker, 2001; Stern, 1997) and in organization theory (see Roux-Dufort, 2000; Reason, 1990). However, scholars do not in great detail explain under what circumstances one outcome is more likely than the other (Carley and Harrald, 1997; Nohrstedt, 2007). The field is still under-researched and in need of more empirical research to lay foundations for theory development.

As a good deal of the above mentioned knowledge gaps indicate, crisis management in public organizations cannot be fully investigated without paying sufficient attention to prior theory and empirical evidence grounded in organization studies and public management and administration. These scholarly fields are described in more detail below. 'Organization studies' is used in this dissertation to identify what factors affects organizational responses to crisis and what factors influence organizational crisis learning. An important part of these studies relate to specific mechanisms, critical contextual factors and issues particular for public sector organizations (cf. Harmon and Mayer, 1986). Accordingly the review also draws on literature from the field of 'public administration and management' in an effort to set the stage for investigating the public organizations under study and critical contextual factors.

Organization studies and crisis management

Organizations play a key role in crisis management (Clarke, 1999). As Carley and Harrald (1997:310) put it: 'Organizations are expected to respond to disasters by minimizing the disaster's impact.' But in practice organizations are often part of the problem. Organizations often generate crises (Roux-Dufort, 2007). Organizational designs fail to balance the potential harmful effects of organizational production (Perrow, 1984; 2007; Shrivastava, Mitroff and Miller, 1988). Given that crisis management and organizations seem interconnected, it is surprising that crisis management studies are critiqued for failing to theorize the functioning of organizations (Roux-Dufort, 2007). The unusualness and

⁹ It is important to keep in mind that the benchmark for 'failed' lessons learned, missed learning opportunities or 'insufficient' reform is better future knowledge and information that was not necessarily accessible at the time when decisions were made.

specificity of crises is what distinguishes management during crises from management of everyday activities and situations and incidents in organizations that have traditionally been the foci of organization theory. So far crisis management studies have only made a limited contribution to organization theory (Roux-Dufort, 2007). On the other hand, the reverse relation has been quite strong. Management and organization scholars are behind some of the most influential studies in crisis management research. More often than not, however, these theorists deal with organization design and preparedness, structure, culture, and day-to-day activities of safety rather than the management of and learning from out of the ordinary events (see e.g. Pauchant and Mitroff, 1992). The most well known debate in this regard is the High Reliability Organization (HRO) – Normal Accident Theory (NAT) debate. The HRO-NAT debate is probably the most influential debate on the crossroads of crisis management studies and organization theory. It has been vital for rejuvenating crisis management theory. Interestingly enough, however, neither school of thought relate directly to crisis management. NAT is about risk management, the origins of accidents and reliability, and HRO theory is about building safety and crisis prevention (Rijpma, 1997). The bone of contention between these schools of knowledge is whether organizational factors may reduce the risk of crisis or not (Boin, 2004b:169).

Imperative factors within these frameworks, such as adequate resources, rewarding discovery of error and commitment to continually improving systems, relate to crisis management and learning (Moynihan, 2008:353). It is therefore hardly surprising that the HRO-NAT debate has influenced theory on risk management, crisis management and crisis learning. Most empirics are based on case studies on risky and thus crisis prone organizations (e.g. Three Mile Island as studied by Perrow (1984)). HRO literature also relates clearly to learning from incidents and thus also to crisis-induced learning (Carroll, 1995; Weick, 1987; Sitkin, 1992).¹⁰ HRO researchers present empirical evidence of how complex organizations can actively work with organizational learning from incidents and accidents. The empirical base of the theory was developed from careful studies of nearly error-free organizations. The organizations studied act in hazardous environments and operate without becoming subjected to large-scale crises.¹¹ Reliability, in this sense, means ‘constancy of service’ and ‘safety of core activities and processes’ (Roe and Schulman, 2008:5). HRO’s then may have close calls, but through careful planning, strategic management and keep-

10 HRO literature also refers explicitly to learning by simulation models, analogy, or imagination (see Carroll, 1995; March, Sproull and Tamuz, 1991).

11 Roberts (1990) mention the U.S. air traffic control system, some power distribution grids, aircraft carriers, submarines, and international banking as such examples. Weick and Sutcliffe (2007: 17-18) also mention the former three as examples, but they also include nuclear power generating plants, hospital emergency departments, wildland firefighting crews, aircraft operations and accident investigation teams.

ing a close eye on the environment, events are mitigated before becoming fully fledged crises (Roberts, 1993; 1989; Laporte and Consolini, 1991). High reliability theory is thus intimately connected to organizational learning theory. It suggests that managers can create and keep safety cultures in organizations that support organizational learning (Boin et al, 2005:122).

High reliability theorists believe in individuals' capacities to 'learn from [their] operating and regulatory mistakes, put safety first and empower lower levels, thereby making risky systems quite safe' (Perrow, 2006:16). One of the leading arguments is that 'organizations can compensate for human limitations and, therefore, can be significantly more rational and effective than individuals – if individuals try' (Perrow, 2006:17). Reliability is seen as a result of established safety cultures in organizations that can be subjected to design changes. By including the characteristics of a safety culture and by bringing organizational structures in line with organizational culture, organizations can become more reliable. The key to the process lies in organizational members and organizational leaders, and their consistent and mindful (i.e. combining awareness and attention) management efforts to reinforce and institutionalize safety culture (Weick and Sutcliffe, 2007). The underlying assumption is that managers can turn high-risk and high pace organizations into high reliability organizations through their actions and strategies (Klein et al, 1995). This research thus represents a more optimistic view of organizational learning (Boin, 2004b: 169; Boin, 2006:91).

HRO theory is contrasted against NAT as proposed by for example Sagan and Perrow. In his influential study of the disasters and near disasters (most notably the Three Mile Island incident) in high risk industries, Perrow (1984) found that organizations cannot prevent human errors or their cascading repercussions. Normal accident theory concludes that:

no matter how hard we try there will be serious accidents because of the interactive complexity (which allows the inevitable errors to interact in unexpected ways and defeat safety systems) and tight coupling (in which small errors propagate into major ones) of most risky systems. Catastrophic accidents are normal (though rare) because they are inherent in the system (Perrow, 2006:17).

In a 'complexly interactive' and 'tightly coupled' organization 'small errors can interact in unexpected ways' and lead to 'a cascade of increasingly large failures' (Perrow, 1994:216). '[T]he initial failures cannot be contained or isolated and the system stopped; failures will cascade until a major part of the system or all of it will fail' (Perrow, 1994:216). According to the NAT perspective then, organizations contribute to crises. Organizational vulnerabilities may develop into crises due to the combination of organizational features like 'sloppy management' (Turner and Toft, 1988), inability to spot significant changes (Boin

2004b:169) and emphasis on efficiency and output targets over safety goals (due to environmental pressures) (Sagan, 1993; Rijkma, 1997).

This dissertation finds organizational perspectives essential for analyzing not only the everyday operations of safety in organizations as dealt with in NAT and HRO theory, but also crisis management and crisis-induced learning responses. Organizational approaches to the study of crisis management and crisis induced learning are therefore applied in the studies presented in Chapters 4-7.

Organization studies and public administration

The field of organization studies is rooted in economics, political science, public administration, sociology and psychology. Nevertheless, organization theory has been associated primarily with studies of private organizations and business firms (Christensen, 2003). Traditionally, however, there have been many connections between public administration and organization theory. As Pfeffer claims: '[m]any of the most prominent early figures in organization science came from political science' and '[m]any of the earliest studies of organizations were studies of public bureaucracies' (Pfeffer, 1997:12-13).¹² In the postwar period the tradition of combining organization theory with political science and political theory has become neglected as public administration and management has become increasingly decoupled from organization studies (March, 1997:692; Pfeffer, 1997:12-13; Christensen, 2003; 112; Hult, 2003; March, 2007; Olsen, 2007, see however e.g. March and Olsen, 1989; Egeberg and Laegreid, 1999; Scott, 2008 for exceptions). Nowadays, then, most organizational scholars are trained in business schools (March, 2007; Shafritz and Ott, 2001). This has shifted the focus of organization studies from public administrations to private sector and business organizations (March, 2007:18). And this has led to a relative growth of studies 'with an emphasis on economic, technological and market-related conditions' compared to those focusing on 'the institutional environment with its values, norms, ideologies and doctrines' (Christensen et al, 2007:2). Further, as March puts it, in later years '[u]nderstandings of how organizations adapt to changing environments have come, for the most part, not from students of public sector institutions but from students of [...] the private sector' (March, 1997:692). For a number of decades then organization theory and public administration and democratic governance have been decoupled (March, 1997; Pfeffer, 1997; Christensen, 2003; March, 2007; Olsen, 2007). Consequently modern organization theory is rarely careful enough in paying attention to specific factors of governmental and politi-

12 Pfeffer (1997: 113) refers to the research of Herbert Simon, James March, Peter Michael Blau, W. Richard Scott, and Phillip Selznick in this regard.

cal organizations and their political-democratic environments (Olsen, 2007). Moreover, the public sector context tends to be defined negatively, as the old way of doing things in non-profit and non-market organizations (Stewart and Ranson, 1994; Schofield, 2001).

In order to learn more about public sector organizations, this dissertation argues that we need specific theories constructed from empirical analysis of these organizations. Like many other environments, the public organization environment is organic and variable. Globalization and deregulation have further increased the complexity challenging public organizations on a number of levels. Previously public organization tasks are now increasingly run by private management organizations. The context in which public sector organizations work has changed fundamentally in later years. With increased demands on public organizations working in complex and ambiguous environments, both private and public organizations alike are required to deal with rapid change (Joldersma and Winter, 2002:88). But public organizations and their environments are different compared to private business. Public organizations are established due to political decisions taken to deal with a social problem. Their activity continues as long as there is political support. Public organizations are more dependent on public legitimacy and accountability and less dependent on market orientation compared to private organizations. Further, while managers for private companies aim to make money for their shareholders, public managers need to produce public value, which is far more ambiguous in terms of achievement and estimation (Moore, 1995). Hence, public managers deal with vague, public goals and different stakeholders' interests and needs. Managers in the public domain are financially, legally and politically accountable to collective values such as democracy and justice rather than individual (shareholder) values such as increased market share and economic gains (Moore, 1995; Joldersma and Winter, 2002; Stewart and Ranson, 1994). Further, in the words of Stewart and Ranson (1994), '[a] private sector organization is limited and can limit its concerns', while 'the public domain is in principle unbounded, in that any interest or individual can make claims upon it' (Stewart and Ranson, 1994: 61). In sum, the public organization's environment is permeated by an inexhaustible potential for ambiguity, dilemmas and value conflicts.

Public administration and management

When aiming to examine public organizational behavior, it is important to employ theories grounded in an organization theory approach to public sector administration and management (Christensen et al, 2007). The case studies used in this dissertation represent organizations with distinct public sector tasks. Thus, they bring to the fore contextual drivers and issues of control pertain-

ing specifically to organizations within the public sector domain. The public management frame is used here (and especially in Chapter 5) to raise deeper understanding of these factors that characterize the cases under study. Public management is the most accepted term for how public sectors are organized and run in democracies. However, public management is a relatively recently developed and at least at times a contested field (Hughes, 2006:487; McLaughlin, Osborne and Ferlie, 2001; Flynn, 2002; Hughes, 2003).¹³ Although public management is often regarded as synonymous with public administration, there are differences.

The traditional public administration of bureaucracies has changed with two basic forces. The first shift is the marketization of the public sector and the intrusion of private sector ideas such as explicit client focus (understanding the public in terms of clients) has led to more managerial and market driven management of public sector organizations. The marketization of the public sphere has affected the organizations under study. This is most clear in the case of the power company Birka Energi, which was in the middle of a privatization campaign throughout the period that is studied.

The second shift is the departure from bureaucracy as the organizing principle for the public sector, including increased staffing flexibility (Hughes, 2003:15; Flynn, 2002:9-10; Hughes, 2006:485). This means that public organizations today use more flexible employment contracts rather than employing public servants at base grade for life with promotions earned by seniority (Hughes, 2006:485). Increased staff flexibility is especially interesting for the sake of this dissertation as it may have a bearing on the learning capabilities of public organizations. Today few civil servants work twenty years in the same public organization. While this may in extreme cases lead to organizational brain drain with repercussions on organizational learning, it may also lead to additional knowledge injections to organizations that manage to attract talented staff.

These changes aside, bureaucracies still play an important and valued role in modern democracies (Olsen, 2005). The spread of the above mentioned assumptions from the late 1970s onward, however, laid the groundwork for a new discourse of public management and administration. In its most extreme form, the shift pertained to ideas that private-sector managerial techniques were superior to those of the public sector and that if such techniques were applied, public service efficiency would automatically improve (Osborne, 2006:378-379). From these insights emerged a highly contested set of doctrines known as New Public Management (Hood, 1991; Flynn, 2002; Osborne

13 See also Kickert (1997), who stressed that 'traditional' public administration continued to remain dominant in areas outside of the Anglo-American domain (cf. also Osborne, 2006).

and McLaughlin, 2002).¹⁴ The NPM applied most clearly to English-speaking countries and most especially to the UK and New Zealand. The paradigm was for example critiqued for having an intra-governmental, unitary state focus while real developments were moving towards plurality and intergovernmental governance (Osborne, 2006); for undermining public sector accountability; for failing to deliver the promised efficiency gains (Pollitt, 2000); and for neglecting differences between public and private organizations (Joldersma and Winter, 2002). The NPM's applicability to the cases investigated in this dissertation is relatively low. Although deregulation processes have affected Swedish public administration, Sweden has not disaggregated and decentralized public services as is a key feature of NPM, but rather the opposite (Osborne and McLaughlin, 2002; Pollitt, Burchill and Putnam, 1998). Still, however, Swedish ministries are relatively small and there is a substantial decentralization of powers to counties and municipalities (Pollitt and Bouckaert, 2004). Sweden did undertake public management reform in the 1980s and 1990s. However, marketization ideas did not disseminate to the public sector in Sweden as much as in New Zealand and the UK (Pollitt and Bouckaert 2004:286; Barzelay, 2001). Increased efficiency and decreased public spending was the aim of reforms and privatization was the means, insofar as turning agencies into public companies rather than outright privatization (Pollitt and Bouckaert 2004:288). In essence, fundamental change of the public management system was not made. Rather Sweden tried to centralize its governance system by decreasing the gap ratio of ministry versus agency employees (Moynihan, 2006). Thus the NPM paradigm does not fit the Swedish context.

However, the shift from public administration to public management is noticeable in the cases studied in this dissertation. The shift emphasizes a more proactive way of governance than the 'traditional' administration of public utility based on bureaucracy and separation of politics from management to private sector inspired styles of public management (Flynn, 2002:9-10). Nonetheless, a caveat should be mentioned: Politics and government are continuously developing. The Clinton administration in the US and the Blair government in the UK are influential examples of governments taking on a very different approach to bureaucracy and markets compared to their forerunners (Hughes, 2003:87). In the Swedish context political power has also shifted back and forth from left to right over the last 30 years.

14 Paradigmatically, New Public Management has been defined as 'reducing and deregulating bureaucracy, using market mechanisms and simulated markets to conduct government action, devolving responsibility downward and outward in organizations, increasing productivity, energizing agencies, and empowering employees to pursue results, improve quality and satisfy customers' (Carroll, 1998:402 cited in Lynn, 2001).

In search of explanations

So far the review has painted a broad-brushed picture of the need to inject organization studies with a public management focus into crisis management studies. From here forward the idea is to narrow down the discussion and focus more clearly on how the present dissertation operationalizes key explanatory concepts in its four empirical analyses. This section thus deals with factors that are seen as valuable for explaining how public organizations respond to and learn from crisis. The factors that are suggested in the following are also used to construct the theoretical frameworks applied in the four analyses presented in Chapters 4-7.

Structural and cultural approaches

Organizational behavior is profoundly affected by the structure and the culture of the organization (Staw, 1979). Organizational structure and organizational culture are useful concepts that help us understand organizations and organizational processes such as for instance organizational crisis management and crisis learning processes. Structure and culture tend to become mixed in organization studies. Both often pertain to keepers of organizational stability that persists despite turnover of personnel (Schein, 2004:14). Structure tends to be discussed in terms of formal rules that result from organizational design (Bakka et al, 2001:37). Organizational structure regulates the system of control and the distribution of authority and work tasks of organizations (Abrahamsson and Andersen, 2000:60). This dissertation sees organizational structure as the degree of formalization in explicit guidelines, rules, roles and procedures as they are presented in formal written documents (cf. Sims, Fineman and Gabriel, 1993:298; Pugh, Hickson, Hinings and MacDonald, 1969).

Prior research on the nexus between structure and crisis response indicates that a structure-laden response based on standard operating procedures (SOP's) might lack in flexibility (Smart and Vertinsky, 1977:654; Carley and Harrald, 1997). One such example is Carley and Harrald's analysis of the responses of FEMA and the Red Cross to Hurricane Andrew in Miami in 1992. Their study dealt with the relation between organizational structure, crisis and learning. Carley and Harrald (1997) concluded that the use of SOP's does not necessarily lead to a less effective response compared to an organization where members follow their own experience. However, the authors found that the use of SOP's may lead to rigidity in response, especially in the middle level. In the worst case scenario SOP's might even lead to a rigid organizational structure 'where exceptions become impossibilities' (Carley and Harrald, 1997:320). On a related note, recent studies by Moynihan (2008; 2009) provide empirical evidence

that crisis learning may occur even if organizations lack previous crisis management experience. Studies of the outbreak and containment of Exotic Newcastle Disease (END) among poultry in the state of California in 2002 demonstrate a case of structural intracrisis learning. An ad hoc network of ten agencies formed a taskforce that learned while managing the crisis by establishing and disseminating SOP's. The END case thus calls attention to the importance of structural learning during and from crisis.

Studies on organizational culture tend to focus on aspects shared by groups and organizations that run deep enough to shape the self image of organization members (Schein, 1985; 2004; Sims et al, 1993:241). Early studies on organizational culture took on a normative stance, emphasizing that companies with strong cultures would be more successful than others (Deal and Kennedy, 1982; Peters and Waterman, 1982). Depending on the manifestation of the culture under study, organizational culture may relate to concrete things (like architecture, interior design, dress codes, logotypes) or abstract phenomena (like shared norms and beliefs about behavior; myths, stories and language or rites and ceremonials (Abrahamsson and Andersen, 2000; Sims et al, 1993; Martin, Feldman, Hatch and Sitkin, 1983; Martin, 1992; Trice and Beyer, 1984; 1993; Cooke and Rosseau, 1988). The present dissertation sees organizational culture as informal procedures, norms, routines, and tacit knowledge as found in shared beliefs and stories rather than in documents. This perspective assumes that organizations are influenced by 'patterns of basic assumptions' based on previous experience and shared by members (Shafritz and Ott, 2001:361f; Schein, 1985).

While many studies from the field of 'safety culture' deal with how organizational culture affects organizational safety and emergency preparedness (e.g. Pidgeon, 1991; 1998; Guldenmund, 2000; van Vuuren, 2000; Harvey et al, 2002; Hopkins, 2006; Haukelid, 2008), only a few studies relate specifically to how organizational culture affects actual crisis response. One well-known model in this regard is Pauchant and Mitroff's (1992) onion model. Pauchant and Mitroff established the onion model to diagnose crisis-prone or crisis-prepared organizations. The model characterizes the interaction of organizations' essential and dynamic components in crisis response. They based their model on personal interviews with more than 500 crisis management professionals in the US, Canada and France, and on 114 questionnaires sent to Fortune 1000 company executives in the US (1992:195ff). The onion model includes a core with three additional layers. The core of the model consists of the character of the individual organizational members and their subjective experiences and individual defense mechanisms (layer 1). Layer 2 signifies organizational culture aspects, such as 'unwritten and unspoken rules, codes of conduct, [and] belief systems', including faulty cultural rationalizations (Pauchant and Mitroff,

1992:51, 81ff). Layer 3 addresses how well organizational structure is dedicated to deal with crisis preparedness, mitigation and management. Layer 4 is the outer layer. It consists of the organization's strategies for crisis management in the form of plans, mechanisms and procedures designed especially for managing crises. Like the present dissertation, Pauchant and Mitroff (1992) emphasize the informal and tacit dimensions of culture. The authors see culture as 'the set of unwritten rules that govern acceptable behavior within an organization' (Pauchant and Mitroff, 1992:81).

Knowledge on the relation between organizational culture and crisis management is limited. Some theory has been constructed on the effects of organizational culture on risk management and on learning from failure and crisis (Turner, 1976; Toft and Reynolds, 1997).¹⁵ Further, as mentioned earlier, there is a large literature on how culture affects organizational crisis preparedness in terms of organizational attitudes to safety and reliability of operations known as safety culture research. Nick Pidgeon defines safety culture as: 'an ideational system of meanings concerned with the norms, beliefs, roles, and practices for handling hazards and risk' (Pidgeon, 1991:129).¹⁶ Studies on safety culture emphasize the importance of attitudes toward safety (IAEA, 1991; Kalmelid, 2003; Frisk and Törnberg, 2004) and that the attitudes also influence behavior. Safety culture may thus be recognized as a process that needs to be continually maintained by organizational behavior (Gherardi and Nicolini, 2000; Fleming and Lardner, 1999:16).¹⁷ Many scholars on safety culture base their operationalizations on Reason's (1997) notion of an informed culture and its subcultures.

15 Toft and Reynolds (1997) argued that post hoc inquiries and investigations into causes of disasters focus too much on visible and immediate triggers rather than on concealed and underlying organizational causes. They claimed that the inability to assess not only technical but also cultural dimensions of failures hinders learning from disasters.

16 A related concept in this regard is sensemaking. Weick (1995) describes sensemaking as an intraorganizational process that creates ongoing interpretations about reality through retrospective sensemaking of situations in which organizational members are found. In essence, sensemaking is about how people generate what they interpret (Weick, 1995:13). Sensemaking is a vital capacity needed to make sense of events as they develop and preferably to nip them in the bud before they turn into crises (Boin et al, 2005). This capacity requires a highly developed collective awareness (Weick and Sutcliffe, 2007). Sensemaking thus has implications for safety culture theory, organizational culture and crisis management.

17 The fact that organizational cultures are shared does not mean that they are not differentiated. Most medium and large organizations have a number of subcultures which at times may clash (Meyerson and Martin, 1987). Similarly, the idea of an all including safety culture shared by all members of the organization is an ideal that is rarely supported by reality (Harvey et al, 2002; Martin, 1992; Gherardi and Nicolini, 2000). Research shows that even organizations within highly regulated operations may have different safety cultures (Harvey et al, 2002; Haukelid, 2008). Further, the socially desirable features often included in safety cultures (such as information dissemination, learning, flexibility, reporting and justice) all have their extremes and drawbacks and thus give rise to potential conflicts.

Although the first two subcultures in Reason's framework are too specific to be focused upon in this study, they are still worthy of mentioning. According to Reason, the first two steps towards an informed culture is to establish a culture of *reporting* (developing systems for and protecting those that report on incidents and errors) and *justice* (apportion of blame without placing it upon individuals). The remaining steps towards an informed culture includes achieving a culture of *flexibility* (being ready to adapt to changing demands); and *learning* (implementing lessons and changing assumptions) (Reason, 1997; see also Weick and Sutcliffe, 2007:125-133).

The notion of safety culture is appropriate to build upon for the sake of the studies presented in this dissertation. However, the focus of the present dissertation is on slightly different areas compared to the safety culture research agenda. First, the empirical cases included in this study are public organizations that cannot be characterized as high reliability organizations. When applying the concept of safety culture to non HRO's, the implications of definitions need to be complemented by a discussion on the costs involved in striking balances between pivotal values such as efficiency and reliability, trial and error learning and prevention of risky mistakes, and maximizing crisis anticipation and maximizing the capability for crisis recovery (cf. Roe and Schulman, 2008:5). Second, organizational studies into safety culture commonly give an overall view of operators' attitudes to safety, which provide for a relative neglect of the top management. Third, safety culture research tends to focus on internal processes of safety within the organization (albeit there is awareness that external perceptions on internal safety conduct may have implications for public and client perception) compared to theories on organizational culture, which puts more of an emphasis on interaction with external stakeholders. This dissertation – and especially Chapter 4 where the organizational culture frame is used most explicitly – looks into how the organization relates to, adapts to and develops in relation to its environment (Abrahamsson and Andersen, 2000:134). Chapter 4 draws on Edgar Schein's definition of organizational culture. Schein defines culture 'as the set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about, and reacts to its various environments' (Schein, 1996:236). He also provides a three-layered operationalization of organizational culture consisting of: artifacts (visible structures and processes that are part of an organization's physical environment); espoused values (refers to explicit statements on organizations' strategies, goals and aspirations); and basic underlying assumptions (the core of organizational culture, which refers to unconscious, taken for granted assumptions, beliefs and perceptions that guide organizational members in their daily work) (Schein, 1992:16-27). In Chapter 4, I also relate Schein's concepts of espoused values and basic underlying assumptions to organizational strategy and adaptability. Consistency

between these latter two factors is required for organizations to fulfill their goals (Schein, 1992, but see also Alvesson, 1992).

Shared organizational aspects like structure and culture may be conducive to learning (Bierly and Hämäläinen 1995; Boin, 2004a; Senge, 1990; Popper and Lipshitz, 1998; 2000; Perrow, 2006; Jones, 2001) or they may hamper learning capacities of organizations (Dodgson, 1993; Roth and Kleiner, 1998). This dissertation argues that neither structure nor culture is by itself a sufficient factor to comprehend complex issues of organizational behavior. Instead, combining cultural and structural approaches is more fruitful for increased understanding of how organizations respond to and learn from crises. For instance, in Chapter 7, I take a structural approach to organizational crisis management and learning. Studying organizational structure gives us a picture of what the organization looks like and how it acts in terms of formal regulations, procedures and hierarchies. In Chapter 4, on the other hand, I use a cultural approach to crisis management studies. Turning the spotlight on organizational culture will teach us more about factors such as values and norms, informal routines and tacit knowledge, and how these factors affect how organizations conduct their work (Abrahamsson and Andersen, 2000). The two perspectives are complementary (Walsh, 2004). Moreover, both perspectives relate explicitly to collective cognition and behavior in organizations.

There are many important factors affecting organizational behavior that relate to structure *and* culture. In practice then the structure/culture dichotomy is hard to uphold. It is at least theoretically feasible to differentiate between formal structures and informal cultures. In practice, however, structures can take on informal forms like routines, while culture can take on formal forms like printed histories. In addition, key factors that this dissertation has taken an interest in, such as experience, adaptability (i.e. the degree of flexibility and rigidity in behavior) (see e.g. Kurke, 1988), centralization and decentralization, and processes like intra- and intercrisis learning and single- and double-loop learning may relate to both structure and culture. Thus I agree with Moynihan and Landuyt (2007:2) who claim that the 'distinct cultural and structural routes' to organizational behavior is simplistic. The authors also add that 'While culture and structure are useful inasmuch as they categorize different approaches to organizational life, such categorizations can become too constraining if viewed as alternate approaches' (Moynihan and Landuyt, 2007:20). Further, Moynihan and Landuyt (2007:25) stress the importance of moving beyond the structure/culture division 'by pointing out that in practice, most of the key variables incorporate both structural and cultural aspects.' In a recent study, the authors selected a sample of Texas state employees to test which variables may encourage organizational learning. Results showed that 'most relevant organizational variables combine structural and cultural aspects, which are mutually depend-

ent on one another' (Moynihan and Landuyt, 2007:1). Hence, 'both structural and cultural approaches are important, and are intertwined with one another to a degree that undercuts the claim that they are distinct approaches to learning' (Moynihan and Landuyt, 2007:2). The authors further claim that:

Many of the features of organizational life – Including variables that affect learning – simultaneously feature both cultural and structural components. Scholarly efforts that attempt to divide all of the antecedents of learning into structural or cultural variables will misdiagnose the causal mechanisms of learning by underestimating the importance of culture to what are classified as structural variables, and the importance of structure to variables deemed to be cultural (Moynihan and Landuyt, 2007:6).

The argument portrayed above is made to 'rethink culture and structure, recognizing them as broad and connected norms that shape behavior' (Moynihan and Landuyt, 2007:20). In relation to the above stated proclamation, this dissertation deals specifically with aspects of organizational behavior that might be explained in terms of both formal structures and informal cultures. Key constructs outlined below include adaptability (flexibility and rigidity), centralization/decentralization and organizational learning (in terms of single- and double-loop and intra- and intercrisis learning). In the following sections these constructs will be outlined in some detail.

Centralization and decentralization

Organizational structure confines an organization's management and control functions. Management may be differently structured and designed according to organizational layers and hierarchies. A common distinction here is made between centralized and decentralized structures. In crisis management literature, centralization commonly refers to the escalation of authority to higher managerial levels or to the reduction of the number of persons or units included within the loop of influence and power (Hermann, 1963; 1969; 't Hart, Rosenthal and Kouzmin, 1993). Some supposed attractions of centralized management and decision making are greater decision speed, clear lines of authority, and decreased potential for internal conflict. Commonly mentioned downsides include lack of participative decision making, inflexibility following the preservation of rules and procedures, and decreased potential to respond to changes in the environment (Andrews et al, 2007:60). Moreover, excessive centralization may lead to the overload of a few key decision makers within the organization.

Authority, responsibility and decision making in organizations may be more or less centralized depending on the organizational structure or culture. A structural approach to centralization is presented in Chapter 7. There I deal with

the link between organizational structure, crisis response and learning. More specifically I delve into the issue of how organizational management structures affect crisis response, learning and lesson implementation in the wake of the crisis. The analysis distinguishes between two crisis response and learning types. The first case shows how a decentralized managerial group responded by behavioral learning and learning implementation outcomes characterized by structured reform and creating new formal structures and policies. The second case identifies how members of a centralized managerial group used individual cognitive structures to store lessons learned. The study demonstrates how the different learning modes are connected to the centralized or decentralized role and character of managerial groups.

Centralization may also pertain to organizational culture. A cultural approach to the level of centralization is explored in Chapter 4. There I look at how organizational culture affects managerial and operational adaptability in the face of strategy change brought on by crises. From close scrutiny of three organizational crisis responses, I found that centralization to top managers is vital for changing strategy. Taken together the three cases also ended up questioning the 'decentralization thesis' which sees decentralization of authority and responsibility as a way to improve efficiency in especially large organizations (Metcalf and Richards, 1990). Chapter 4, however, found that decentralization in terms of influence on strategic issues handed to operators in complex crisis management situations may provide an adverse response.

The rationale behind the 'decentralization thesis' is that decentralization relieves managers from excessive control. The 'decentralization thesis' then holds that decentralization may facilitate innovation and creativity, while centralization may lead to rigidity and inefficiency. In public organizations, however, decentralization runs the risk of leading to a deficit of accountability (Metcalf and Richards, 1990:77). The accountability deficit does not apply as much to more operational levels. Nonetheless, the NAT/HRO debate has underlined a value conflict in this regard. Both schools of thought argue for organizational decentralization in complex organizations. According to this view, operators that are close to the system (and thus in many cases closest to the potential problem) should be able to act independently, rapidly and creatively to solve problems as they emerge (Perrow, 1984:10; Rijpma 1997:17). Perrow and high reliability scholars diverge on one critical account, however. While Perrow argues for operational decentralization, he claims that centralization is required for timely recovery from failure. Moreover, unlike HRO theorists (Weick, 1987; Weick and Sutcliffe, 2007:151; Roe and Schulman, 2008), Perrow claims that organizations cannot centralize and decentralize at the same time. This caveat seems reasonable, at least in the context of the present study. For instance, it is unusual, at least in the Swedish public organization setting, to centralize a few

key values while giving operators the autonomy to act on everything else. This also means that a response carried out by on-the-spot operators would not suffice in most public organizations subjected to emergencies.

Studies on crisis management in regard to decentralization/centralization of crisis response notice that organizational structural characteristics have the potential to impact on crisis management response. The 'crisis-centralization thesis' proposes that a crisis will lead to centralization of authority (Hamblin, 1958; Hermann, 1963; 1969 Billings et al, 1980; 't Hart et al, 1993; Benini, 1999). It argues that increased time pressure creates an urge for rapid response and shorter lines of communication enabled by escalation of more direct control to higher managerial levels (Billings et al, 1980:314). The 'crisis centralization thesis' has been described as 'the most widely reported and most strongly supported structural feature of bureaucratic adaptation to crises' ('t Hart et al, 1993:14, see also Hermann 1963; Weick, 1988; Pijenburg and van Duin, 1990).

At closer glance, however, 't Hart et al (1993) found quite the different picture. In their study of societal crisis responses in a number of different fields, the authors found that responses varied in the degree of centralization. 't Hart et al (1993) concluded that crisis decisions should be classified according to their actual importance in shaping the crisis development. Major strategic crisis management decisions may, according to the authors, be made at lower governmental hierarchy levels. Thus, 't Hart et al (1993) questioned the thesis that crisis decision-making is in most cases centralized at the top of the organization. On the contrary, decisions that are critical in shaping organizational crisis responses are often taken at different levels within and between organizations. Specifically, the authors found that when looking at other crises besides traditional international security crises, operational actors are imperative for a successful response ('t Hart et al, 1993). Benini (1999) deliberated further on these inferences by looking specifically at a disaster organization network response to the 1998 Rostaq earthquake in Afghanistan. There the network of organizations did not centralize. Yet it performed reasonably well.¹⁸

Research on organizational learning in regard to centralization proposes that centralized structures may reinforce past behavior and thus slow down learning, while decentralized structures enable learning by facilitating assimilation of new patterns and associations (Fiol and Lyles, 1985; Nicolini and Meznar, 1995:731). However, structural frameworks of ad hoc centralization of initia-

18 It should be mentioned, however, that Benini's findings may not be entirely surprising as he did not deal with centralization within the actual organizations that made up the network. The very idea of a network made up of complementary and equal partners as compared to a hierarchy should argue against the centralization thesis (cf. Powell, 1990. See also Moynihan (2005) for a contrary view on networks in crisis management).

tives and authority for decision makers are also mentioned in the literature as conducive to learning (see Boin et al, 2005:129). It is reasonable to assume that both centralization and decentralization, brought to an extreme, will affect any organization negatively. Thus it should be favorable to balance centralization and decentralization in organizations.

Adaptability – From rigidity to flexibility

Adaptability is one of this dissertation's key concepts. Adaptability refers to an organization's 'capacity to redefine underlying character in response to large-scale change' (Denison and Mishra, 1995:215). Organizations need adaptability in order to respond to crises as crises are dynamic situations signified by great uncertainty. To be able to adapt, organizations need to interpret incoming signals and adjust the organization in accordance (Denison and Mishra, 1995). This dissertation looks into how organizations adapt to crisis events by classifying responses along a flexibility-rigidity scale. According to a pragmatic but simplified view, previous research indicates that organizational behavior in crisis may be based on rigidity as the guiding purpose or on flexibility (Roux-Dufort and Vidaillet, 2003; Chelariu, Johnston and Young, 2002; Dynes, 1970). Inaction or routine response is likely to be the outcome of the former while original solutions is the likely outcome of the latter (Billings et al, 1980: 304). This means that responses to crises may be either based on novel solutions and flexible improvisation or learned routines and set and rigid procedures (Roux-Dufort and Vidaillet, 2003; Weick, 1993).

One of the most influential pieces of theory on rigidity in connection to crisis-like circumstances is presented by Staw, Sandelands and Dutton (1981). Their threat-rigidity hypothesis shows a restriction in information processing and constriction of control under threat conditions, which leads to rigidity in response (Staw et al, 1981:501). The threat rigidity hypothesis is based on experimental research on corporate responses and their inability to alter in the face of environmental change.¹⁹ The TRH argues that actors during crisis conditions tend to make use of learned routines, reflexes and lessons drawing. But

19 Although the TRH refers to threat rather than crisis, it has proven valuable in understanding crisis decision making and response patterns. Although threat management has more to do with planning and mitigation in the pre- or initial stages of crisis management, there is more that unites than divides the concepts of threat and crisis. In addition, the TRH draws from disaster research (Staw et al, 1981:505) as well as other seminal literature from fields such as crisis management and group psychology (Janis, 1972). In the words of Staw et al: 'threat is probably the driving force behind most of the events that the term crisis attempt to explain' (Staw et al, 1981:512). Smith (2006a:1-2) argues in a similar fashion when he contends that 'the failure to manage risks within an organization or society will generate the potential for a wider crisis and, as such, risk is seen as being a sub-set of the much wider crisis process.'

as long as decision makers refrain from reflecting on their lessons and their environment, the lessons will not be appropriate as 'prior, well-learned responses are inappropriate under new conditions' (Staw et al, 1981: 502).²⁰ The cognitive dimensions of learning, i.e. the reflecting dimension, needs to be part of the response if it is to be functional.

Additional research on private sector crisis management supports the TRH. For instance strategy research has demonstrated that organizations respond to threat with a resistance to change strategy (Starbuck, Greve and Hedberg, 1998; Miller, 1990; Powell, 1991). In a similar fashion, rigid structures have been declared harmful for organizational learning from crisis (Nicolini and Mezner 1995:731; Hedberg, Nystrom and Starbuck, 1976). These findings are especially interesting when dealing with public organizations. Public sector organizations are at times characterized as rigid as they are tied together with bureaucracy, which in turn is seen as unadaptive (Bennis, 1966). As declared by Bennis: 'It is the requirement of adaptability to the environment which leads to the predicted demise of bureaucracy and to the collapse of management as we know it now' (Bennis, 1966:10). Such claims are debatable, however. Organizational unadaptiveness is not necessarily a problem. As Perrow put it in his attempt to defend public and complex organizations: 'another description of unadaptiveness might be stability, steadfastness, and predictability' (Perrow, 1986: 5. See also Lynn, 2001; Olsen, 2005). This line of reasoning means that a rigid organization may either remain stable in the face of risk and threats, or it may have the capacity to return to normalcy soon after a crisis has impacted upon it. In this way a stable organization resembles a resilient organization (Smith and Fischbacher, 2009:7). Organizations require rules and regulations when complexity in personnel, products, techniques and environment increases. It would take a mechanistic and inflexible organization to function with no or only few rules (Perrow, 1986:21). In addition, empirical evidence indicates that bureaucracy may be favorable to learning, which in turn presupposes adaptability. van Duin (1992) in a comparative case study of learning from seven major accidents and crises in the Netherlands found that while politicians regarded the accidents as one-off incidents leading to a parliamentary inquiry at most, the bureaucracy and its public officials stubbornly saw learning initiatives through by initiating deliberations and forming committees and working groups.

A number of studies deal with the value of flexibility under crisis and threat-like conditions (Borodzics, 2004; Boin and Lagdec, 2000; Roux-Dufort,

20 In a similar vein, the limited empirical research that has been conducted on the topic of creativity under 'normal' and 'non-crisis conditions' also shows that top-managers tend to stick to previous patterns. In a study of managerial decisions, Nutt (1984) found that eighty-five percent of managerial decisions did not involve alternative deliberations. Thus he concluded that creativity is unusual in higher management.

2007). Crisis management research promotes flexibility as critical for successful response. However, studies rarely go into specific details regarding what that flexibility actually entails. Flexibility tends to be linked to vital crisis management 'best practices' such as creativity and improvisation (Borodzics, 2004:418; Stern, 2001:215-216). Moreover, in mainstream management and business literature flexibility is recognized as a necessary capacity for organizations to adapt to a changing environment (e.g. Ford and Gioia, 2000; Reason, 1997; Sharfman and Dean, 1993; Senge, 1990) and as a crucial ingredient for crisis management, learning and resilience (Borodzics, 2004:419). Mainstream management research is useful to operationalize the flexibility concept, Management researchers describe flexible processes as a requirement for new ideas, assumptions and choices that organizations need for adaptations and change to occur (Sharfman and Dean, 1993). Flexibility in management means using different modes of understandings such as sensing and intuiting when making decisions (Nutt, 1993:697) as well as a wider range of creative alternatives (Ford and Gioia, 2000). Sharfman and Dean (1993:194) divide the concept of flexibility into openness and recursiveness. By the former they refer to openness to new ideas, information sources and roles, and considering wide varieties of alternatives; by the latter they mean self-reflection. Both openness to new ideas and information and continuous reflection on the organization, its goal, strategy and actions, as well as one's own role within the organizational realm, are vital parts of crisis management.

The emphasis on adaptability (i.e. the level of rigidity to flexibility) is noticed in especially Chapters 4 and 5. The former deals with strategy change in the advent of crisis, the role of organizational culture in this process, and crisis adaptability of managerial and operational levels. Chapter 5 also looks into the acute crisis management effects of this issue. It also deals with the aftermath learning aspects of organizational adaptability. The study presented in Chapter 4 differs somewhat from the one presented in Chapter 5. While the former looks at cultural drivers of adaptability, the latter focuses on both the structural and the cultural drivers. Rather than analyzing either formal structural design or informal cultural norms, Chapter 5 delves into the outcome of crisis response and learning and how they are characterized in terms of rigidity or flexibility. Chapter 5 asks – without further prejudice – how organizational rigidity and flexibility might affect public organizations' crisis response and crisis learning. It uses the concepts of rigidity to flexibility as two poles on a continuum of crisis response and learning.

Types of organizational learning processes

Examining crisis and learning from an organizational perspective requires that attention is given to organizational learning theory. Therefore a short description of the literature on organizational learning is provided below.

The concept of organizational learning is hard to define, isolate, measure and apply empirically (Levy, 1994:280; Fiol and Lyles, 1985:803). This has led to a shortage of empirical studies within the field, and to a gap between theory and empirical evidence. There are several potentially confusing debates within the field of organizational learning. One is the so-called 'duality in organizational learning' signified by the diffuse relation between individual and organizational learning and the problem of unambiguously stating what units in fact learn. This issue is dealt with in some detail in Chapter 7. In essence the debate is between scholars that take an interest in 'learning in organizations' and 'learning by organization' (cf. Birkland, 1997:135). The former refers to when individual members of organizations learn, while the latter takes on more formal structural forms like regulations and documented standard operating procedures (SOP's), as well as informal cultural forms such as attitudes, routines, and norms (Lipshitz, 2000:461). This type of learning is more than the sum total of the individual learning within the organization. What the organization learns is possessed not only by individual members of the organization but 'by the aggregate itself' (Cook and Yanow, 1993:378).

Organizational learning is in most regards based on individual learning that is shared with other members of the organization by for instance procedures, policies, norms, ceremonies or stories (Argyris and Schön, 1978; Lawson and Ventriss, 1992; Senge, 1990; March and Olsen, 1976; Hedberg, 1981; Dodgson, 1993; Nicolini and Mezner, 1995). The individually centered view of organizational learning involves a paradox: 'organizational learning is not merely individual learning, yet organizations learn only through the experience and actions of individuals' (Argyris and Schön, 1978:9). It is hardly surprising then that this view (promoted by Argyris and Schön among others) is criticized for underestimating the institutional level (Huysman, 2000; Duncan and Weiss, 1979; Cyert and March, 1963; Levitt and March, 1998; Lant and Mezias, 1990; Vera and Crossan, 2003). Critics claim that individual learning alone does not explain how shared knowledge can be developed in an organization as a whole or in parts of it. For that, supporters of a structural view on organizational learning argue that we need to delve deeper into the role and function of the organization and its structure, as this is what actually makes learning organizational. According to structural views on organizational learning, organizational learning is set apart from individual learning by the process of institutionalizing knowledge, which occurs when lessons become dis-

seminated and thus institutionalized within the structures of the organization (Dekker and Hansén, 2004:219; Popper and Lipshitz, 1998:164, 170).²¹ The structural school undeniably has a point in that lesson drawing and knowledge dissemination need to be rooted in the organizational level for organizational learning to appear. But this requires formal as well as informal processes of embedding learning in non-human repositories: These may take on explicit structural forms like systems, formal rules, policy documents and manuals, but also implicit forms relating to organizational culture such as routines and strategy (Vera, and Crossan, 2003:123), norms, beliefs and tacit knowledge based on prior experience. In both cases collective learning tends to be scattered and hard to locate. Thus bringing critical information into a unified and organized picture is essential for organizational learning (Argyris and Schön, 1978:160). Chapter 7 deals specifically with these two distinct ways of learning formally or informally from crisis experience. The study argues that the modus of learning (formal structural or informal cultural) is not imperative in explaining learning outcomes. Rather the way learning modes are connected to managerial groups and organizational settings, including prior experience, is key.

This dissertation deals with collective learning in organizations triggered by crisis events. In order to find ways of analyzing organizational learning during and after crisis, the study in Chapter 6 takes a special interest in exploring the learning process by illuminating different types of learning processes. The study suggests a conceptual framework based on conceptual categories. Two such factors relate to different types of learning processes in terms of scope (single- or double-loop learning) and time (intra- or intercrisis learning), and they will be deliberated upon in the following sections.

Single- and double-loop learning

Argyris and Schön's (1978; 1996) work on organizational learning accounts for a useful set of concepts that assist in identifying how different kinds of organizational learning processes may occur. The most influential categorization is the distinction between single-loop and double-loop learning (Lipshitz, 2000; Fiol and Lyles, 1985; Dodgson, 1993). The distinct concepts have proven useful in separating repetitive trial and error learning processes from more cognitive processes that put organizational structures, cultures and procedures into

21 Organizational structures entail for example channels of communication (forums for discussion and debate, formal and informal patterns of interaction); information systems, including their media and technologies (e.g. the computer); the spatial environment of the organization as long as it influences patterns of communication; procedures and routines that guide individual and interactive inquiry; and systems of incentives that influence the will to inquire (Argyris and Schön, 1996:28).

question (Fiol and Lyles, 1985). The practical applicability and allure of these concepts is evident. The following section provides a short description of the current status of the concepts.

Single-loop learning is in general achieved by members of the organization detecting and correcting shortcomings, divergences, and flaws without inquiring into the basic premises of the work and the organization (Argyris and Schön, 1978:18). Organizational strategies and assumptions are modified, but only in order to keep performance within set and unchanged organizational norms. In these cases, learning is characterized by routine change, while fundamental norms, principles and values remain (Argyris and Schön, 1978; 1996). Single-loop learning is an incremental process aiming to preserve consistency (Argyris and Schön, 1978:19-21). Such learning processes are sufficient when the external environment changes slowly or when there is no conflict between organizational premises and the environment (Argyris and Schön, 1978). In rapidly changing and conflicting environments, however, managers must undertake inquiries that resolve conflicting organizational requirements and question the organizational status quo. This kind of learning then presupposes an organizational inquiry that detects errors connected to 'the strategies and assumptions for effective performance' – that is the single-loop learning – and to 'the very norms which define effective performance' (Argyris and Schön, 1978:22) – that is double-loop learning. When actors double-loop learn, they detect and correct errors by inquiring into, and if it is found necessary, modifying underlying norms, policies and objectives of the organization (Argyris and Schön, 1978:3). Such radical adjustments mean that old understandings are discarded as new ones are added (Argyris and Schön, 1996:26).

From a researcher's perspective single-loop learning is advantageous because it is more common than double-loop learning. This means that data is more accessible, which in turn should increase possibilities of finding fair benchmarks. This is a reason why this dissertation argues that investigations into single-loop learning are as important as those into double-loop learning. As 't Hart and Boin (2001:37) put it, single-loop learning 'can be quite important in influencing the complex causal chain of events that promotes or reduces vulnerability.' Hence, three of the studies included in this dissertation (Chapters 5, 6 and 7) use the single-loop (and double-loop) learning concepts. In Chapters 5 and 7 the concepts are utilized to distinguish instrumental change from crisis induced learning relating to values, routine and procedure. In Chapter 6 the concepts are used to distinguish between inquiries into organizational errors and shortcomings, and inquiries into broader issues of organizational norms, policies, objectives and working procedures.

Intra- and intercrisis learning

Crisis learning has traditionally been seen as related to crisis aftermaths. However, many crisis-induced lessons are likely to be grounded in the acute phase of the crisis as so-called intracrisis learning. A researcher that studies only learning after crisis without paying attention to what goes on during crises will neglect important aspects of the learning process. This dissertation therefore makes a distinction between intra- and intercrisis learning. The concept of intracrisis learning is relatively novel. The distinguishing factor between the two learning types is found in the matter of timing. In line with Moynihan, I define intercrisis learning as ‘learning from one crisis and making changes to prepare for another’, while intracrisis learning refers to ‘learning that seeks to improve response during a single crisis episode’ (Moynihan 2008:352). Intracrisis learning is more challenging for organizational members as it takes place when values are at stake, and under conditions of time pressure and uncertainty (Dror, 1988; Lagadec, 1990).²² Intercrisis learning, on the other hand, occurs in crisis aftermaths when time pressure is reduced and uncertainty is reduced. In Chapter 6 I present an analysis based on a number of lessons grounded in processes of inter- and intracrisis learning. Two of the power company’s lessons may serve as examples of the two learning processes. For instance, intercrisis learning occurred when the city manager, in the aftermath of the first blackout, critiqued the power company for sending an engineer that lacked the mandate to make decisions on behalf of the organization to the city’s all-municipal coordination group meetings. The power company made an overview of its crisis organization and at the time of the second blackout it was represented by the Vice President. Intracrisis learning occurred when the power company during the second blackout commissioned an external supervisor to monitor the subcontractor’s repairs as they were being conducted. The supervisor noticed that several of the cable joints were not being correctly repaired. Upon explaining to the subcontractor a more reliable way to repair the cable joints, the repairs were carried out in a correct manner.

The study of intracrisis learning poses a problem. General crisis hallmarks like values at stake, time pressure and uncertainties do not provide a cultivating environment for learning as they affect leaders’ cognitive capacities and information processing in a negative way (Stern, 2001:38; Smart and Vertinsky, 1977). Intra-crisis learning then is difficult to execute and it takes place in situations when learning matters the most (Dekker and Hansén, 2004; Dror, 1988;

22 Intracrisis learning may be conflated with improvisation as both are in essence cognitive responses to new information. A key distinction between the two, according to this dissertation, is that learning is based on previous experience, while improvisation is based on real-time experience (cf. Miner, Bassoff and Moorman, 2001).

Lagadec, 1990; Moynihan, 2009).²³ Consequently there is only limited empirical data on the topic. The present dissertation addresses this problem by presenting empirical evidence from case studies on crisis-induced learning. Rather than focusing solely on crisis aftermath processes – like traditional studies on crisis learning – this dissertation also takes a closer look at processes during the actual crisis management in order to capture learning during crises.

Summary

In this chapter I have argued in favor of the need to increase knowledge not only about crises and how they develop, but also about how they are actually managed by public organizations. For this purpose it is essential to incorporate organization studies and public management studies into crisis management studies. Crises shift the structures and cultures that affect regular day-to-day behavior, decision making and run-of-the-mill activities in organizations. Crises often trigger new informal and formal ad hoc measures that are strongly affected by the organizational structure and culture, which in turn are influenced by previous experience. Intraorganizational features such as structure and culture matter and need to be involved in the crisis and learning analysis. Organizational structure and culture affect the views and the behavior of managers and operational staff. Thus they deeply affect not only the crisis management response but also the learning that takes place during and after crises.

However, organizational structure and culture are not sufficient tools to appreciate and categorize complex processes of crisis management and crisis learning in organizations. Other aspects that run across the structure-culture divide have been pointed out as keys to understand these processes. In this chapter I have argued for crisis management scholars to focus on organizational factors such as adaptability (in terms of rigidity/flexibility), decentralization/centralization and different types of organizational learning processes (such as single- and double-loop learning and intra- and intercrisis learning). These aspects will be delved into in further detail in the empirical analyses.

23 It should be mentioned, however, that high stakes, mass media pressure and accountability claims from the public and even stress (up to a certain level) can act as motivators for increased performance, efficient and legitimate decision making and thorough post crisis evaluations (Stern and Sundelius, 1997:34).

Chapter 3

Research strategy and method

Introduction

This dissertation sets out to increase understanding of how public sector organizations may respond to and learn from crisis experiences. This chapter spells out the methodology used to reach that aim. In the following I will describe the abductive research strategy adopted in this dissertation, the case study approach, and the process tracing and case reconstruction method. Moreover, as I have had some assistance from other researchers in some parts of the data collection and initial case study analyses, this chapter also deals with the issue of case ownership and spells out clearly who has contributed to the specific parts of the dissertation. The chapter also discusses the issue of case selection and how the selected cases are used in the four empirical chapters.

Research strategy

In line with Teorell and Svensson (2007:51-53), I believe that strictly inductive or deductive research processes are rarely followed in social science. We need empirical observation to understand theory just as we need theory to understand our empirical observations. Social science researchers therefore find it hard to collect data without theoretical goggles or to digest theory without empirical applications. So there are reasons to believe that, rather than settling on either an inductive or a deductive approach, a middle-ground approach is more appropriate. This dissertation uses an abductive research strategy, which is

especially useful for describing, exploring and understanding complex phenomena and for theory development (Blakie, 2000:126; Dubois and Gadde, 2002). The abductive research process is characterized by '[c]ontinuous movement between an empirical world and a model world' (Dubois and Gadde 2002:554). In abduction, both theory and empirical data are gradually reinterpreted as they are contrasted and confronted by each other (Alvesson and Skjöldberg, 1994: 42). Further, like the inductive approach, the abductive approach uses empirical data as its point of departure. Like the deductive approach, it welcomes theoretical assumptions and prior research. The analysis of the empirical data may be combined with studies of prior theory and literature 'as a source of inspiration to discover patterns that lead to understanding' (Alvesson and Skjöldberg, 1994: 42). The abductive research strategy thus allows for theoretical ideas or hypotheses to be developed from the confrontation with empirical data. In short, the empirical data is first observed. Thereafter the theoretical hypothesis is formulated (Teorell and Svensson, 2007:51).

To recap, abduction as a research process aimed at theory development is characterized by a reciprocal movement between empirical data and theories (Alvesson and Skjöldberg, 1994; Dubois and Gadde, 2002). Thus, the abductive research strategy entails inductive and deductive parts. In practice, the research strategy was applied in this dissertation inductively at first, as I (and in some cases my colleagues) conducted six case studies of organizational crisis response and learning. Two broad avenues were then embarked on. First an explorative avenue to increase understanding of how to study crisis management and learning processes. Second an explanatory avenue to explain why some of the case narratives and decision making processes differed. In a search for explanations of what could explain the different crisis response and crisis-induced learning outcomes, I turned to prior theory on crisis management and learning. I selected from my readings of existing literature on crisis management and learning a number of factors that could help explain the variations in the empirical processes. Some focusing and limiting regarding the approach were made. Several theories, in the sense of proposed theoretical sets of explanations, were selected from the field of organization studies (including organizational learning theory), crisis management studies and public management in an effort to shed light upon theoretical problems. I then revisited the case data with these theoretical frameworks grounded in explanatory factors from prior theory to perform analyses presented in the four empirical studies. Taken together, I thus use a multi-theoretical approach to propose a number of basic arguments and to develop propositions from case studies. More specifically, I draw from the crisis management, organization theory, and public management literature conditions regarding crisis management and learning. When applied to the six cases of Swedish public sector organization these insights are developed into

propositions. The propositions are presented throughout the dissertation and hopefully future research will put them to the test. The methodology will be discussed in more detail below.

Case studies and the process tracing and case reconstruction method

The principal contribution of this dissertation is increasing theoretical knowledge about crisis response and crisis learning in public organizations. However, this dissertation also makes an empirical contribution by providing new empirical case study data on how Swedish public organizations manage and learn from crises. In line with Yin (2003), I find that case studies ‘are the preferred strategy when ‘how’ or ‘why’ questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon with some real-life context’ (Yin, 2003:1). Moreover, and keeping in line with Yin, case studies are especially useful when ‘the boundaries between phenomenon and context are not clearly evident’ (Yin, 2003:13). In addition, a case study approach is justified because the field of crisis management and crisis learning is in need of more knowledge and increased structure (Mitroff et al, 2004; Roux-Dufort, 2007).

The empirical focus of the study takes the form of six case studies of organizational crisis management and learning analyzed through process tracing and reconstructive methods (George and Bennett, 2004). Traditionally, the method of process tracing is used ‘to identify the intervening causal process—the causal chain and causal mechanism—between an independent variable (and variables) and the outcome of the dependent variable’ (George and Bennett, 2004:206). In line with Sundelius, Stern and Bynander (1997), Stern (1999) and Stern and Sundelius (2002), I use an adapted version of the process tracing approach based on case reconstruction and decision making occasion analysis. This approach is apt for studying complex processes such as crisis management and learning. Crises tend to be described as a single- and closely connected event, whereas they actually are comprised of series of events and problems taking place before, during and after the triggering event (Stern, 1999). Process tracing and reconstruction allow for an integrated approach to crisis and crisis management, which is essential given that the focus of this study is not only on acute trigger events but also on crisis-induced learning. From the process tracing of the crisis management processes, triggering events relating to learning responses have also been traced. Case study reconstruction in terms of pinpointing and analyzing key decision making occasion is fruitful in showing the complexity of

crisis events while giving appropriate room for the individuals involved in the crucial decision making processes (Stern, 1999; Stern and Sundelius, 2002).

The method for process tracing and reconstruction of crisis episodes was developed by Sundelius, Stern and Bynander (1997) and used in several studies by researchers in CRISMART's Crisis Management Europe Program (Sundelius et al, 1997; Stern, 1999; Stern and Sundelius, 2002). The procedure identifies actors (networks, organizations, groups, or individuals) involved in crisis management and learning processes. It then identifies their considerations, actions and decisions. The method intends to investigate and explain decision-making processes. More specifically, the approach aims to unearth what stimuli the actors attend to; the decision process that made use of these stimuli to arrive at decisions; the actual behavior that then occurred; and the effect of different institutional arrangements on attention, processing, and behavior (cf. George and McKeown, 1985). The principal idea of process tracing, according to this view, is to trace the relation between the decision making occasion stimuli and the decisions that are made in response to that stimuli. In this respect the process tracing was carried out in a mostly inductive fashion by casting a broad net in terms of data collection.

The first step of the method is to map out the course of events into a detailed crisis narrative. A large number of primary and secondary sources (discussed in more detail in the section on data) are required to present a holistic description of the crisis case. The case research behind the case reconstruction and narrative requires more than simply using sources that apply to the crisis in question. Newspaper articles, log-books, minutes and interviews with key players do not necessarily create a fair picture of the event and its management. The narrative has to be complemented by adding the context in which the crisis occurred. The historical, institutional and political context creates a specific milieu that affects the crisis decision makers (Sundelius et al, 1997; Stern, 1999; Stern and Sundelius, 2002).¹

The second step of the process tracing and case reconstruction method is to dissect the case by identifying dilemmas and precarious decision-making occasions to study in more detail. Case dissection entails three major steps. First, key decision occasions are identified. The concept of decision occasions in this context refers to moments when organizational actors confront circumstances or face a problem that forces them to act or not to act (Sundelius et al, 1997:30). In other words, these are occasions during which the coping capacity of decision-makers is challenged, and they must ask themselves, 'What do we do now?' The actions that decision-makers then take have the potential to shift the course of events for better or for worse. At this stage of the study, focus is placed on the

1 See Appendix 3 for sections on the Swedish crisis management context.

impetus behind the crisis, i.e. the stimulus that triggers an action or non-action from the crisis management actors. An impetus generates a crisis management response that, in turn, generates a new impetus (Stern, 2001:50ff). The way the crisis managers respond to each impetus heavily influence whether the crisis escalates or de-escalates.

Some criteria should be applied when selecting decision occasions. Among other things, the sheer importance of the problem in the crisis decision-making process is essential. It is necessary that the problem was of concern to the decision-makers and took up much of their attention at that point in time. Second, there is the post hoc importance; these problems may well have given the impression of being secondary at the time but, in retrospect, decisions about them affected the course of events significantly (Stern and Sundelius, 2002; Stern, 1999).

Due to the limitations of the study, i.e. that it encompasses six somewhat opportunistically sampled organizational responses to organizational crisis events, the case studies are 'heuristic' case studies in the sense that they promote inductive identification of new hypotheses for further research rather than producing generalized knowledge (George and Bennett 2004:75). This issue is discussed further below.

Case selection

Crisis management research has been criticized for mostly conducting single case studies without making sufficient efforts to synthesize findings, thus making each crisis seem idiosyncratic (Lalonde, 2007). This critique is relevant insofar as researchers in the field typically engage in single case studies. However, as early as the 1970s crisis researchers were synthesizing crisis management case studies and drawing integrated and general propositions (Hermann, 1963; Paige, 1968; Hermann, 1972; Brecher, 1977).² Recent contributions along these lines have also been made (Boin et al, 2005; Boin et al, 2008; Boin et al, 2009). Although the present dissertation entails a small n study, it does have a relatively broad empirical scope that allows for detailed case presentations, case comparison and generalizations on a theoretical level.

The empirical contribution of this dissertation is grounded in two related research ventures. Initially six intensive, detailed and descriptive case studies of organizational crisis management were conducted. They were carried out inductively by a case reconstruction and process tracing approach. The cases were selected for practical and theoretical reasons. Apart from all being epi-

2 This first wave of crisis management studies (Paige 1968; Hermann, 1972; Brecher, 1977) was related to foreign policy making and international crisis decision making rather than the domestic or organizational crises that I focus upon in this dissertation.

sodes of relatively rare organizational crises experienced in 2001-2003, they are focused on Swedish public organizations, albeit to a varying extent. Some are an integral part of the government sector. Others, whilst being partly privately owned, play a pivotal role in the national public sphere. In line with Bozeman (1989), I find other measures besides ownership to be of interest for determining publicness. Media organizations for instance are pivotal for democratic societies. I thus use the term 'public' not in the sense of equating government, but rather in reference to the degree of political authority impact on the organization. Even organizations that are not formally part of the government sector are 'constrained and empowered by political authority' (Bozeman, 1989: xi). Further, most organizational environments consist of both public and private organizations, and interorganizational relations and communication between the sectors (Bozeman, 1989:83).

This inclusive view on publicness guided the case selection. Further, case selection was in large parts opportunistic in terms of access to research material. I looked for places where major crises had hit and where I could get the 'deep' access needed for this type of study.

As some of the case studies were part of research projects initiated at CRISMART or part of consultancy projects conducted for external clients, other researchers were in some of the cases involved in data gathering and case reconstruction. These researchers were all skilled in the relevant approach and methodology. To be more specific, I single-handedly conducted two of the six case studies used in this dissertation. This includes case selection, data gathering, original case reconstruction and decision making occasion analysis. Furthermore, two case studies were made in cooperation with other authors and two were conducted entirely by a colleague. All case study analyses, however, followed the process tracing approach as has been described above. Moreover, it should be emphasized that the six case studies only compose the empirical basis for additional analyses carried out in order to produce the four analyses that are the real research contribution of this dissertation. These contributions are presented in Chapters 4-7.

Case ownership

Some of the original case studies that formulate the first empirical basis of this dissertation project were conducted by other authors. Hence, the issue of case ownership needs to be elaborated upon. In essence, I conducted the following original descriptive case studies single-handedly:

- **Case I:** The Swedish public/private hybrid energy utility Birka Energi, with a combined public and market orientation and its management of a cable fire that caused a large-scale blackout in Stockholm in March 2001 and

the repeated incident in May 2002. The case is reported in Deverell (2003; 2004). The reports were prepared as part of the CM Europe research program at CRISMART.³

- **Case II:** The city of Stockholm command and control unit's management of the 2001 blackout and the repeated incident in 2002. In many ways the Stockholm blackouts provide 'perfect' circumstances for examining crisis management and learning since they involve a repeat of almost the same crisis a mere fourteen months after the first event. In addition, the same organizations, and to a large extent the same organizational members, were involved in the management of both crises. The case is reported in Deverell (2003; 2004). The reports were completed as part of the CM Europe research program at CRISMART.

The following original case studies were conducted by the author in cooperation with co-authors.

- **Case III:** FOI, the Swedish Defence Research Agency's Division for NBC-Protection's management of hoax anthrax letters in 2001.⁴ The study was co-authored by FOI researcher Kerstin Castenfors and CRISMART colleague Eva-Karin Olsson. The case was reported in Castenfors, Deverell and Olsson (2003) as a part of the FOI report series.
- **Case IV:** The Swedish public service radio Sveriges Radio's management of news work and broadcasting challenges on 11 September 2001 was co-authored by Eva-Karin Olsson. The case was presented in a comprehensive report (Deverell and Olsson, 2002) and in Olsson's doctoral thesis in journalism studies at Stockholm University (Olsson, 2008).

The following original case studies were not conducted by the author, but carried out according to the same research approach and methodology as the other studies. Moreover, the original case studies and the source data that they are based on have been examined and analyzed by the author (with co-authors) for the purpose of this dissertation:

- **Case V:** The Swedish private (with public service tasks) TV station TV4's management of broadcasting and news work challenges on 11 September 2001 was written by Eva-Karin Olsson. The case study was initially presented in Olsson (2008).

3 Regarding the repeated incident four interviews were conducted by a research assistant. This issue is dealt with more thoroughly below.

4 The division conducts research and analysis on nuclear (N), biological (B) and chemical (C) threats and substances.

- **Case VI:** The Swedish public service TV station Sveriges Television's management of news work and broadcasting challenges on 11 September 2001 and following the murder of the Swedish Foreign Minister Anna Lindh in September 2003 was written by Eva-Karin Olsson. The case was reported in Olsson (2008).

Data

The empirical studies are based on source material drawn from a range of data sources. These largely came from extensive semi-structured interviews with stakeholders and decision-makers, notes from meetings, witness symposiums and conferences engaging involved actors, memos and e-mail correspondence, as well as organizational documents and policies such as checklists, crisis management planning and organizational histories from the organizations' web pages. Post hoc accident and crisis management investigations were also used extensively.

Secondary sources included official government reports and investigations, but also media sources, e.g. national and local newspaper articles, internet news media, and TV broadcasts. In addition, first hand impressions from organizational actors through semi-structured interviews were important, although not crucial for most of the case studies.⁵ All in all 129 interviews were conducted to lay the empirical foundation of this thesis and in an effort to reconstruct the crisis management processes of the organizational crisis management cases selected for further scrutiny. I personally conducted fifty-three of these interviews, while sixty-six were conducted by other colleagues involved in research or consultancy projects funded by CRISMART.

In general, interviews lasted between one and two hours. They were tape recorded, transcribed and then analyzed for content. The interviews were semi-structured and started out from a specific and shared set of questions. All interviews were conducted according to the same interview guide. Originally, the interview guide was developed by the author and Eva-Karin Olsson in order to trace organizational decision-making processes and actions in the case of Sveriges Radio's response to 9/11. The interview guide was based on questions that incited organizational and individual responses, actions and deliberations. In other words, open ended questions that encouraged interviewees to tell their own stories were used (see Sackmann, 1991). In the bulk of the cases, inter-

⁵ There were far fewer printed sources on the cases of organizational crisis management in the media organizations under study. Hence interviews were crucial for reconstructing the decision making and crisis management processes in these cases (see Olsson (2008) for more information).

viewee selections were made by the researchers and based on organizational hierarchy, knowledge of the case obtained through written sources and in some cases snowballing. In the case of Sveriges Radio, however, the interviewees were selected by the management of SR as the investigation was based in a consultancy report ordered by the SR Board. The selection was not necessarily controversial. It was strictly based on bureaucratic hierarchy and encompassed the full scope of managers.

Researchers who use interviews to reconstruct events post hoc, especially political and contested events such as crises, run various risks relating to the reliability of the information received from interviewees. The most potentially precarious risk relates to memories. Memories become increasingly blurred over time. The reliability of the information may also be affected by conscious or subconscious false depictions of events.⁶ These risks of bias have been reduced by the use of multiple sources. Claims confirmed by other independent accounts, i.e. triangulation of sources, have been utilized to increase data reliability (cf. Toft and Reynolds, 2005:39). More specifically, narratives from different interviewees were compared and contrasted against each other, and against other sources such as official reports, organizational documentation and media sources.

As mentioned above, I owe some thanks to colleagues in collecting some of the data that this dissertation makes use of. Regarding the case of Birka Energi's response to the 2001 and 2002 Stockholm blackouts (Case I), eight interviews with five operational and strategic managers at Birka Energi were conducted from October 2001 to February 2002 (in relation to the first event) and from June 2002 to December 2002 (in relation to the second event). I conducted four of the interviews personally, and a research assistant, Christoffer Källström, conducted the other four. In addition I conducted a control interview focused on the crisis follow up learning aspects in May 2006. I also carried out four control interviews with representatives of large Birka Energi clients. Representatives of the global company Ericsson, the local business association and the newspaper printer DN/Ex were interviewed in October 2001 to February 2002 in an effort to access the external stakeholder perspective.

I conducted sixteen interviews with twelve operational and strategic managers at the city of Stockholm in response to the 2001 and 2002 Stockholm blackouts (Case II). These interviews were carried out from September 2001 to January 2002 (regarding the first event) and from December 2002 to October

6 For instance, managers may find it difficult to separate their first-hand experiences from information relayed to them by others; interviews may lead to post event rationalization of one's own behavior; organizational members may go to great length not to criticize co-workers or, vice versa, underlying conflicts may serve to rationalize unfair critique; or psychological mechanisms may kick in that make the interviewee overemphasize their own role in the process.

2003 (regarding the second event). One of the interviews, conducted in February 2004, focused on follow up and investigation aspects of the event.

Regarding the case of the Swedish Defence Research Agency's response to the hoax anthrax letters in 2001 (Case III), eighteen interviews were conducted in February 2002. The interviewees belonged both to the executive body of the division, and to the five departments within the division: Threat Assessment, Medical Countermeasures, Environment and Protection, NBC Analysis, and Defence Medicine. Administrative support personnel were also interviewed. I conducted seven of these interviews. My CRISMART colleague Eva-Karin Olsson conducted seven interviews and FOI researcher Kerstin Castenfors carried out four interviews.

In regard to Sveriges Radio's response to 11 September 2001 (Case IV), forty-four interviews were conducted with strategic and operational managers. These interviews were carried out in January 2002. I conducted twenty-one of the interviews, Eva-Karin Olsson carried out twenty-one and Anders Johansson, a PhD student at Örebro University and researcher at the Swedish National Defence College, carried out two. In addition, Eva-Karin Olsson conducted seven interviews with strategic managers at TV4 to get access to information about the organization's response to 9/11 (Case V). These interviews were carried out from November 2002 to February 2003. Finally, Eva-Karin Olsson also conducted thirty-one interviews with strategic managers at Sveriges Television in regard to the public service broadcast organization's response to September 11 and the 2003 Lindh assassination (Case IV). These interviews were conducted from December 2003 to January 2004.

Case overviews

Case I and Case II

The empirical underpinnings of the case of Birka Energi's management of the 2001 and 2002 Stockholm blackouts (Case I) and the city of Stockholm command and control unit's management of the same events (Case II) were presented in two reports written as a part of the CM Europe Research Program (Deverell, 2003; 2004). The reports entail detailed empirical mapping of decision making and learning processes at the power company Birka Energi and the city of Stockholm's command and control unit during and after two comprehensive cable fires that led to large-scale blackouts in northwestern Stockholm in 2001 and 2002.

The crisis began early in the morning on 11 March 2001 when power cables belonging to the power company Birka Energi caught fire in a tunnel adjacent to a power station in northwest Stockholm. The consequences were dramatic for the residents, the power company, and leading city actors. The fire caused

a power outage that struck eight districts in the Swedish capital. The blackout seriously affected businesses and public administration as well as the daily lives of residents as some 50,000 people and 700 businesses employing 30,000 people lost power. The blackout lasted from 07:00 to 20:35 the following evening.

In 2001 researchers at CRISMART had already begun mapping crisis management responses to infrastructural crises (Newlove et al, 2003; Ullberg, 2005). In an effort to produce new knowledge on the complexity of crisis management and to create better conditions for emergency planning, CRISMART's Research Director assigned me to analyze the public response to the 2001 blackout. The report (Deverell, 2003) focused on the decision-making processes of the various actors involved, most notably Birka Energi, and the city of Stockholm, represented foremostly by the Stockholm Fire Brigade, the City Executive Office, and the Kista District Administration. Many more city actors were directly involved in the management of the crisis by participating in the city's crisis coordination group at the Fire Department's Center of Rescue Operations in Stockholm. In keeping with existing contingency plans, this coordination group held five group meetings presided over by the Fire Chief. The report mapped out the processes of decision making by the main players and found twenty-one occasions for decision making worthy of further analysis.

Fourteen months after the big blackout in northwestern Stockholm, the same area was again subjected to a large scale blackout. On 29 May 2002, a ground fault error on a 33 kV-cable sparked a new fire in the same cable tunnel. This time thirty-six high power cables and a number of telephone and data traffic cables went down. 20,000 Birka clients in northwestern Stockholm were deprived of electrical power and electricity dependent comforts. Hence, some 50,000 people and companies employing 30,000 people again lacked power. It took fifty-four hours to restore power.

These two highly similar events offered a rare opportunity to study crisis induced learning processes in practice. I therefore gathered data on the second event to write a report on the blackout which was aimed at documenting learning from one crisis to the next. Nineteen occasions for decision making were selected from the data for further scrutiny (Deverell, 2004).

Case III

Case III deals with the NBC Division of the Swedish Defence Research Agency and its management of hoax anthrax letters in 2001. The crisis episode started on 15 October 2001 when four suspected anthrax letters were reported to the Swedish police. During the day a number of staff members at the FOI Division of NBC Protection in Umeå received indications that something was going on. The Head of Division was informed in the afternoon. Then the National

Police Board and the NBC management decided that the NBC Division should analyze the suspicious letters and their contents. For about a week FOI received large numbers of letters to analyze.

FOI had to make a number of rapid decisions regarding re-organization and management to meet demands and expectations. After the crisis, FOI commissioned an investigation to find out whether its staff had received adequate means to do a proper job; if delegated responsibilities were accepted; how assigned tasks were carried out and if the decision making process was employed in a competent manner. The assignment went to FOI's Defence Analysis Division. The assigned researcher, Kerstin Castenfors, in turn asked CRISMART for assistance. As Eva-Karin Olsson and I were working on a report with a similar scope (commissioned by Sveriges Radio and described in brief below), we became involved in the project. Hence Castenfors, Olsson and I put together a report that investigated how management, leadership, decision-making, and internal and external coordination and media contacts worked at FOI from 15 October to 1 November 2001. The case study presented an analysis of interviews with division staff that was actively involved in the management of the letters. These testimonies were complemented by logbooks and minutes from internal and external meetings (Castenfors, Deverell and Olsson, 2003).

Case IV

Case IV covers decision-making and broadcasting challenges at the Swedish public service radio station Sveriges Radio on September 11-13, 2001. The first impetus of the event occurred at 14:45 Swedish time when a hijacked passenger plane crashed into one of the World Trade Center towers in New York. At the time the news desk began working in order to report on the event. The New York correspondent reported live on the news at 15:00. The second impetus occurred at 15:03 when the second tower was attacked. For many seasoned reporters and managers it was clear that this was a news media event out of the ordinary that would require extraordinary efforts from the organization. The challenge was to rapidly and accurately inform the Swedish public about the terrorist attacks that had struck the United States. The organization had to make quick decisions and reorganize the company to reach out with the news.

After the event, Sveriges Radio's management assigned CRISMART to investigate whether personnel had been given appropriate conditions to do a good job, if responsibility was accurately managed, and if decision-making was conducted effectively. With these queries as a point of departure, Eva-Karin Olsson and I conducted a study of the Sveriges Radio management's decision making, leadership, coordination and communication on 11 September 2001.

Since written sources were limited in this case, we gathered data from interviewing managers and senior staff members.

The case study dissected the crisis into twenty-five occasions for decision making. The most essential decision that day was taken shortly after the Program Directors had been given the news about the second plane. As usual when big news events occur, they gathered by the news desk. Then and there the Program Directors made the overall decision regarding how Sveriges Radio would handle the situation. After ten minutes they had decided to ‘clean out’ the P1 and P4 schedules and launch an eight hour long joint broadcast on the events (Deverell and Olsson, 2002).

Case V and Case VI

Case V and Case VI are different from the other cases reported in this dissertation as I was not personally involved in the initial steps of data gathering, process tracing and case reconstruction analysis. In the doctoral thesis in journalism studies at Stockholm University, ‘Media Crisis Decision Making’, Eva-Karin Olsson (2008) tells the story of the TV station TV4’s management of broadcasting challenges on September 11, 2001 (Case V) and the public service organization Sveriges Television’s management of broadcasting challenges on September 11, 2001, and during the 2003 assassination of Foreign Minister Anna Lindh (Case VI).

Due to the lack of written documentation at both organizations during the most intense hours of September 11, the case studies were based on interviews with operational and strategic managers. In line with the other case studies, the SVT and TV4 case narratives were also dissected into occasions for decision making. Seventeen occasions for decision making were selected at SVT and eleven at TV4. The media organizations under study chose somewhat different strategies in response to the terrorist attacks. SVT basically stuck to its regular scheduling and reported on the news mostly in its regular news programs on its various channels. TV4, on the other hand, took unusual measures in response to the extraordinary news event. One hour and twenty minutes after the second plane hit the south tower, commercials were removed and TV4’s own live broadcasts were alternated with live CNN material. Both these measures were improvised. While SR and TV4 received good reviews for their broadcasts, SVT was heavily criticized for not changing its schedules in line with what the situation demanded, and for letting the least experienced of its three news programs carry the brunt of broadcasting during the day.

* * *

The descriptive case studies briefly described above were of great importance for this dissertation as they lay as empirical foundations for the four studies presented in Chapters 4-7. The analyses and theoretical findings presented in this dissertation are grounded in further analysis of the descriptive case study data. These further analyses have also been peer validated as they are published, or accepted for publication, in peer reviewed journals. Further, the cases that I conducted single-handedly are most exploited in these chapters. The case of Birka Energi's response to the cable fire and blackouts of 2001 and 2002 (Case I) is used in the study presented in Chapters 5 and 6. In addition, Birka Energi's response to the first crisis in 2001 is used in Chapter 4. The case of the city of Stockholm command and control unit's response to the blackouts (Case II) is used in Chapters 5 and 6. Each of the remaining cases only appear in a single study as the FOI case (Case III) and the TV 4 case (Case V) are utilized in Chapter 4, and Chapter 7 analyzes the crisis-induced learning of Sveriges Radio (Case IV) and Sveriges Television (Case VI). Below I elaborate further on how the six cases are used in the four studies.

How the six cases are used in the four studies

Data on crisis management and learning processes in public organizations is limited. Therefore, I had to find and collect new data on the topic. For this purpose I used the process tracing and case reconstruction method to inductively identify what actors and organizations were involved in the crisis management processes and what decisions or actions they took. Each in-depth case study aimed at explaining what happened during the process of managing the respective crisis. The first step then was to inductively trace the crisis responses of six organizations by tracing the relation over time between the crisis impetus and the crisis decision making. These features lay the groundwork for a descriptive narrative of crisis response and learning processes (cf. George and Bennett, 2004:210). The six cases make out the basis for the four empirical chapters. In each empirical chapter two or more cases are further examined and contrasted with various methods. In these studies different research strategies are used to answer different research questions and conclusions in the form of propositions are drawn. In the following, I will elaborate on how the empirical groundwork in the six case studies is used in the four chapters.

In short, two basic strategies were used: an explorative strategy was initiated in order to deepen theoretical and methodological insights on how to study crisis management and learning processes; and an explanatory strategy was adopted to explain why case narratives and processes of decision making differed.

In chapter 4 I used the explanatory design. The first empirical analysis of this dissertation is driven by a theoretical interest. The study sets out to shed

light on the question why some organizations manage to adapt to crisis challenges, while others do not. In order to find out more about the relationship between organizations and crisis response, a typology with three different types of responses (adaptive, semi-adaptive and non-adaptive) was constructed. The next step was to select cases that fit the organizational types presented in the typology. Three cases were selected that differed in terms of their adaptability in the sense-making phase of crisis response. TV 4 was selected as an adaptive case, Birka Energi was selected as a non-adaptive and FOI was added as a middle ground case. The case data was then revisited in a search for clues that could explain why these organizations differed in their response.

A more exploratory venture was undertaken in Chapter 5. There I used the crisis narrative and critical decision making occasion analysis of Birka Energi's management of the 2001 and 2002 Stockholm blackouts and the city of Stockholm's management of the same events. In this study I set out to see how organizational adaptability (operationalized as a scale from flexibility to rigidity) affects response and learning at different stages in time and throughout the crisis management process. First I reconstructed the crisis narrative and decision making analysis into three chronological cuts: crisis lead up; crisis management proper; and crisis aftermath. Then I assessed the two organizational responses in terms of rigidity and/or flexibility in each of the three chronological cuts. From this discussion I drew propositions on how organizational rigidity and flexibility may affect crisis response and learning in the different phases of the crisis management process.

The study presented in Chapter 6 is also carried out according to an exploratory design. It suggests a conceptual framework for the study of crisis learning during and after crises. For this study I used the descriptive case studies of Birka Energi's and the city of Stockholm's management of the 2001 and 2002 Stockholm blackouts as a basis for detection of crisis-induced lessons. I selected from the crisis narratives and decision making analyses fifty-one instances of lesson drawing. Lesson drawing was seen as moments in time when experience altered knowledge or behavior. When I revisited the empirical data, I searched for new insights, knowledge and understandings as well as more concrete and visible actions and changes taking place. Further I constructed a coding sheet rooted in conceptual categories designed to answer the questions of: What is learned (single- or double-loop lessons)?; What is the focus of learning (prevention or response)?; When does learning take place (intra- or intercrisis)?; Is learning blocked from implementation or does it come full circle (lessons distilled or implemented)? I then coded each of the fifty-one lessons according specific criteria (as demonstrated in Table 1) and according to what organization drew the lesson and when (i.e. in 2001 or in 2002).

Table 1: Criteria used for coding of crisis induced lessons

1.	Intercrisis learning lessons are carried out after the crisis episode
2.	Intracrisis learning lessons are initiated during the crisis episode
3. a)	Single-loop learning lessons entail error detection regarding minor organizational flaws
b)	Single-loop learning lessons do not entail inquiries into organizational norms
4.	Double-loop learning lessons entail error detection into underlying organizational norms, policies, objectives or working procedures
5. a)	Prevention learning lessons focus on minimizing risks of crisis reoccurrence
b)	Prevention learning lessons focus on improving preparedness
6. a)	Response learning lessons focus on improving the actual crisis response
b)	Response learning lessons focus on minimizing consequences of the crisis
7. a)	Lessons distilled are noticed by organizational members but not subsequently acted upon
b)	Lessons distilled do not change actual organizational behavior
8. a)	Lessons implemented are noticed by organizational members, subsequently acted upon and carried out/corrected
b)	Lessons distilled change organizational behavior

The coding outcome uncovered correlations hypothesizing how crisis learning may come about. These are deliberated upon in the final sections of the study.

The study presented in Chapter 7 follows a research rationale that is somewhat similar to the one presented in Chapter 4. In both studies I present case studies of organizations that performed differing responses to similar events. The study takes an interest in the strategic management level of organizational learning. From the broad case description, data regarding the top managerial response and the strategic level is utilized. Specific case-based information from narratives relating to crisis-induced learning processes were coded depending on the different type of learning, i.e. cognitive or behavioral modes of learning. The notion of single- and double-loop learning was used to make sure real learning processes and not merely instrumental changes from crises were assessed. The concepts were used to differentiate between learning related to routine change and learning related to change of values within the organizations (cf. Argyris and Schön, 1978).

Delimitations and generalizability

This dissertation deals with crisis management and learning in public organizations. The empirical crisis cases explored in the study occurred in 2001, 2002 and 2003. They are all cases of Swedish organizations with public task-orientations that were subjected to a crisis. The learning processes studied in this dissertation are in some ways ongoing. However, for practical reasons empirical

data collection was terminated within a few years after the events. For instance the last interview was conducted in 2006.

Placing the microscope on organizational responses to crises and organizational processes invariably leads to a relative neglect of other potential explanatory factors. Thus, my choice of focus means that the micro level of individual agency as well as the macro level of the external environment is not dealt with in detail here. However, these factors are important for determining how and why organizations act in certain ways. They also pertain to issues creating ambiguity for organizations compared to more stable phenomena such as structure and culture (Brunsson, 1989; Meyer and Scott, 1983; Zucker, 1988). External factors are important to understand a political and mediated environment like the public sector. As Scott (2008:178) puts it: 'Organizations are creatures of their institutional environments, but most modern organizations are constituted as active players, not passive pawns' (Scott, 2008:178). The focus of this study is on these active players, the organizations per se, rather than on the external environment that they act within. That said, the specific context that the selected cases occurred within is not neglected. Sections on the specific Swedish context are featured in Appendix 3.

The fact that all organizations studied for this dissertation are Swedish public organizations is a strength of the study as well as a limitation. On the one hand, the shared context makes contrasting and comparing the cases easier. On the other hand, the fact that the study draws on data only from Swedish public organizations while aiming to develop theory on public organizations in general may lead to a gap between case selection and the scope of generalization.

What then are the possibilities of generalizing the findings from this dissertation given the delimitations of the study discussed above? Do the results of this study apply to a few organizations in Sweden, or may the case findings be generalized to a greater circle of organizations? There should be no doubt that the limitations of this study in terms of the number of cases used in analysis and their representativeness affect the ability to generalize its findings to a larger set of organizations. What is more, such generalization is not within the scope of this dissertation. In keeping with the limitations of the small *n* study design, I aim to contribute towards building theoretical knowledge rather than empirical. This is important since there is a lack of developed theory to build on within crisis learning theory. Moreover, the prospects for theory development are relatively low as empirical studies on organizational learning in general are lacking (Dekker and Hansén, 2004).

Critics of single case studies often claim that case studies 'offer a poor basis for generalizing' (Yin, 2003:37). However, there is an important distinction between empirical and theoretical generalization. Large *n* studies can do the former, while small *n* studies can contribute to the latter. I agree with Yin when

he argues that the critique directed towards case studies as a basis for generalization is based on a mix-up of survey research and case study research. Survey research, i.e. large n studies, aims to generalize a correctly selected sample to a larger universe by means of statistical (or empirical) generalization. Case studies, on the other hand, are set up to be a basis for analytical (or theoretical) generalization. As Yin put it: 'the investigator is striving to generalize a particular set of results to some broader theory' (Yin, 2003:37). This dissertation aims to develop theory within the field of crisis management studies by presenting six in-depth and detailed case studies. But rather than reflecting on the single case studies of crisis management and crisis learning as presented in the dissertation, the study covers broader theoretical issues related to crisis management theory such as for example organizational structure and culture, centralization and decentralization, rigidity and flexibility, single- and double-loop learning, and intra- and intercrisis learning (cf. Yin, 2003:38).

The reason for finding theory development within crisis management studies of importance is that the field of crisis management studies is 'ill structured' (Mitroff et al, 2004). The construct propositions, clarifications and findings presented in this dissertation should therefore be seen as building blocks that may assist in creating new knowledge. In addition, the propositions that are stated in this dissertation aim at structuring the field. Further research should put them to the test.

Summary

This chapter has set the stage for the dissertation in terms of research strategy, method and data. Initially I claimed that abductive research strategies are more fruitful than purely inductive or deductive strategies, at least when it comes to describing, exploring and understanding real events in an effort to develop theory. In abduction, the researcher continuously moves between empirics and theory, the rationale being that empirical observations are necessary to help us understand theory, and theory is required to understand empirical data. After describing the research strategy, the process tracing and case reconstruction method used to analyze the six case studies of organizational crisis management and learning was outlined. The case studies are based on a variety of sources including post hoc accident investigations, crisis management reviews, newspaper articles, organizational documents and policies, and 129 extensive semi-structured interviews with key crisis managers. The first step of the methodology was to map out the course of events into a detailed crisis narrative. The second step was to dissect the case by identifying dilemmas and decision-making occasions for further analysis. The case studies are 'heuristic' case studies aimed at promoting new hypotheses for further research rather than producing

generalized knowledge. To this end these relatively descriptive decision making analyses were analyzed further by using an explorative avenue to increase understanding of how to study crisis management and learning processes, and by an explanatory avenue to explain why some of the case narratives and decision making processes differed. Prior theory was used to suggest explanations of what factors could help understand and explain the outcomes.

Chapter 4

Organizational culture effects on strategy and adaptability in crisis management

This chapter presents a typology of temporal organizational responses to crises in public perception aimed at examining the ability of organizations to restructure in order to cope with acute crisis management challenges.¹ The typology is based on organizations' capacities to launch crisis management strategies and adapt their managerial and operational levels to deal with crises. According to the typology, the Fully Adapting Organization manages to adapt both its strategy and its managerial and operational levels to deal with the crisis. The Semi-Adapting Organization changes its strategy but lacks the capacity to change managerial and operational levels according to the new strategy. The Non-Adapting Organization does not grasp the importance of strategy change in the first place. Based on three inductive case studies the study concludes that organizational culture plays an important role in this process where the Semi and the Non-Adapting organizations were dominated by strong expert cultures that proved to be less inclined to change. In contrast, the Fully Adapting Organization had deliberately fostered an organizational culture in which flexibility was a cornerstone.

¹ Manuscript co-authored with Eva-Karin Olsson. Accepted for publication in *Risk Management* (November 2009). Reprinted with permission by Palgrave Macmillan.

Introduction

The starting point for this study is formulated by a set of seemingly basic questions: What makes some organizations better than others at handling crises in public perception? What is required from organizations in order to adjust to the changing conditions in stakeholder relations as well as organizational tasks in the midst of a crisis, and what organizational features may facilitate or hamper these efforts?

Drawing upon inductive case studies I argue for studies on crisis management to focus on the impact of strategy change, leadership and organizational culture on crisis response. I follow Smith's (2006b) call for crisis management scholars to focus on the critical phase of crisis management during which crises may be mitigated or accelerated. I am concerned with the first critical period of acute emergency response, which challenges organizations to undertake temporary organizational adjustments in line with a crisis management strategy. The relation between crisis incubation and strategy change also has implications for resilience, which is the term most commonly used to describe activities aimed at attaining business continuity and functional crisis management (Smith and Fischbacher, 2009:6). The notion of resilience underlines the task of organizations to manage external challenges and uncertainties, and to develop from experience a capacity to 'bounce-back' after crises (Wildavsky, 1988; Smith and Fischbacher, 2009). However, in line with my focus on crisis exploitation (Boin et al, 2009), successful organizations do not bounce-back to exactly the same state. Instead they manage to use the crisis in a favorable manner. In my understanding, the capacity to adapt organizational strategies in accordance with the new situation is vital for this process (cf. Miles and Snow, 1978). When defining strategy I lean on Mintzberg's (1993:13) definition of strategy 'as a mediating force between the organization and its environment' consisting of interpretations of the environment and corresponding organizational decisions. However, in line with the discussion on resilience and stability, my take on strategy differs from Mintzberg's insofar as he refers to relatively consistent strategies, decisions and interpretations, while this study deals with temporary adjustments and change.

In this study I am interested in the nexus between crisis management and organizational culture. Previous research on the topic has been developed to examine the pre-crisis phase. These studies have focused on issues related to organizational design, emergency planning, and fostering of safety and resilience. Three theoretical constructs have been especially influential in this regard. The normal accident theory developed by Perrow (1984) deals with risk management and the origins of accidents and reliability. It is pitted against high reliability theory, which explains how complex organizations can learn

from incidents and build safety and crisis prevention (Rijpma, 1997; Laporte and Consolini, 1991; Klein et al., 1995; Laporte, 1996; Weick, Sutcliffe and Obstfeld, 1999). These schools of thought differ on whether organizational factors may reduce the risk of crisis or not. The former contend that they cannot, while the latter say that they indeed may (Boin, 2004). The third influential construct is the concept of safety culture. Studies within this field deal with how culture affects organizational crisis preparedness in terms of organizational attitudes toward safety and reliability of operations (Reason, 1990; Pidgeon, 1991; 1998; Vaughan, 1996; Guldenmund, 2000; van Vuuren, 2000; Harvey et al., 2002; Hopkins, 2006).

In contrast to previous research, however, I am interested in the critical initial stage of crisis management and the challenges it poses to organizational everyday life. By drawing on Schein's (1992) notion of organizational culture, I argue that crises have the capacity to challenge organizations' everyday life and the internal logic between strategy and operational components.² This means that a 'perfect' organizational culture for day-to-day strategies and stakeholder relations might be a burden when sudden changes occur. Schein's line of reasoning also resembles the idea behind Miles and Snow's (1978) influential typology on how organizations adapt to their external environment. According to the authors, organizational adaptation rests on the ability of organizations to match internal processes and structures to external strategy. In this study I argue that an organization's ability to adapt to changing conditions imposed by a crisis, in terms of stakeholder relations as well as operational crisis management capacity, affects its ability to cope with crises in public perception. Based on this line of argument, the aim of the study is to present a typology that illustrates three different potential organizational outcomes of adaptability to examine what mechanisms affect organizations' ability to restructure in order to cope with acute crisis management challenges.

2 Schein understands organizational culture as consisting of three basic layers: artifacts (visible structures and processes that are part of an organizations physical environment); espoused values (referring to explicit statements on organizations' strategies, goals and aspirations); and basic underlying assumptions (the core of organizational culture, which refers to unconscious, taken for granted assumptions, beliefs and perceptions that guides organizational members in their everyday work) (Schein, 1992, pp. 16-27). Taken together the three divisions create a certain organizational culture, which makes organizations fulfill their goals. Schein's notion of organizational culture has proven to be a valuable construct to scholars with an interest in issues related to organizational change (Denison and Mishra 1995; Küng-Shankleman, 2000; Lurie and Riccucci, 2003). In this study I relate Schein's concepts of espoused values and basic underlying assumptions to organizational strategy and adaptability.

Crisis management research and crises in public perception

Drawing on Boin and 't Hart I define crisis as: 'when a community of people – an organization, a town, or a nation – perceives an urgent threat to core values [...] which must be dealt with under conditions of uncertainty' (Boin and 't Hart 2006:42; cf. Rosenthal et al., 2001). It should be noted that the definition does not necessarily entail that the crisis under study had a direct or harmful effect on the organization per se. The main characteristic of a crisis according to this perspective is instead that the organization is triggered to act as a response to exogenous shocks or changes. Thus a crisis can also be conceived as a political, social or organizational dynamic that brings about opportunity and organizational change (Rosenthal et al., 2001:21; Roux-Dufort, 2007). The double edged nature of crises relates to the notion of crisis as opportunity for post hoc reform as stated by the 'window of opportunity' concept (Keeler, 1993; Kingdon, 1995) and the notion of 'crisis exploitation' which refers to a phenomenon when actors embrace crises voluntarily as a strategy to utilize them for their own organizational objectives (Boin et al., 2009, cf. Gioia and Chittipeddi, 1991; Brockner and Hayes James, 2008).

The specific crisis characteristic of interest for this study can be described as a 'crisis in public perceptions', which may cause severe harm to an organization by undermining confidence among its stakeholders. According to Seeger et al (2003:54), '[r]egardless of the form or transmission of negative public perception, crises in public perception results in an increase in negative attention directed at the organization.' All three crisis events selected for this study had the potential to devastate the public perception of the organizations and ran the risk of impacting organizational financial interests. On the other hand, if managed well, the events could just as well have led to an enhanced image of the organizations and to an increase in funding.

Crises in public perception differ somewhat from the usual objects of study in the field of crisis management research. Most current theories on organizational crisis management have been fuelled by analyses of media-intensive emergencies such as for example Three Mile Island, Bhopal, Chernobyl and the Challenger and Columbia space shuttle disasters (Perrow, 1984; Shrivastava, 1987; Stern, 1999; Starbuck and Farjoun, 2005). These events have tied researchers to an approach centered mainly on accidents, which has somewhat arbitrarily been generalized to all kinds of hazards and unwanted events (Roux-Dufort, 2007). The typology of crisis adaptability proposed in this study should be understood as a reply to the call made above for theory development regarding non-accident fuelled crisis management.

Research on how organizational culture affects an organization's ability to react to and act in times of crisis has so far received limited interest (see Kets de Vries and Miller, 1984; Mitroff et al, 1989; Pauchant and Mitroff, 1992 for exceptions). Many important studies have been conducted in the related field of safety culture research. For the purpose of this study, however, the concept of safety culture is problematic since it is most commonly approached by examining perceptions, values, attitudes and behaviors of the staff, which consequentially leads to a relative underestimation of the role of top managers in risk and crisis management. In addition, the concept of safety culture usually deals with intraorganizational information dissemination and communication rather than interorganizational communication, which is essential in this study given its focus on stakeholder relations (Reason, 1997: 191ff).

A key claim of this study is that managers' perceptions of crises are central to the notion of change of strategy as a condition affecting crisis response. In contrast to previous research, I approach crisis response from a strategic choice perspective, i.e. as 'crisis exploitation', and include the top manager's role in strategy change and operational components in the model. Further, in contrast to most previous research, I am not primarily interested in the pre-crisis phase, but the acute management phase. Thus this study moves beyond the notion of safety cultures by turning the attention to how organizational culture affects acute crisis management.

Building a typology of organizational crisis responses

Based on inductive case study research, I found strategy change and operational components to be two essential features of organizational responses to disruptions. My focus on strategy change highlights the role of top managers in crisis response. I believe that top managers play a pivotal role in changing organizational strategies that relate to both stakeholder relations and internal operators. Further, top managers also play a central role in adjusting the managerial and operational levels (including their own leadership, competencies and styles) to deal with the new situation (Schein, 1992:375).

The need for a change in strategy (which should be understood as a temporal change caused by the crisis) is related to the tendency for stakeholder alternation in times of crisis. According to Freeman (1984) and Freeman and Gilbert (1987) stakeholder relations are vital for organizational success, and overlooking important stakeholders can have a devastating impact on organizations. Stakeholder theory focuses on how organizations create and maintain relations. The few crisis management studies dealing with stakeholder theo-

ry tend to emphasize the fostering of relations prior to the crisis in question (Ulmer, 2001; Alpaslan, Green and Mitroff, 2009). However, as acknowledged by Ulmer and Sellnow (2000) and Acquier, Gand and Szpirglas (2008), crises tend to introduce a new set of stakeholders, which means that the processes of identifying stakeholders might differ extensively from everyday operations and thereby catch communicating actors off guard. It is a top managerial task to acknowledge new stakeholders and their expectations in times of crisis, not least because swift decision making is necessary due to limited time available.

From an organizational culture perspective operational and managerial levels relate to the norms, values and routines that guide everyday organizational life. A key challenge here for organizations is to change these levels in order to adjust to the change of strategy undertaken by top managers. Consistency between strategy on one hand and operational and managerial levels on the other is pivotal for organizational performance, which makes disruptions of the two an organizational threat.

According to Denison and Mishra (1995:215), adaptability refers to organizational 'capacity to redefine underlying character in response to large-scale change'. In order to be able to adapt, organizations should have the capacity to interpret incoming signals and to adjust the organization accordingly. The authors further state: 'Thus, the adaptability hypothesis asserts that an effective organization must develop norms and beliefs that support its capacity to receive and interpret signals from its environment and translate these into internal cognition, behavioral, and structural changes' (Denison and Mishra, 1995:215).

The typology presented in the study (see Table 2) is based on how managers and their organizations were able to adapt to rapid changes in their environments posed by crisis events. To this end, three different types of organizations were selected as illustrating examples of ideal types. The selection was based on the organizations' abilities to cope with the two identified dimensions of organizational strategic crisis adaptability, namely strategic and organizational adaptability (the latter is divided into managerial and operational levels).³

3 The typology may be contrasted to previous classifications of how organizations respond to crises. The most famous such typology is Dynes' (1970) classification of organized behavior in disaster. He distinguished between the nature of tasks undertaken by the organization in response to the disaster, in terms of regular or non-regular tasks, and between the post-impact structure of the organization, in terms of old and new. From this he drew four types of organizations. Type 1 is an 'established' organization carrying out regular tasks. In a disaster this organizational type is a first responder, such as a local police force or fire department. Type 2 is an 'expanding' organization carrying out regular tasks. Readiness to expand the organization by changing its general functions and structure when disaster strikes, is an important attribute for this organization. Volunteer organizations such as the Red Cross are examples of this organization type. Type 3 is an 'extending' organization carrying out non-regular tasks. This organization type gets involved in disaster management not because it is an expected organi-

Table 2: Typology of organizational strategic crisis adaptability

	Fully Adapting	Semi-Adapting	Non-Adapting
Strategic adaptability	Strategy change	Strategy change	No strategy change
Organizational adaptability	Managerial and operational adaptability	Inhibited managerial and operational adaptability	Operational routine adaptability

The cases

Each of the three cases in the study illustrates a specific type of organization as presented in the typology. Inductive case studies were undertaken to further explore organizational mechanisms behind the respective response pattern. The cases were examined by a detailed process tracing effort of the main decision making occasions confronted by the organizations (George and Bennett, 2004:205ff; George and McKeown, 1985:35ff; Stern, 1999). The process tracing was conducted by pinpointing the stimuli that actors acted on (George and Bennett, 2004). The organizational crisis management and decision making processes were reconstructed from a number of sources into crisis narratives, which were then dissected into occasions for critical decision making, each of which were closely examined (Stern, 1999). This approach helps the researcher to pinpoint periods in time when organizational experience alters behavior or knowledge.

The case narratives were based on a variety of sources including incident investigations, media reports, and personal interviews. In depth semi-structured interviews were conducted with 33 key crisis managers.⁴ The interviews were based on broad and open ended questions aimed at chronologically restructur-

zational task, but because of its community orientation. The organization either wants to help out or its specific resources or expertise is required. Examples may include hotel companies or school buildings offering shelter, or construction companies assisting in rescue operations. Type 4 is an 'emergent' group, with no pre-disaster existence, undertaking non-regular tasks. These ad hoc groups tend to be loosely coordinated and are often dissolved upon completing their tasks. Examples of such ad hoc groups are local authority task forces, operation groups, or coordinating groups established due to the disaster (Dynes, 1970: 137-140). The main difference between the typologies is in their focus. Dynes focuses on traditional emergency and disaster management, and specifically on community response and the way community members and organizations come together to mitigate the repercussions of the disaster by concerted efforts. My typology, on the other hand, focuses specifically on pre-existing organizations that are not traditional emergency or crisis management organizations, and on how these organizations respond to crises of public perception with a direct impact on the organization, rather than on the community at large.

4 Seven interviews were conducted at the Fully Adapting Organization (TV4), 18 at the Semi-Adapting Organization (FOI) and eight at the Non-Adapting Organization (Birka Energi).

ing the events. Rather than introducing cultural issues from the outside, the interviews purposefully enticed responders to share day-by-day narratives and thus uncover their own cultural settings (cf. Sackmann, 1991:301).

The responses, to be further presented in the empirical section, can briefly be described as the following: The Fully Adapting Organization is illustrated by a national hybrid public service/private TV-station (TV4) and its response to September 11, 2001. The organization changed its strategy and possessed a high degree of adaptability to cope with the change. For the first time since the station was launched ten years earlier, the Adapting Organization managed to get a higher percentage of viewers than its main competitor – the national public broadcaster – during the first critical hours after the attack. The reason for the competitive advantage was the lack of re-scheduling by the public broadcaster, in contrast to the major changes carried out by the Adapting Organization (Olsson, 2009).

The Semi-Adapting Organization is represented by a National Defense Research Agency (FOI) division's handling of the so-called anthrax letters in Sweden in 2001. When the first suspect parcels appeared in mid October, the organization, at the request of the national police, undertook the task of analyzing their content. The organization is traditionally a research and advisory organization, not a day-to-day operational organization. The organization changed its strategy in relation to the challenges presented but demonstrated adaptability in management, as well as in the operational core of the organization, that was less well-fitted to the change of strategy. The organization's democratic expert advisory culture set the parameters for a crisis response characterized by vague leadership and a lack of decision making capacity.

Finally, the Non-Adapting Organization is illustrated by a semi-public power company's (Birka Energi) management of a local cable fire in 2001 that led to a blackout without modern precedent in Sweden in terms of duration and scope. The 37-hour blackout affected eight commercial and residential capital city districts. It seriously disturbed the daily lives of some 50,000 residents and 700 companies employing 30,000 people (Aktuellt, 2001). The lack of strategic managerial response resulted in an operational response that emphasized the technical aspects and overlooked new stakeholder relations. Strategy change was not enacted and strategic adaptability was not on the organizational agenda.

Organizational fit: Strategy and adaptability

How then did these organizations react to the different crisis events brought upon them, and more importantly, which organizational features influenced the organizational crisis response?

The Fully Adapting Organization

Strategic adaptability

On a collective basis the managerial group interpreted the terrorist attacks as an exceptional news event that in the worst of cases could mean the beginning of a third world war. The perception was clearly linked to the collapse of the World Trade Center towers. In order to meet the new communicative demands as they were interpreted by the managerial group, the channel was cleared to broadcast solely on the events. Such a long live broadcast, without commercials and with material from another TV-station (CNN was used to compensate for lack of own coverage when needed), had never before been done. However, the managerial group perceived the situation as so severe that no other option was available if the station were to maintain its reputation as an important national source of news. The change of strategy challenged the capacity of the operational core to deal with crisis-induced change in terms of, for example, setting up an extra news desk as well as the long live current affairs program, which was fully operational around two hours after the second plane crashed into the twin towers. The process was facilitated by the high degree of centralization within the organization, as well as by the pre-planned composure of the managerial group, which was represented by all of the important organizational divisions that had to carry out the task according to the new strategy.

Organizational adaptability

On September 11, 2001, the organization managed tasks similar to those managed on an everyday basis. Since the strategy changed, however, top managers had to change the organization so it could cope with the new situation. The change in the broadcast schedule required organizational change to cope with the situation, and prompt leadership to make these changes come about.

Top managerial level: The decision to change its normal scheduling and to re-structure the organization to cope with the new demands was taken by the managerial group. The managerial body consisted of six people, including the CEO who was responsible for economic issues rather than operational news work. The group was well established. Most of its members had worked together and were used to making decisions in extraordinary situations ever since the start of the station ten years earlier. The managers described their own mandates as strong and capable of making unanimous decisions. Further, the group had clear divisions of responsibility as each member was responsible for its own division, whereas ultimate responsibility for the organization as a whole rested with the Program Director. His position was well anchored within the group and no

one questioned his mandate. The decision making structure was described as simple, with role descriptions clearly laid out in the emergency planning.

Economic responsibility was vested with the CEO. This could have been a potential for conflict between journalistic and commercial values. It should be noted, however, that the CEO had a long history as a journalist. Nevertheless, the magnitude of the event made journalistic and commercial interests come together and decisions were taken jointly. For instance the CEO decided for the first time in the history of the station to cancel all commercials on the day of the terrorist attacks. According to the CEO, sacrificing commercial interests at this critical time would earn the organization credibility and goodwill, which in turn would further benefit commercial interests in the long run.

Operational level: The decision taken by the Fully Adapting Organization to change its broadcast schedule was explained by references to organizational culture. Being a small station that from the very start had to compete with the comparatively resource-rich public broadcaster, the guiding principles had always been speed and flexibility. As expressed by the Head of News:

Since its very start, it has been part of the structure and the thinking of this organization. We have always tried to act fast when something happens, to be on the spot of the event and quickly broadcast extra news. We have far less resources than our competitor, but at least we should beat them in bloody simple foot work.

Besides streamlined decision making procedures and hierarchical structure, the inherent organizational flexibility was demonstrated by the weight given to planning for extraordinary events, which is an exception amongst news organizations that tend to ignore crisis planning (Quarantelli, 2002:5). Throughout the years the Program Director worked consistently with operating procedures and documentation connected to crisis planning. One important part of the planning efforts focused on creating conditions for speedy decision making by prioritizing clear and hierarchical decision making orders. According to the head of the Current Affairs desk, the goal had been to promote flexibility in decision making, rather than having a fixed response, as events are never identical to each other. 'Even if it was an identical event, our perceptions of that event when repeated would be different, which means that we have to handle it in a different way.' The quote underlines that the organizational response was a product of organizational resilience and proactive contingency planning that rested on the notion to expect the unexpected by planning for flexibility. This approach made the organization set up a functioning extra current affairs program as well as a new desk (working parallel to the ordinary news desk) in order to cope with the extended live broadcast.

The Semi-Adapting Organization

Strategic adaptability

The anthrax letters posed an opportunity for the organization to firmly place itself on the national map of agencies dealing with nuclear, biological and chemical (NBC) threats, which demanded a change of strategy. Placing the organization on the map was the head of the organization's outspoken ambition, which he clearly communicated on the very day that the first parcels arrived. In the auditorium at the main office he went before the staff emphasizing that the specimens had highest priority and that everything else should be put aside: 'This is the only time Sweden needs us, we cannot blame anything else.' From the beginning he did not perceive the threat as real and anticipated that it would only last a few days. The organization's aim was to show that there was no anthrax threat, and in addition to place the agency's NBC division on the national political map as an organization to count on.

The change in strategy meant that public image became of great importance. To foster the new relationship and to achieve its strategy of placing the organization on the map, media relations became essential and thereby a main task. The new strategy changed the core of the organizational tasks from a research and expert organization to a crisis exploitation organization (Boin et al, 2009; Brockner and Hayes James, 2008). On the operational level, however, the organization managed the tasks that were close to everyday business – conducting and analyzing specimens.

Organizational adaptability

In order for the organization to handle its new strategy, it had to adjust to the demands for communication under high pressure from the media and the public. Further, on the intraorganizational level the organization had to cope with managing incoming samples in a speedy and reliable manner.

Top managerial level: The new strategy placed high demands on the managerial level in terms of organizing work as well as communicating with the media. Early on Tuesday morning, 16 October, the group that had initiated matters the day before reassembled. Now the group was made permanent. It included the Head of Division, the four department heads, and a number of different specialists. There were no predetermined criteria for how the group should be composed. Members were chosen on the basis of their line experience and social competencies. With vast media pressure on the division, it became evident that some type of formal structure was required to cope with the onslaught. For this purpose, the Head of Division established a command center, organized special routines for meetings, and re-defined responsibilities and schedules.

The crisis management group was established *ad hoc*, which is often the case in crisis situations and not necessarily a problem (‘t Hart et al, 1993). However, *ad hoc* groups with undefined roles that lack clear mandates are likely to have weak positions (Moynihan, 2009). In this case, problems arose concerning the size of the executive group, since – according to the Head of Division – it became governed more by spontaneous needs than by strategic planning. At times the group consisted of fifteen people, all of whom belonged to the four originally defined functions. The group eventually expanded to include virtually everyone involved in managing the anthrax parcels. I see this as an expression of the division’s cultural mix, i.e. a bureaucratic line organization with strong decentralized tendencies based on departments mandated to make expert decisions and independently carry out work within their area of expertise. For such a group to function and to manage time effectively, a more ‘authoritarian’ leadership was required. As stressed by the Head of Division he was ‘not used to being in this type of leadership role.’ He described himself as fundamentally a ‘discussing and reflecting’ manager, but the specific situation demanded clear signals and direct orders – a task which he was not always up to.

One of the reasons why the Head of Division was reluctant to change his leadership style was that he thought the organizational members would not accept a sudden change of leadership practice. Nevertheless, he made some attempts to act in a somewhat more authoritarian fashion, which made him feel that he ‘went against [his] own natural leadership style, and instead started giving direct orders.’ Regardless of this, many declared afterwards that they would have been satisfied with stronger, more resolute leadership. Even though the operational core of the organization was better suited to deal with the situation, it also became affected since its work load increased, which demanded a new type of organization.

Operational level: There are several examples of how the new strategy led to problems of adaptation on the operational level. The organizational leadership lacked understanding of media relations. For example the Head of Division did not plan for media contacts the first day of the event. The absence of strategic media planning was clearly due to lack of previous experiences. However, the few people who had ample media experience reported that they saw the handwriting on the wall. The difficulties in keeping a strategic perspective, and avoiding getting caught up in operational details, is a common tendency in crisis management (‘t Hart et al, 1993; Boin et al, 2005). I argue that the expert dominated organizational culture aggravated this tendency since its day-to-day focus was not on operational issues. In an organization, which to a high degree consists of autonomous, well-defined subject-specialist groups whose principal activities are advisory, there is normally no clearly defined separation between strategic and operational functions – other than in the line functions.

Initially, the division's managers and experts offered virtual and total accessibility toward the media. Although the crisis management team regarded the media reports on the crisis as objective and impartial, the extreme openness led to a media onslaught that no one had anticipated. The media was given great freedom in terms of, for instance, access to expertise and even to the actual premises, which impeded the administrative and strategic expertise functions and thus hampered the organization as a whole. Once the media frenzy gained momentum, it was difficult to control.

That the organization had to communicate with the media as a new set of stakeholders entailed a change of strategy. Another important aspect of the crisis management was handling the actual samples. Even though the organization was used to testing samples, the normal working routines changed when it was decided to test not only for anthrax but also for nuclear and biological substances. This led to an expansion of the operational group and several staff members thought that the group had become too large. This in turn caused difficulties in information sharing and trust between group members. The reason for expanding the group from the leadership perspective was that they did not want to wear out the lab personnel. Still, it was argued that the problems instigated by the expanded group could have been avoided if the managerial group had made a clear timetable and personnel schedule. Instead, lab personnel had considerable freedom in determining their own working hours, which refers back to the democratic leadership style. Moreover, part of the problem was that the lab personnel had a hard time adapting to the time table. They were not used to working in shifts or more than regulated hours and they felt that the schedules intruded on their weekends. In short, the lab personnel found it hard to change their attitude towards the working hours and accordingly to work at the pace that was required by the situation. Staff members possessed the formal requirements for the given assignment, but lacked a flexible attitude in changing everyday routines, which was also required to cope with the situation.

The Non-Adapting Organization

Strategic adaptability

The overall strategy of the organization is to deliver reliable power to its clients, companies, authorities and the public. The cable fire and blackout challenged the strategy as it brought other crisis management aspects besides the technical challenge of restoring power to the fore. Demands from external stakeholders intervened with crisis decision making and led to a change in stakeholder relations. In order to engage in symbolic communication with clients, municipal stakeholders, the media and the public, public relations became essential and thereby a main crisis management task. The operational framing of the crisis,

based on technical engineering values, was an effect of the organizational culture. The framing did not pay necessary heed to the change in stakeholder relations. In sum, the utility 'only considered repairing', as stated by the Operation Manager.

Organizational adaptability

The changes in the external environment challenged the management mainly in terms of organizing work and communicating with the media and the public. The crisis challenged the utility to shift from a technical operational organization into an organization aimed at symbolic communication. The failure to adapt the strategy according to these changes had repercussions throughout the management of the crisis.

Top managerial level: The corporate management decided that the crisis should be managed as close to the event as possible, which placed the local management in the driver's seat. Media relations were to a large extent decentralized to the local operations department. The company's communication planning conveyed that the Operation Manager, besides being responsible for the technical operational dialogue with contractors, also became the key point of contact for the media. Hence, an operational manager handled the important issue of public communication. The added task overloaded the manager. Matters turned worse as communication back-up was delayed. It took a good eight hours for the Information Manager proper to join the crisis management group. The important organizational task of informing the public was not as well established as the technical operational task of restoring power. As the Regional Director put it: 'We didn't realize the extent of the pressure from media and clients.' Subsequently, the core of the management group supported the Operation Manager in dealing with the media. But the managers lacked sufficient understanding of the need for a strategic communication response. In the post-crisis evaluation, the utility complained that although they in general appreciated media interactions, 'it [the media] did not want to understand our needs to coordinate information to specific press conferences' (Stockholm Fire Department, 2001:17).

Further, the issue of societal communication and coordination was not accordingly dealt with by the utility. The issues were managed in the city coordination group set up to discuss strategic issues of city-wide coordination and crisis response. The Fire Chief and the City Manager led the group, and the utility was represented by an operations department engineer. The gap between organizational representatives and remaining city agencies regarding mandates and status led to problems, as the engineer had to anchor decisions with the strategic management. Thus the lack of decision making power vested in the

engineer led to delayed public decisions. Moreover, the operational problem perception of the utility was very different from that of the city. The utility seemed to lack understanding of the more symbolic, social and political dimensions of societal crisis management.

Operational level: As a public utility staffed mostly by technicians and engineers, the organization was permeated by a technical culture. This led the organization to apply narrowed attention fields that focused on the technical core aspects and failed to notice the complexity of the situation. The cable fire had cascading consequences beyond the technical effects, which were not noticed at the time. The utility provided technical operational leadership but fell short on the symbolic side. It focused most of its efforts on operational actions at the accident site. For instance, the company sent operations managers to the damage location and to the operations centers of large public clients, but it made no efforts to establish symbolic communication in the affected districts or among private companies. Local actors criticized the utility for not showing concrete and personal leadership in the districts, and local companies complained that they did not have direct contact with the power company (Stockholm Fire Department, 2001:18).

The case shows an organizational blurring of operational and strategic levels, illustrated by operational personnel also taking on more strategic assignments. This, in turn, was a result of the organizational design, which was based on problems at hand. When errors appeared at the Operations Center, operators acted according to reflex by making reconnections while failing in crisis mitigation. The errors were left unattended when they could have been mitigated, and operators visited the damage location on three occasions before they understood that a contingency was at hand. As all clients had power, operators framed the event as a technical error that they had solved. It seems the limited problem perception was a result of the technical culture, which led the organization to develop unjustified trust in the network system.

Most of the crisis response was based on technical framings. For instance, the organization's service team at the damage location entered into heated discussions with the Rescue Commander, which is unusual given the latter's nearly unconditional mandate specified in the Rescue Service Law. The utility's operators did not incorporate the fire department's uneasiness regarding the risks of fighting the fire, which in turn was of great importance for societal crisis mitigation. In addition, waste water was discharged into a nearby creek after the fire was extinguished, which led to risks of environmental damage. The Operation Manager admitted that they failed to consider environmental aspects: 'It was not an issue of environmental pollution for us [...]. Actually, the environmental aspect was not noticed at all.'

Post crisis, managers contemplated the company's technical culture and how it affected its crisis management and response. As the Vice President recalled: 'For us technicians who base our crisis management on the technical level – to repair damaged cables – issues of environment, information, and municipal coordination increasingly demand time and resources. Our crisis organization wasn't really dimensioned for that, which led us to bring in more people in the process.' The way organizational culture affected crisis management was thus understood as a key lesson learned by managers.

Conclusions

In this article I have constructed a typology that illustrates three potential outcomes of organizational strategic adaptability in crisis. In this concluding section I will discuss the mechanisms embedded within the organizations that can help explain the different outcomes in our three case studies. However, in order to establish general organizational features explaining organizational adaptability in crisis, additional research grounded in empirical data on organizational crisis response is required.

Why then did two of the organizations manage to adapt to crisis challenges by employing new strategies to deal with the incidents, while the third did not take on strategy changes in terms of stakeholder relations?

On a general level, the study demonstrates the importance of top managers for strategy change. Top managers are essential in this process since they hold the mandate to carry out temporary changes of strategy (Huber, Sutcliffe, Miller and Glick, 1993). Further, on a cognitive level, Clarke and Mackaness (2001) suggest that top managers, due to their experience, are able to rely on less complex cognitive maps than their peers further down in the organizational hierarchy, which is compensated for by intuition in terms of what is going on and what ought to be done. Due to these two factors, centralization of leadership structures becomes vital for organizations' ability to change stakeholder strategies in the midst of a crisis.

This explains the fact that the Non-Adapting Organization, as the only organization with a decentralized structure, did not manage to upgrade its operations to fit the public's expectations. On the other hand, we could see how the managerial group in the Fully Adapting Organization, with its hierarchical structure and strong leadership, was able to perceive the event as requiring a change of routine work and output. Further, the managerial group was composed of representatives in charge of key organizational departments, which meant that decisions taken at the highest level could quickly be disseminated throughout the organization. As a hybrid between the two, the Semi-Adapting Organization did centralize, but the managerial group was less well defined and

it expanded through the crisis management period. In doing so the group also weakened its mandate and effectiveness.

The next aspect in the framework is organizational ability to adapt to changes in strategy. Here we found the role of organizational culture to be pivotal. Starting with the Fully Adapting Organization, organizational responses were matched with strategy change, resulting in scheduling adjustments and the setting up of an ad hoc-organization to deal with these changes. Due to the organizational members, the prevailing organizational culture with its focus on flexibility explains both the strategy change and the ability to match strategy and operational response.

The Semi-Adapting Organization represents the middle ground, where managers changed the strategy in terms of stakeholders but did not, due to the democratic expert culture that dominated the organization and its response, manage to fully implement the change into the operational core of the organization. The organizational culture had a hampering effect on the management in so far as the top manager was uncomfortable in adjusting his academic leadership style towards what he perceived as an operationally focused, hierarchical crisis management style. In a similar manner, members of the operational core expressed a lack of clear guidelines, and at the same time had a hard time adjusting their day-to-day schedules to fit into a crisis response pattern. I therefore conclude that strategy change is not enough, unless it is followed by organizational and operational adaptation, which in this case was hampered by a democratic academic culture on the top managerial level and a bureaucratic culture on the operational level.

In a similar manner, the Non-Adapting Organization was hampered by a technical culture, which made it run the operation according to everyday routines unable to pick up the cues indicating the need for symbolic communication. The de-centralized organizational structure added to the problems. In line with how the organization was run on a day-to-day basis, the technical operational personnel continued to take on strategic assignments, which limited the problem perception to a technical issue ignoring symbolic communicative aspects.

Based on the case study findings, I conclude that changing stakeholder relations in crises require top managerial ability to adapt to the changes, as well as to adjust the everyday organizational culture to the changes made.

Chapter 5

Flexibility and rigidity in crisis response and learning at Swedish public organizations

This study argues that the relationship between crises, organizational crisis response and management, and learning has been understudied.¹ In an effort to broaden theoretical understandings of the relation between crisis and learning, this study analyses the crisis management and crisis learning of two public organizations during a sequence of two failures. A framework of rigidity versus flexibility in response is utilized in the analysis. The findings are discussed in relation to their implications for the connection between crisis and learning. The study concludes by raising four propositions for further research.

Introduction

The acute operational and technical aspects of coping with emergencies and crises – such as saving lives, protecting property and allocating resources – are important tasks in traditional emergency management. The public expects managers in all parts of society to fulfill these tasks in a correct and efficient manner. Equally important are the symbolic and communicative aspects of

1 Manuscript accepted for publication in *Public Management Review* (April 2009). Reprinted with permission by the Taylor & Francis Group.

politico-strategic crisis management. Public managers need to be seen as credible, responsible, accountable and ready to act in difficult situations if they are not to compromise their intraorganizational positions or their relations to the external environment, including other organizations, mass media, and the public. Today, crisis management and communication capacity – including the ability to make sense of and frame urgent problems, muster support for and justify actions to solve such problems, and to learn from these experiences – are part of general public management skills that are necessary in mediated political environments (Boin et al, 2005). To maintain or strengthen credibility and legitimacy in crises – understood here as situations that involve serious threats to the basic structures or the fundamental values and norms of an organization, which under time pressure and highly uncertain circumstances necessitates making crucial decisions (Rosenthal et al, 1989:10; cf. Stern and Sundelius, 2002; Smith, 2006a) – is vital for any public manager as it can make or break careers of public and political actors and organizations (Lewis, 2002). The ability to learn from crisis experiences is a key asset for building crisis management capacities (Stern, 1997).

So far, however, the relationship between the critical dimensions of crises, crisis management and learning has been underdeveloped in the literature (Boin et al, 2005:134; Nohrstedt, 2007:7; Carley and Harrald, 1997:317). One reason is that there is a substantial lack of empirical studies within the field of organizational learning (Dekker and Hansén, 2004:212; Fiol and Lyles, 1985; Lähteenmaki, Toivonen and Mattila, 2001; cf. Bapuji and Crossan, 2004:397). By drawing on findings from crisis management literature, literature on organizational learning, and from empirical case studies, this study intends to bridge the knowledge gap on the connection between crisis and learning – the latter understood here as purposeful efforts based on the experiences of organizational members working within a community of inquiry to create new understandings to act upon (Argyris and Schön, 1978; Dekker and Hansén, 2004; Boin et al, 2005). I apply two theoretical frameworks representing optimistic and pessimistic appraisals of how organizations respond to crises to a new set of crisis management and learning data. The analysis aims to establish how rigidity and flexibility in organizations might affect public organizations' crisis response and crisis learning, and how well the two theories may explain organizational outcomes in regard to crises in general.

The case under study covers two fires in the power company Birka Energi's local cable tunnel in northwestern Stockholm that led to a thirty-seven hour blackout in eight city districts in March 2001, and to a fifty-four hour blackout in the same area in May 2002. The power failures seriously affected businesses and public administration as well as the daily lives of residents, as some 50,000 people and 700 businesses employing another 30,000 were deprived of electric-

ity. In the Swedish national setting, the duration and the scope of the blackouts were without modern precedent (Aktuellt, 2001). The events posed similar challenges to two organizations: the city's command and control unit (consisting of the City Executive Office and the Fire Department), which represents a fully public organization, and Birka Energi which represents an organization that is more of a hybrid with a combined public and market orientation (cf. Joldersma and Winter, 2002). Two noteworthy aspects of the crises included the fact that both blackouts occurred within fourteen months of each other and that the organizations were managed to a large extent by the same individuals. The case is particularly interesting for dealing with crisis management responses and their implications for learning because it allows for contrasting organizational responses before and after recent crisis management experiences.

Design and method

Crisis researchers interested in public management have mostly dealt with individual incidents rather than reoccurring accidents, which is problematic from a learning perspective (Elliott and Smith, 2006:291). The present case analysis addresses this weak point in the literature. Due to the limitations of the study (foremost that it encompasses only two organizational responses to two organizational crisis events), the study should be understood as a 'heuristic case study' in the sense that it promotes identification of new hypotheses for further research rather than producing generalized knowledge (George and Bennett, 2004:75).

The study uses an ex-post reconstruction and process tracing method (George and McKeown, 1985:35ff; Stern, 1999; Stern and Sundelius, 2002) appropriate for examining complexity in detail (George and Bennett, 2004). Moreover, and keeping in line with the aim of the study, 'process-tracing can be particularly effective at examining the kinds of detailed sequences in learning and diffusion processes' (George and Bennett, 2004:33). The process tracing was conducted by first pinpointing the stimuli that the actors acted upon. The organizational crisis management and learning processes were reconstructed into crisis narratives. Narratives were then dissected into occasions for critical decision making, each of which were closely examined (cf. Stern, 1999). This approach helps the researcher to pinpoint periods in time when organizational experience alters behavior or knowledge.

Case reconstructions were based on reviews of original sources, incident investigations, media sources, and twenty-eight in-depth interviews with twenty-one key crisis management players from the city's command and control unit and Birka Energi. Rescue commanders, district directors from the most affected districts (Kista and Rinkeby), the Fire Chief, the City Manager, the

Negotiations Manager, and the Commissioner of Finance were among the interviewees representing the former, while representatives of Birka's crisis group (such as the Vice President, Regional Director, and the Operation Manager) as well as first responders (such as the Duty Engineer and the Operation Engineer) were among those interviewed from the latter.² Interviews were semi-structured and based on broad open-ended and chronological questions aimed at reconstructing the events. Interviews were conducted between September 2001 and December 2002, apart from a follow up interview in May 2006. Interviews took between one and two hours and were tape recorded and transcribed.

Once detailed understanding of the critical occasions for decisions was achieved, the case was reconstructed according to three chronological cuts into the events: crisis lead up, crisis management proper, and crisis aftermath. The analysis section focuses on the within-case cases of Birka Energi and the city's command and control unit during the 2001 and 2002 Stockholm blackouts.

The study is structured as follows: After the presentation of the case and case context, the analytical framework of threat rigidity versus crisis flexibility is outlined. The case is then discussed in accordance with the chronological cuts. Here, the 2001 events are used as a benchmark for the 2002 events. Both events are then analyzed through the theoretical lenses of rigidity and flexibility in order to assess and explain crisis management and crisis-induced learning in public organizations.

Case context and interorganizational relations

The affected districts in northwestern Stockholm consist of business and residential areas. The business areas are prosperous and known as the hub of Sweden's high-tech industry. The residential areas are multi-cultural and socio-economically deprived, with a relatively high rate of unemployment (Axelsson, 2001).

Lack of redundancy was the underlying vulnerability of the local power distribution system. Backup cables lay alongside main cables in the only tunnel feeding the area. The second event was a failure of quality control and maintenance. Temporary repairs during the first crisis were not monitored and deficient repairs were overlooked (Göransson, 2002:4). This tightly coupled event led to two long lasting blackouts.

² Representatives of local businesses such as Ericsson, national newspaper printers, and the local business association were also interviewed to gain the business perspective.

Deregulation and privatization

The events took place in the midst of privatization reform. Until the mid 1990s Swedish energy companies were municipal companies accountable to the citizens. The 1996 electricity reform deregulated the national electricity market and made the production and retailing of electricity competitive, while transfer of power by grids remained government controlled (Government Report, 2001a). Mergers and acquisitions over the years decreased the number of power companies (Government Report, 2002). In the local context, the 1998-2002 center-right coalition in City Hall was relatively fierce in carrying out large scale privatization, with profound effects on the city's management (Tottmar, 2000). There are no systematic national overviews of how deregulation has affected the power system, but official concerns have been raised on deteriorating power system maintenance, power supply security, and the high number of blackouts following deregulation (Government Report, 2001b:5).

The public utility Birka Energi was established in 1998 when the old local public power company Stockholm Energi merged with another local power company owned by the Finnish energy company Fortum. In 2001 Birka was owned in part by the city and in part by Fortum. The company consisted of seven subsidiaries and employed some 3,200 people. It was Sweden's largest energy company in terms of the number of customers.

The 1999 city of Stockholm financial plan stated that the city would sell off its interests in Birka. The privatization bill passed the County Council on 17 December 2001 (Tottmar, 2001) and the EU Commission approved Fortum's acquisition in January 2002. Hence, at the time of the 2001 blackout Birka was still very much a public company, while during the 2002 blackout Fortum owned 70.7 per cent (Braconier, 2002). However, the acquisition was not carried out fully and the Heating Division, which also owned the cable tunnels, remained partly owned by the city. As an official sign of the complete merger, the company name Birka Energi was discontinued as of 2 September 2002 (Birka Press release, 2002).

City crisis planning

In the event of a crisis in Stockholm, the city's command and control unit is managed by Stockholm Fire Department and the City Executive Office. The City Executive Office is led by a politically appointed city manager. It is the city's central administrating body operating under the Municipal Board. The city's organizational responsibility in a crisis was outlined in the relatively new plan 'Management and coordination during severe societal strains', which was established in the run up to the millennium shift (Y2K). The Stockholm Fire

Department, the City Executive Office, and Birka played important roles in Y2K planning. The City Executive Office overhauled city planning and initiated the 'Y2K project' in order to coordinate the city's preparations and exchange of information. Meanwhile City Hall commissioned the Stockholm Fire Department to set up a plan for the city's crisis management (Jidling, 2003). The Fire and Rescue Board approved the mandate in March 1999 (City Executive Board Protocol, 1999). The protocol assigned the Fire Department and the City Executive Office as the coordinating body for the city's crisis management efforts, mandated to assemble the necessary actors to coordination meetings (Stockholm Fire Department, 2001). The Y2K was the only time that the city coordination group had gathered prior to the blackouts.

Contingency planning in the late 1990s created a platform for crisis cooperation between the City Executive Office, the Fire Department, Birka and other city agencies. Relations were hierarchical. The City Executive Office and the City Manager were in charge as strategic managers who authorized and legitimized the crisis command. The Fire Department and the Fire Chief carried out the operational coordination (Kleist, 2001; Hallander, 2002; Andersson, 2001). Interorganizational relations changed somewhat between the blackouts as Birka was becoming a private internationally owned company, and thus no longer subject to political scrutiny. According to the City Manager, the city could act tougher as a public representative in 2002, as it had less financial interests in Birka (Kleist, 2003). Public influence on Birka after the sale was confined to the city owning half of the heating distribution company and control of the city's planning monopoly. The latter function approves plans of physical planning of the company's facilities (Cederschiöld, 2003).

Analytical framework

Previous research tells us that managers tend to act in two basic ways in response to crises. They either rely upon familiar norms and templates and try to fit ambiguous events into pre-existing and familiar cognitive frames, or they draw from previously unknown resources and design ad hoc strategies to manage the events at hand (Roux-Dufort and Vidaillet, 2003:87; Weick, 1993; Staw et al, 1981). That managers respond rigidly or with creative and flexible improvisation has implications for crisis management in public organizations, not least since the public sector traditionally is described as resistant to change (Common, 2004). Public organizations are also characterized by attributes understood as contrary to flexibility. For instance their commissioned work is limited by incremental budgeting, and bureaucracy has a key role in implementing organizational output (Osborne, 2006:378). It would thus be likely to expect from public organizations difficulties in providing flexible crisis responses. However,

public organizations increasingly deal with rapidly changing environments, and this has enhanced demands on effective organizational learning (Common, 2004:35). Public service organizations are dependent on external resources, government policies, and multiple stakeholders. They deal with vague public goals and different stakeholders' interests (Joldersma and Winter, 2002:88). The environment that public organizations work in is complex and ambiguous. Organizational learning, including flexibility, then becomes a necessary capacity for thriving and for surviving (Nutt, 1993). Given the inherent ambiguity in the public management context, managers need to practice managing styles with a considerable level of flexibility. Prior research, however, shows that managers are least flexible during situations of high threat and low slack (Sharfman and Dean, 1993:191). Crisis contexts are thus understood as detrimental to managerial flexibility.

Below I delve deeper into the concepts of rigidity and flexibility in relation to public organizational crisis response. Moreover, I set the stage for the analysis by constructing a framework for analyzing crisis response and crisis learning by operationalizing the key concepts of the study.

The threat rigidity hypothesis

The threat-rigidity hypothesis (TRH), formulated by Staw et al (1981), is based on experimental research on corporate responses to threats in the environment. The TRH shows a restriction in information processing and constriction of control under threat conditions, leading to rigidity in response. Information processing is restricted as attention fields are narrowed, information codes simplified and the number of information channels reduced (Staw et al, 1981:501-502). For individual decision makers, 'restriction in information processing takes the form of reliance upon internal hypotheses and prior expectations and attention to dominant or central cues' (Staw et al, 1981:506). Thus managerial abilities to process information and make reasoned choices are reduced during crises due to analogical reasoning (cf. Khong, 1992). According to the hypothesis, stressful situations lead decision makers to cut themselves off when information is most critical (Seeger et al, 2003:9). Further, there is a constriction in control as power and influence become centralized. These two features lead to reliance on dominant modes of thought, learned routines and reflexes, which leads to a rigid response (Staw et al, 1981:502-3). This does not necessarily mean that the pattern is dysfunctional. The dominant response may reduce threats, if the task or environment has not changed drastically. In an unstable and radically changing environment, however, a rigid response will most likely be inadequate (Staw et al, 1981; Stern and Sundelius, 1997:35). As long as decision makers refrain from reflecting on their lessons and their environment,

lessons will not be appropriate as 'prior, well-learned responses are inappropriate under new conditions' (Staw et al, 1981:502). The cognitive, reflecting dimensions of learning need to be part of the response if it is to be functional.

The TRH has implications for the connection between crisis and learning. According to Stern and Sundelius (1997:34) the TRH proposes that innovative and vigilant decision making and learning are inhibited during crises. Boin et al (2005:118) even go so far as to claim that the TRH 'predicts that the conditions of crisis make it hard if not impossible to learn.'

This rather pessimistic view on the organizational learning capacities in response to crises can be summed up as follows: When organizations are subjected to crises they respond rigidly, detached and inflexibly, with an inability to alter and change directions as a result of decision makers':

- R1) restrictions in information processing and reduction of information channels;
- R2) reliance on analogical reasoning and learned routines; and
- R3) reliance on centralization by concentrating influence.

Flexibility in crisis management

The TRH has been critiqued for overlooking the possibility of flexible responses to organizational crises. In an effort to complement the TRH, Barnett and Pratt (2000) used case studies of corporate crises to show how managers may use threat to generate flexibility and learning in response to risk and crisis. Flexibility is generally recognized as a necessary capacity for organizations to adapt to a changing environment (e.g. Senge, 1990; Reason, 1997; Sharfman and Dean, 1993). It is also seen as a crucial ingredient for crisis management, learning and resilience (Boin and Lagadec, 2000; Roux-Dufort, 2008). Borodzics for instance argues that 'flexibility [...] may be key to facilitating crisis management' (Borodzics, 2004:419). Moreover, he links flexibility to creativity when he concludes, based on research on crisis management executive trainings, that: 'in every single case of a successfully managed crisis event, the positive outcome could be directly linked to creative or flexible rule breaking by key decision makers in the response' (Borodzics, 2004:418). Strategic management researchers have also linked flexibility to improvisation and creativity (Ford and Gioia, 2000:725). Flexible processes are in this sense understood as a requirement for new ideas, assumptions and choices that organizations need for adaptation and change. According to this view flexible choices are unusual, innovative or at least different from the norm (Sharfman and Dean, 1993; Nutt, 1993).

Although crisis management research promotes flexibility as critical for successful response, studies rarely go into detail about what flexibility actually entails. Despite noted objections against studying flexibility as a coherent or systematic phenomenon made up of a number of specific criteria (Martinez Lucio, Noon and Jenkins, 2000:295), I find a disaggregation necessary to operationalize the concept. I draw on Sharfman and Dean (1993:194) who disaggregate the concept into openness and recursiveness. By the former they refer to openness to new ideas, information sources and roles and considering wide varieties of alternatives. By the latter they mean self reflecting. This study understands openness and recursiveness as two sides of the same coin.

Accordingly, the first criterion of a flexible response to a crisis is to produce an open, non-defensive and critical reflection on the pros and cons of organizational performance. In the crisis aftermath these reflections often take the form of post-mortem investigations (t Hart, forthcoming; Dodgson, 1993; Roth and Kleiner, 1998; Jones, 2001). Second, flexible responses rely on openness to new and varying sources of information, rather than learned routines and analogical reasoning (Sharfman and Dean, 1993; Nutt, 1993). Third, flexibility is linked to creativity and improvisation as it presupposes that the outcome of the act in question is judged as novel and valuable (Ford and Gioia, 2000: 714). Flexible responses are thus understood as results of urgent needs for creative improvisation, and thus going beyond standard operating procedures and policies to address short-term emergencies (Weick, 1993; Roux-Dufort and Vidaillet, 2003).

To summarize: this rather optimistic view on organizational learning capacities in response to crises states that an organization may adopt a flexible approach to crisis if it:

- F1) supports open, critical and reflective inquiry and investigation;
- F2) is open to new and varied sources of information;
- F3) has the ability to improvise and produce novel approaches.

Crisis flexibility and threat rigidity in practice

Findings from the crisis lead-up

Both organizations studied in the present analysis initially displayed a relatively detached response to the first crisis. In the early hours of 11 March 2001 initial indications of a technical failure reached Birka's control room. Coupled with an out of order fire alarm, operators interpreted the failure as minor and responded by making routine reconnections (Hornyak, 2001). In Birka's case the response

possibly derived from the power company's perception that a major system failure was improbable. The illusions of infallibility were possibly a product of the lack of experience of large-scale cable fires and urban blackouts among Birka staff. Illusions were embodied in an overly optimistic public statement, based on routine estimations rather than an analysis of the situation at hand, which declared that the system would be restored by that evening (Birka press release, 2001; Karlsson, 2001). This, in turn, led local stakeholders, including the city's command and control unit, to underestimate the severity of the situation. When Birka's control room operator ultimately made the crucial decision to call the fire department, the case data shows an organization taking its first steps to investigation and response.

Lack of prior crisis management experience within the city's crisis coordinating and managing organizations led to a time-consuming gap between the phases of operational rescue service and strategic coordinating (Hallander, 2002; Stockholm Fire Department, 2001). The fire department's response at this stage was rigid. Though information about the threat and the problem was evident, they responded detachedly from the events, discussing the problems like they would not affect the organization (Svensson, 2001; Hallander, 2002). With parts of the northwestern suburbs without power, senior managers at the fire department realized that it was an extraordinary situation. Nonetheless, protocol and routine led the organization to dismantle its increased organizational emergency preparedness as soon as the fire was out because the blackout was not considered a bona fide rescue service operation. The fire department acted according to existing regulations when it pulled back. Had the fire department kept more of a strategic outlook on the events by careful monitoring, less time might have been lost in the initial phase of the city's crisis response.

Birka's initial flawed prognosis was the main reason for the tardy response. The diagnosis made it difficult for operators to understand the state of the operation. The process that ended in the first prognosis was an example of deliberations characterized by reliance on simplified information codes and narrowed attention fields. As the Operation Manager acknowledged, the stressful circumstances compelled the utility managers to release the public statement despite uncertainties. Since damage to high power cables was unusual, Birka's staff relied on prior expectations and internal hypotheses stating that high power cables would not be damaged. The crucial decision regarding the prognosis was limited to a few operational key functions, which in effect restricted the information channels.

In 2002, when indications that the tunnel was again the scene of a fire reached Birka, a similar response was initially generated. Despite the experiences of 2001, Birka operators responded according to routine and reliance upon the internal hypothesis that the system was reliable. Again operators interpreted

events as minor and mundane. Attention to the analogy of the fire fourteen months earlier was lingering. The Duty Engineer even admitted after receiving the first error reports that they had the prior fire in mind, but 'didn't really want to acknowledge it at the time.' Operators informed the Operation Manager and waited for more information, although the Duty Engineer had formally unlimited authority to deal with network failures. Initially the same routines that Birka used in 2001 were followed and operational actors needed more information to understand the nature of the problem. Some suspicion that the problem could be serious was admittedly on operators' minds as they upscaled decision making within the organizational hierarchy at an early stage before there was confirmed information about the events. Eventually, as incoming signals were interpreted as being analogous to the 2001 crisis, responses based on learned routines became appropriate strategies since the situation was virtually identical to the one in 2001.

Birka operators called the Fire Department seven minutes after the initial alarm. When called upon, the city's command and control unit acted with more vigilance compared to 2001. The city's command and control unit based most of its perceptions in 2002 on analogies from 2001. While the operational rescue service mission was being executed, the City Manager and Fire Chief initiated staff work for managing the social consequences of the blackout and they again made plans for the city's coordinated response. The command basically repeated its response based on the Y2K structure. The main difference was that the response came earlier in 2002.

Findings from the crisis management proper

The real scope of the 2001 accident came to the attention of Birka's managers after a visual inspection in the afternoon, eight hours into the blackout. They promptly released a new prognosis stating that power would be restored at 22:00 on 13 March. Now Birka launched its emergency preparedness plan and established a crisis management group. In addition, their command center contacted media and various public players within minutes. However, the potentially most crucial player responsible for coordinating the public response – the fire department – was not contacted, which delayed societal crisis management proper.

The city's alarm chain was formed ad hoc as the fire department's information manager haphazardly acknowledged the contingency and informed higher management (Stockholm Fire Department, 2001:19). Regulations limited the choice of actions that the fire department could take, although the crisis was indeed an extraordinary event. In accordance with the plan 'Management and coordination during severe societal strain', the Fire Chief consulted the City

Manager about establishing a coordination group. Without formal checklists or instructions for the mission, the Fire Chief in an act of creativity, turned to the minutes of the 1999 City Executive Board meeting protocol that formed the basis for the Fire and Rescue Board's decision to give the mission to the fire department (Hallander, 2002). The decision to establish the group bordered on improvisation, as there were no clear guidelines on how or when the group should be established.

Most participants in the city's coordination had positive impressions of the meetings (Stockholm Fire Department, 2001:18), although gaps in opinion between center and field on issues regarding the framing of events and the amount of resources required did lead to open, critical discussions and even to minor conflicts (as mentioned by the District Director of Kista and the City Manager).

During the second blackout things were a bit easier. In the words of the City Manager, 'The second time we had the answers so we did exactly as the last time. I can't say we changed anything either. On the contrary, it ran more smoothly the second time. I think everyone felt more at ease.' Faced with crisis reoccurrence, city officials responded according to the TRH. The basic structure of the crisis management response was repeated. The city gathered public decision makers for coordination meetings according to the same procedure as in 2001. As the City Manager puts it, 'We gathered the whole crew just like last time. We had the routines all set. We had done this before. Repetition is the mother of learning so we just did it the same way.' However, adjustments to improve responses were actually made on some accounts. For example new functions and organizations were invited to join the group. Thus there was not a blind adaptation, but rather a reflective inquiry into how the prior response could be improved.

In terms of Birka's response in 2001, the strategic information management responded rigidly to the threats. The company had a limited outlook on the crisis communication aspects by only providing technical operational information and neglecting the symbolic aspects of crisis management. On the operational side of crisis mitigation, however, Birka engineers and contracted expertise used reflective and innovative investigation to find a temporary way to speed up crisis termination. On the one hand, the temporary fix-decision can be understood as crisis flexibility. The improvised way of repairing shows an organization with an ability to alter and test creative ideas. However, it also shows an organization with narrowed attention fields and restrictions in information gathering, as operators working in the tunnel were not instructed to take necessary precautions and thus were subjected to health risks (Swedish Agency for Civil Emergency Planning Newsletter, 2001). Moreover, Birka deviated from system safety procedures by installing a cable that did not meet standard criteria. The

temporary repairs were critical for crisis de-escalation, but the improvised solution, combined with lapsed quality control, would prove costly a year later.

For those who experienced the blackout fourteen months earlier, the 2001 crisis event became a leading analogy influencing behavior in 2002. As Birka's Duty Engineer put it, 'I understood that it was of the same scope as the last time. I understood that it was serious since the course of events happened so fast. Within an hour everything went black.' Operational actors did their best to restore power. They suggested an overhead line between Birka's power station and the national grid. The idea was triggered by the first blackout when the Operation Manager, caught up in worst case deliberations, asked what would have happened if the blackout had lasted even longer. The creative solution kept the blackout from spilling over into a third day. The power was successfully restored after 54 hours as a result of the provisional power line. The decision to prioritize the landline project had a distinct flexibility aspect. The important crisis mitigation effort was initiated by an inquiry into organizational risks and vulnerabilities. It entailed improvisation and going beyond organizational routines. This example of learning deliberations led to one of the most important crisis mitigating decisions during the 2002 crisis.

Lessons from 2001 also led to more systematic information and credibility defending approaches at Birka. The Vice President described the situation as 'a disaster, not only because it happened, but it was a disaster for our credibility too.' Birka's strategic decision makers understood that the greatest challenge would not be to restore power, but rather to manage mass media pressure and to restore credibility. In 2002 information management was based on managerial inquiries into organizational shortcomings in the event of a crisis and optional ways to overcome these shortcomings by open reflections on organizational culture. Furthermore, urgent improvisation took place. Rather than increasing control and centralizing information management, Birka expanded the sphere of influence by contracting external expertise in information management as well as in investigation issues. On the morning of the blackout's second day, the Regional Director and the Vice President called in a private PR company to be present in the central crisis decision making unit in an effort to strengthen the crisis communication group with media communication experts.

Key managers were also aware of organizational shortcomings characterized by the potential cover-up of operational mistakes. Promoting an external investigation to examine the causes of the accident was a way to achieve a candid assessment of organizational performance. The hasty repairs and absent quality control was a result of organizational deficiencies and, as such, were regarded as causes of the 2002 crisis. Moreover, strategic managers in this case indicated that in-house investigations were not optimal for identifying the real causes. The decision to commission an external inquiry can also be seen as a way to take

decisive action to prevent crisis reoccurrence. The Vice President stressed that it was grounded in the quest to, in earnest, find out what had happened. The external investigation was an important part of Birka's quest to redeem public faith and return to normalcy. The idea to commission an external investigation into the causes of the fire also led to general lessons on safety and the implementations of guidelines for cable repair supervision.

Findings from the crisis aftermath

The makeshift repairs in 2001 laid the groundwork for crisis reoccurrence in 2002. The tunnel was not sufficiently decontaminated after the fire, which resulted in 'serious flaws in a number of cable joints' (Göransson, 2002:4). In addition, there was no subsequent quality control of the repairs (Branger, 2002; Karlsson, 2002). As Birka's Operations Engineer explained, 'They were only provisional and they had to be overhauled. We planned to do it, but it was not carried out and sufficient resources were not allocated.' In the words of the Operation Manager, 'We probably thought that this would not happen again. Therefore everything that one, in hindsight, might think should have happened, probably did not happen.' Temporary repairs thus became permanent, which increased system vulnerability and the risk of further failures.

Issues of compensation and investigation dominated both aftermaths. Regarding the former issue, Birka declared that it would follow regulations and compensate citizens but not businesses for financial losses incurred due to power loss. The issue of compensation fuelled conflicts between Birka and local clients that lasted long after the blackouts. Efficient and legitimate management of compensation claims was an important part of crisis termination. Birka's response in 2001 can be seen as rigidly sticking to regulations. Rather than actively finding alternative solutions to the problem, the company relied on existing strategies and guidelines, thus losing local credibility and delaying crisis termination.

With the discussions on compensation from the 2001 crisis in mind, it was obvious for Birka's management in 2002 that the issue would need to be addressed again to ensure that more credibility was not lost. Nonetheless, the organization did not produce a novel strategy to deal with the issue. Birka followed the same guidelines and compensated citizens but not companies. Media pressure and local discontent of increasingly organized critics mounted on the company (Engström, 2002; Eriksson, 2002). When the issue did not disappear from the agendas of the victims, local politicians or the media, Birka's managers found themselves in a reactive spiral forcing them to adapt. To save credibility, the management group stepped back from the first decision and compensated businesses for damages caused by the blackout. During this episode,

Birka responded rigidly to the threat that the compensation demands entailed. The company responded according to its existing strategies as it launched the strategy to follow regulations. Had Birka changed its position regarding compensation earlier, the conflict might not have been as infected or protracted. Furthermore, reactive adaptation did not effectively calm the complaints.

The crisis aftermath analysis also points to the culture of investigation at Birka and a relatively outspoken reflection on organizational culture and performance. The fact that the technical in-house investigation – available only to the Operations Division in 2001 – was followed up by a more comprehensive external investigation in 2002 indicates a need to go beyond existing policies. The intention this time to really find out what went wrong can be interpreted as a decisive action to prevent crisis reoccurrence. Regarding lessons of the operational crisis management, decision makers at Birka did focus on some system shortcomings when they inquired into the lessons of the 2001 blackout. However, they seemed to have been affected by an opportunistic attitude that led to simple improvements of technical flaws. The actual threat that a fire posed to the vulnerable system was not sufficiently considered (Göransson, 2002:8). In essence, non-decisions regarding quality control of the temporary fix were instrumental in incubating crisis reoccurrence. In the 2001 crisis aftermath, the organization failed in the process of addressing underlying problems and in monitoring and maintaining crisis-induced lessons. The crisis event crowded out other significant events, processes and projects. Similarly, the potential for crisis-induced learning seems to have been held back by the demands, tasks and strains that commonly overload an agenda and distract organizational everyday life.

The second time around Birka made more of an effort to implement changes in the crisis aftermath. Cables in the tunnel were separated and joints were protected by fire protection equipment and increased surveillance. The Vice President commented on the single-loop lessons as such: ‘In a very short term they did all of this that they should have done directly after the first blackout.’ Although suggestions presented after the blackouts were mostly single-loop learning, statements from Birka’s managers indicated that a more sophisticated learning process was initiated. As the Regional Director puts it, ‘We will have to make an overview of our risk perception and network design, that is a strategic, long term reflection of how we should operate. [...] But also we have to look more strategically over our entire network philosophy.’ To make learning take root in the organization, preparedness plans were updated with organizational lessons. In addition, more exercises were pledged. In other words, there are signs of a double-loop learning process (cf. Argyris and Schön, 1978; 1996). According to the Vice President, Birka ‘completely changed its attitude to cable fires’ as a result of the events. Risk perceptions regarding cable fires were inten-

sified. Previously the company regarded cable fires as low in risk and consequence. After the events, however, the work became guided by a different philosophy. The attitude to cable fires and cables in tunnels changed and awareness increased, according to the Vice President:

Now we've raised the level. We've said that every cable fire is a presumptive disaster. Then you get a completely new perspective. First of all we simply cannot allow a cable fire to occur, and if it does occur, we have to have much more sophisticated indication and detection techniques because a fire spreads fast. [...] And now we're seeing... on the one hand a rather radical change... where we can change the design we are doing so. We're building a completely new feeding route. Then they're going through the entire cable network and they're increasing the level of preparedness. [...] All of this learning goes into the organization in a very distinct way. They're taking this seriously. You know what they say: One time is nothing, two times is a habit. But what about a third time? It cannot happen!

Understanding that the company's reputation would be deeply tarnished by another cable fire set the stage for questioning existing assumptions, routines and procedures.

The city initiated purposeful learning processes already in the 2001 crisis aftermath. The City Manager instructed the Fire Department to evaluate the events and especially the city's command and information efforts. The city's command and control unit was satisfied with the public crisis coordination, but it also, rather self-critically, acknowledged that the outcome rested on plain luck rather than planning or routines (Stockholm Fire Department, 2001: 18). The candid investigation, which included a reference group of several risk and crisis experts, was of special importance as the city's rescue service plan was being redrafted. After the report, public organizations involved in the management of the blackout were invited to a 'day of learning' conference pertaining to the events. The Commissioner of Finance was keynote speaker and he explicitly commissioned the Fire Department and City Hall to review the city's crisis command and coordination capacities. In a follow-up statutory meeting a formal project team was institutionalized at the Fire Department as the Review Project. Hence, commissioned investigations, seminars and learning programs turned the spotlight on municipal crisis management mandates and roles.

The second time, the city managed the crisis aftermath in much the same way as the year before. The city's command and control unit leaned strongly on analogies from 2001 and relied on strategies launched in the 2001 blackout aftermath. For example, the investigation after the 2002 crisis was, at least in terms of methodology and strategy, a virtual replica of the 2001 investigation, with little effort put into improving the models used. As the blackouts took

place in the midst of privatization reforms, the city also had some credibility on the line. After the second event the city made more of an effort to show accountability. In the 2002 blackout aftermath, Birka and the city launched a joint learning process. City Hall demanded a program declaration from Birka on how the power company would organize its network to prevent a similar event (Kleist, 2003; Gustafsson, 2002). Birka's Regional Director presented the company's plans in a series of meetings with the City Manager. The Review Project continued its work throughout the second crisis. The project was concluded in February 2004, and after several discussions it was accepted by City Hall. Planning the implementation of the program followed suit and in the spring of 2008 training programs were launched.

Conclusions

The flexibility/rigidity analysis of the Stockholm blackouts is summarized in the table below.

Table 3: Crisis rigidity and flexibility in different phases of the crisis response

	Crisis lead-up	CM proper	Crisis aftermath
Rigid response	<p>Birka 2001</p> <ul style="list-style-type: none"> • Failures interpreted as minor (R1) • Routine reconnection response (R2) • Routine estimation behind flawed prognosis (R2; R3) • Reliance on internal hypotheses (no damaged high power cables) (R2) • Decisions centralized to few operational functions (R3) <p>Birka 2002</p> <ul style="list-style-type: none"> • Routine response relied on system reliability (R2) • Failures interpreted as minor (R1) • Shut out 2001 analogies (R1) • Stalled sense-making due to lack of information (R1) • Upscaled decisionmaking (R3) • Crisis analogies and routine learned response (R2) <p>City 2001</p> <ul style="list-style-type: none"> • Severity not recognized (R1) • Detached from the event discussions (R2) • Dismantled staff readiness (R2) • Operational/strategic response gap (R2) <p>City 2002</p> <ul style="list-style-type: none"> • Repeated structure of 2001 (R2) 	<p>Birka 2001</p> <ul style="list-style-type: none"> • Visual inspection required to understand (R2) • Forgot to inform city (R1) • Second flawed prognosis (R1) • No symbolic/empathic communication/leadership (R2) • Risk averse regarding system and worker safety (R1) <p>City 2002</p> <ul style="list-style-type: none"> • Repeated (but early) response (R2) 	<p>Birka 2001</p> <ul style="list-style-type: none"> • Flawed repairs (R1) • No quality control or supervision (R2) • Only simple improvement of flaws (R1) • Protracted compensation conflicts by leaning on guidelines (R2) <p>Birka 2002</p> <ul style="list-style-type: none"> • Repeat compensation policy (R1; R2; R3) • Forced to adapt and compensate businesses (R2;R3) <p>City 2002</p> <ul style="list-style-type: none"> • Learned on analogies from 2001 (R2) • Repeat of investigation (R2)
Flexible response	<p>City 2002</p> <ul style="list-style-type: none"> • Did not dismantle staff readiness (F2) • Initiated strategic staff work early (F1) 	<p>Birka 2001</p> <ul style="list-style-type: none"> • Problem framed—rapid response (F3) • Improvised quick fix (F3) <p>Birka 2002</p> <ul style="list-style-type: none"> • Creative learning approach: Overhead line project (F1;F3) • Inquiries into org shortcomings: Private PR company; external investigator (F1;F2;F3) <p>City 2001</p> <ul style="list-style-type: none"> • Ad hoc start by information manager (F2) • Ad hoc response and improvised group gathering (F3) • Open and critical discussions (F1) <p>City 2002</p> <ul style="list-style-type: none"> • Reflective adjustments—New functions and organizations invited (F1) 	<p>Birka 2002</p> <ul style="list-style-type: none"> • Rules of thumb from investigation (F1) • Decisive action to prevent reoccurrence (F1) • New risk perception on cable fires (F1;F3) <p>City 2001</p> <ul style="list-style-type: none"> • Self critical novel investigation (F1) • Launched learning programs and conference (F1;F3) • Learning fed into Review Project (F1) <p>City 2002</p> <ul style="list-style-type: none"> • More supervision and accountability (F3)

The aggregated results of the analysis indicate that public organizations, especially when they are not experienced crisis responders, tend to act rigidly in response to threats, warnings and signals in the crisis lead-up phase. In addition, the organizational responses analyzed in this study show rigid reactions the second time around as well, despite that crisis management knowledge was increased by prior experiences. The second blackout came as an unwelcome surprise, and again learning was difficult for the organizational actors because of the belief that the initial problem had been solved. This has implications for crisis and learning theory because it shows that public organizations even after recently experiencing a crisis may also have difficulties in making sense of warning signals in the crisis lead-up phase. This leads us to the first proposition:

Proposition 1: Public organizations with crisis management experience, as well as public organizations without crisis management experience, are likely to act rigidly in response to early warnings, signals and threats.

When signals turned to noise and the onset of the second crisis was evident, the organizations again responded rigidly. This time, however, the response was not dysfunctional. On the contrary, because there were no radical differences between the two events, a response based on analogies from 2001 reduced the threat and mitigated the crisis in 2002. The analysis also suggests that a great deal of crisis-induced creativity and improvisation is produced in the crisis management-proper phase. Operational crisis responses based on organizational inquiry, improvisation and creativity were evident at both organizations during both crisis episodes. The organizations in essence lacked prior experience of societal crisis management, apart from Y2K when nothing out of the ordinary happened. Thus creative and new ideas took on the form of improvisation during the 2001 crisis management-proper, while similar activities in 2002 were based on prior crisis experience and consequently became crisis-induced learning. The case then shows that creative improvisation and organizational learning processes are not necessarily less likely to occur in the operational crisis management phase illustrated by time pressure and clashing values at stake, than in the aftermath phase characterized by relative tranquility and time for reflection. This leads us to the second proposition:

Proposition 2: Public organizations with recent crisis management experience are as likely to produce creativity and learning in the acute phase crisis response as in the crisis aftermath.

Results from the analysis of the crisis aftermath are more ambiguous. Indications suggest rigidity in the learning patterns in the crisis aftermath. To a large extent

these were based on the power company's responses to operational maintenance and the compensation issue, which the second time around can be described as reactive at best. Nonetheless, the case also demonstrates distinct patterns of organizational learning in at least four critical episodes: first from the city when launching an unusual public seminar debate on the first blackout; second, when the city subsequently merged the crisis management evaluation into comprehensive programs dealing with the city's preparedness and crisis management capacities; third the interorganizational discussions, triggered by City Hall, on Birka's strategies for dealing with the two incidents; and lastly the double-loop learning by Birka in the form of unbiased investigations into the causes, and reassessments of system design and risk assessments. These episodes indicate that strategic public officials and politicians may play important parts in exploiting the crisis aftermath (Boin et al, 2009). The findings support prior research on the nexus between politicization and crisis-induced learning which, unlike conventional theories that consider political involvement a constraint on organizational learning (Boin and 't Hart, 2000; Bierly and Hämäläinen, 1995; Brändström and Kuipers, 2003; Senge, 1990; Argyris, 1986; Commons, 2004: 46), stress that political involvement in the crisis aftermath may assist learning and encourage institutionalization of organizational lessons (Dekker and Hansén, 2004). This, in turn, leads us to the third and final proposition:

Proposition 3a: Public organizations that are subjected to crises are likely to act rigidly in the crisis aftermath.

Proposition 3b: Politicization of public organizational learning processes in the crisis aftermath may increase organizational learning flexibility.

This study has presented an analysis of public organizational responses to crisis events viewed through the theoretical lenses of rigidity and flexibility in crisis response and crisis learning. Three propositions for further research have been outlined as a contribution to building new knowledge on the issues of crisis and learning. Although the analysis stresses the importance of experience as a driving force for crisis-induced learning, it is also a reminder that experience per se is not a sufficient variable for organizational learning from crises. Additional factors need to come into play in order to enable a learning response to a crisis. For instance, the crisis needs to be distinctly understood as a frame breaking event, which provokes flexible cognitive processes aimed at post hoc change, rather than being rigidly interpreted as a 'business as usual' isolated event (cf. Kingdon, 1995).

Chapter 6

Crises as learning triggers: Exploring a conceptual framework of crisis induced learning

The study presented in the following chapter contributes to the debate on organizational learning from crisis by shedding light on the phenomenon of crises as learning triggers.¹ To unveil theoretical patterns of how organizational crisis-induced learning may appear and develop, I suggest a conceptual framework based on concept categories and answers to four fundamental questions: what lessons are learned (single- or double-loop)?; what is the focus of the lessons (prevention or response)?; when are lessons learned (intra- or intercrisis)?; is learning blocked from implementation or carried out (distilled or implemented)? The framework's applicability is explored in a study of how a Swedish utility (Birka Energi) and the city of Stockholm command and control unit responded to two large-scale blackouts in Stockholm. The final sections suggest four propositions for further research.

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Introduction

The literature on organizational learning has so far been vague and elusive. Its guiding concept is characterized by confusion, and scholars find the phenomenon hard to define, isolate, measure and apply (Fiol and Lyles, 1985; Levy, 1994; Berends, Boersma and Weggeman, 2003; Common, 2004; Dekker and Hansén, 2004). Nonetheless, lately there has been a steep increase in studies on organizational learning. Literature on organizational learning from crises, on the other hand, has remained scarce (for exceptions see e.g. van Duin, 1992; Carley and Harrald, 1997; Dekker and Hansén, 2004; Smith and Elliott, 2007). Hence, for practice and academia alike there is a need to increase the knowledge on how to analyze organizational learning during and after crisis, and to find out more about what criteria should be part of the analysis.

In order to increase theoretical understanding of the process of organizational learning, and how it relates to crisis management, this study aims to shed light on the phenomenon of crises as learning triggers by designing a concrete conceptual framework for research on organizational learning from crises. The framework is then applied to a case study of organizational learning patterns from a series of two incidents. The case study shows how two organizations – the semi public energy utility Birka Energi and the Stockholm City command and control unit (led by the City Executive Office and the Fire Department) – managed two consecutive local cable fires that led to local blackouts in Stockholm in March 2001 and in May 2002. The underlying cause of the first blackout was as a failure of design. The system lacked redundancy. Back-up cables were placed right next to main cables. A fire in the main cable threatened the entire system. Once the main cable ignited, the fire spread to backup cables leaving no reconnection options. The second case can be characterized as a failure of learning and quality control. Temporary repairs during the first fire were not sufficiently monitored and shortcomings in the deficient repairs were not noticed (Göransson, 2002). The events were dramatic for the residents, the power company, and leading city actors. The fires caused power outages that affected eight districts in Stockholm's northwestern suburbs. These districts were left partially or totally without power. The blackout seriously affected businesses and public administrations as well as the daily lives of residents as some 50,000 people and 700 businesses employing 30,000 people were deprived of electrical power and electricity dependent comforts. The blackouts were two of the most comprehensive power outages ever to strike Sweden and the largest power disturbances witnessed in the history of electricity distribution in Stockholm. In the Swedish national setting both the duration and the scope of the blackouts were without modern precedent (Aktuellt, 2001).

The case study was constructed and examined by thorough process-tracing, which resulted in detailed case study narratives (Stern, 1999; George and Bennett, 2004) and the detection of fifty-one crisis-induced lessons. These were structured according to conceptual categories designed to answer the questions of: What is learned (single- or double-loop lessons)?; What is the focus of learning (prevention or response)?; When does learning take place (intra- or inter-crisis)?; Is learning blocked from implementation or does it come full circle (lessons distilled or implemented)? The case study design affects the possibilities to generalize the findings to a larger set of organizations. However, this study contributes to building theoretical knowledge and theoretical generalizations rather than making empirical generalizations (Yin, 2003). This should be useful since there is a lack of developed theory to build on within crisis learning theory. In line with the theoretical ambitions, the propositions that are suggested in the concluding sections are for further research to test.

Crisis, learning and lesson-drawing

Crisis is defined in this study as a situation that subjects a community of people, such as an organization, a state, or a municipality, to a serious threat to its basic structures or fundamental values and norms, which under time pressure and uncertainties necessitates making crucial decisions (Boin and 't Hart, 2006: 42). Following a definition put forth by Argote (1999) and Schwab (2007), organizational learning is seen to occur 'when experience systematically alters behavior or knowledge' (Schwab, 2007:233). This view on organizational learning clearly distinguishes between cognition and behavior, which according to most views is the essence of learning (Dekker and Hansén, 2004). In addition, it does not, like other definitions (see e.g. Bennett and Howlett, 1992)² distinguish specifically between lessons distilled – that is lessons observed that do not change actual behavior – and lessons implemented – that is lessons observed that change individual and organizational behavior. Thus both types of learning processes are studied here.

The relation between crisis and learning is unclear in the literature. Organization scholars highlight the effect that crises have on learning and change. Two such notable sub-fields are organizational learning (Fiol and Lyles, 1985: 808; Common, 2004) and management communication (Seeger et al,

2 Bennett and Howlett's (1992) conception of learning suggests that learning is best studied from the behavioral outcome perspective. The authors argue that the conceptualization of learning as an intervening variable between agency and change may never be successfully operationalized. They stress that 'It may be impossible to observe the learning activity in isolation from the change requiring explanation. We may only know that learning is taking place because policy change is taking place' (Bennett and Howlett, 1992: 290).

2003; Seeger et al, 2005). Studies within the fields of policy analysis and public administration tend to see crisis as an opportunity for learning that may open up windows of reform required for change (Keeler, 1993; Sabatier and Jenkins-Smith, 1993; Kingdon, 1995; Birkland, 2006). Recent evidence from the crisis management literature, however, shows that learning does not necessarily follow from crises (Elliott and Smith, 1993; Fortune and Peters, 1995; Toft and Reynolds, 1997; Smith and Elliott, 2007; Boin et al, 2008). The literatures of crisis management, public administration and organizational learning thus present divergent views on the potential impact of crises on learning. Furthermore, what organizations learn, and when that learning takes place is rarely delved into (Roux-Dufort, 2000; Nohrstedt, 2007). Research on crisis and learning so far concludes that it 'remains an open question' whether crises trigger or forestall learning and change (Boin et al, 2005:134). From this brief overview I conclude that there is a need to increase knowledge on the relation between crisis and learning. This study takes on this task by explicitly targeting these puzzling aspects of the crisis-induced learning process.

In this study, I explore learning from crisis as a series of crisis-induced lesson-drawing processes. Although I do not focus on learning from other jurisdictions to improve government reform programs as e.g. Richard Rose (1993), I draw on his conception of lesson-drawing, which understands a lesson as crafted within the organizational structure by organizational members. A lesson is designed on the basis of experience and thus 'requires a cause-and-effect model', which shows how the lesson can achieve a desired goal if adopted (Rose, 1993:13). In the midst of crisis, this cause and effect loop might be difficult to distinguish as acting and thinking under time pressure, value complexity and uncertainty may be interwoven (Flin, 1996). Nevertheless, I noted that a crisis-induced lesson was distilled when new information or knowledge based on the crisis experience was declared in statements by organizational members, for real or rhetorical reasons (Clarke, 1999; see also Birkland, 2009). The lesson is considered as implemented when it leads to a systematic alteration of behavior. Therefore, when examining the data, I looked for new insights, knowledge and understandings as well as more concrete and visible actions and changes taking place.

A conceptual framework for crisis-induced learning

Lalonde (2007), in a recent study, set the stage for a learning model for organizational resilience and improved crisis coping capacities. She claimed that crisis management studies do not seem 'to lead to a crisis management learning model that fosters organizational resilience in coping with crises' (Lalonde,

2007:95). In line with this call for studies that uncover practical implications for crisis managers, I use the case study approach, which remains close to real-life situations (Flyvberg, 2006). The case study was constructed by using a process-tracing approach aimed at pointing out what stimuli actors act on (George and Bennett, 2004). The selected case includes narratives of two cable fires that caused blackouts in eight commercial and residential city districts in Stockholm, affecting some 80,000 people. The detailed process-tracing and reconstruction of the crisis management and crisis aftermath processes identified the Stockholm City command and control unit and the power company Birka Energi as the case's main actors.

The case is particular as it involves repeated crisis events and thus an opportunity to learn from crisis. Case narratives are based on data from commissioned investigations, media sources, an official symposium and interviews. These multiple data sources were used to increase reliability by balancing statements and mitigating uncertainties within the respective source data. Further, sources include semi-structured interviews with twelve decision makers at the city and five key decision makers at the power company. Interviewees were selected on the basis of their roles in the management of the incidents (according to organizational hierarchy and secondary sources). Taken together the data provided for a thick narrative of the crisis event, including phases before, during and after the actual crisis impetus.

The process-tracing approach was carried out by reconstructing the crisis management and decision making processes into a crisis narrative, and then dissecting the narratives into occasions for critical decision making, each of which was closely examined (Stern, 1999). This approach helps the researcher pinpoint lessons and learning episodes, observe how actors involved in crisis management make use of lessons learned, and discover the causal relation between the two phenomena of crisis and learning. Instances from the crisis narrative and decision making analysis that depict periods when experience alters knowledge or behavior were interpreted as a lesson taking place. By using a coding sheet rooted in the four previously mentioned conceptual categories (what is learned; when; what is the focus; is learning implemented?), fifty-one crisis-induced lessons were identified. As the analysis required coding of non-visible constructs, inter-coder reliability was required to confirm reliability (cf. Nohrstedt, 2007). An inter-coder reliability test was carried out by a department colleague assigned to code the lessons independently by using the four criteria outlined below. After the inter-coder reliability test, the analysis was revised and lessons that came out as ambiguous were removed from the analysis.

What is learned – Single- or double-loop learning?

Argyris and Schön's (1978; 1996) distinction between single- and double-loop learning is probably the most influential categorization of organizational learning. Other theorists have presented similar categorizations, but none has been cited with such intensity (Fiol and Lyles, 1985; Dodgson, 1993; Rose, 1993; Lipshitz, 2000). Single-loop learning is achieved when organizational members detect and correct divergences and flaws in the organization and its procedures, without inquiring into basic organizational premises and norms (Argyris and Schön, 1978:18ff). Hence, single-loop learning processes permit organizations to carry out and achieve present policies and objectives. Such learning works best when the external environment changes slowly or when organizational premises and the environment are not in conflict. In times of rapid change, however, managers may feel an urge to undertake inquiries that question the organizational status quo. Such double-loop learning inquiries may take the form of restructuring of organizational norms, strategies and assumptions associated with those norms. This deeper form of learning presupposes that error detection becomes not only connected to strategies, and assumptions for effective performance (single-loop learning), but also to 'the very norms which define effective performance' (Argyris and Schön, 1978:22). To double-loop learn, actors need to detect and correct errors by inquiring into and – if necessary – modifying the underlying norms, policies and objectives of the organization (Argyris and Schön, 1978:3). This radical adjustment means that old understandings are discarded as new ones are added. Operationalizing these concepts can be difficult. For instance, a learning process starting out as single-loop might end up as a double-loop and vice versa. This study, however, understands the learning in question as dependent on the initial intention.

In summing up, the question of what is learned is addressed by coding lessons either as single-loop lessons that inquire into organizational errors and shortcomings, or as double-loop lessons that inquire into broader issues of organizational objectives, norms and working procedures.

What is the focus of learning – Prevention or response?

Prevention and response are two basic foci of crisis-induced learning. The former pertains to finding the cause of the crisis, and making sure that it does not happen again. This is learning how to avoid being subjected to the same or similar crisis in the future. The latter pertains to minimizing consequences of the same or similar event by enhancing crisis management capacities. This is learning how to respond to the crisis events (at hand or in the future). Both foci are essential for organizational resilience. However, Wildavsky (1988), in

his seminal piece on risks and safety, argued that a strategy of resilience – that is learning from error how to bounce back after accidents and crises (similar to the focus of response) – is more efficient than spending resources on anticipatory measures to prevent accidents from occurring (similar to the focus of prevention).³ It should be mentioned, however, that the line between minimizing risk of repeat and minimizing consequences is thin at times and inquiring into the root causes of a single crisis is not always fruitful (Shrivastava, 1987). More often than not crises are results of series of interlinked events, shortcomings and flaws (Perrow, 1984; Reason, 1990), which may be triggered by human, organizational and technical causes (Shrivastava, 1987). This study's take on the issue is to distinguish between the two foci on the basis of the aim of the lesson, rather than on its outcome.

In summary, I analyze the focus of learning by distinguishing between learning focused on accident prevention – when lessons aim at minimizing risks of crisis reoccurrence or on improving preparedness – and learning focused on response – when lessons aim at improving the crisis response, or at minimizing the consequences of the crisis.

When are lessons learned – Intra- or intercrisis?

The distinction between intra- and intercrisis learning is understood as a matter of timing. Following Moynihan (2008:352) intercrisis learning is defined as 'learning from one crisis and making changes to prepare for another', while intracrisis learning refers to 'learning that seeks to improve response during a single crisis episode' (see also Moynihan, 2009). According to Moynihan (2008) research on intracrisis learning is not as developed as research on intercrisis learning. Intracrisis learning is activated in the midst of stress, uncertainty, time pressure and demands for rapid action. Crisis-induced learning triggers tell organizational members that they need new routines and procedures to manage the events at hand. These acute crisis characteristics make intracrisis learning more difficult than intercrisis learning (Dror, 1988; Lagadec, 1990), which happens when there is in general more time to contemplate. Some caveats should be mentioned, however. First, these propositions apply to fast-burning crises, rather than slow burning, 'crises after the crisis' where systemic flaws are incubated and eventually erupt to the detriment of public trust in authorities and institutions, or creeping crises like for instance chronic environmental crises that take years to erupt and to solve ('t Hart and Boin, 2001). Second, lesson-

3 Roe and Schulman (2008) call the conflicting distinction between anticipation and resilience 'misleading' and 'counterproductive' (Roe and Schulman, 2008:133). Instead they advocate the concept of reliability which they tie to both anticipation and resilience – the ability to plan for, absorb, and rebound from, crisis (Roe and Schulman, 2008: 5).

drawing from crisis is a dynamic process that is not easily located in a single point in time (e.g. during or after an incident). For example, lessons may be initiated by individual inquiry in the intracrisis period, but more thorough investigation may be postponed to the intercrisis period. Post crisis, these lessons may be pushed to the fore in a more formal manner by for instance organizational inquiries and investigations. Thus it can be a thorny task to determine if the lesson in question is an intra- or intercrisis lesson. Third, the distinction between intracrisis learning and improvisation becomes unclear. Both improvisation and learning are responses to new information. The distinguishing factor between the two is that the learning is based on previous experience, while improvisation is based on real-time experience (Miner, Bassoff and Moorman, 2001). That said, lessons have been coded according to when the particular problem was first inquired into.

In sum, the issue of when learning takes place is dealt with by coding lessons as on the one hand intracrisis learning, initiated during the crisis, and on the other intercrisis learning, initiated after the crisis.

Lesson implementation – Are lessons distilled or implemented?

Distinguishing between the processes of observing lessons and implementing lessons is related to the distinction between cognition and behavior. Most definitions of organizational learning agree that learning entails both cognition (change in states of knowledge) and behavior (change in organizational outcome) (Dekker and Hansén, 2004). But separating cognition from behavior may cause concern when real events and processes are to be analyzed. Implicit in many views of learning it is the assumption that we ‘learn the right lessons’ (Boin et al, 2008; Birkland 2006), but when learning from crisis does occur, it does not necessarily lead to performance improvement. Further, behavior is not necessarily an accurate reflection of cognition, and vice versa. Nevertheless, a distinction is made between the concepts of lessons distilled and lessons implemented, by connecting the cognitive activity taking place as shortcomings are observed, to the behavioral activity played out as lessons are acted upon. If the lesson was only noticed but not carried out to the extent that it altered organizational behavior, it is understood as a lesson distilled. Whereas if the case narratives show evidence stating that the lesson was carried out, it is understood as a lesson implemented. Evidence of implementation is found in statements from investigation reports, media reports and interviews.

To sum up, the question of whether lessons are carried out or blocked is addressed by coding lessons as either distilled – that is lessons noticed by organizational members but not subsequently acted upon – or lessons implemented

– that is lessons noticed by organizational members and subsequently acted upon and corrected.

Crisis narrative of the 2001 and 2002 Stockholm blackouts

Early morning on 11 March 2001, a technical failure occurred in a local cable tunnel in northwestern Stockholm. The power company control room interpreted it as a minor failure. A few hours later a second failure occurred, along with disturbances in communication cables (Hornyak, 2001). Now operators suspected more than an everyday event and notified the Fire Department. Matters turned worse as the local network lacked redundancy. Power distribution stations were dependent on feeder cables from a single regional transformer station. Connecting cables ran through the same tunnel, and they all burned down in the blaze (Stockholm Fire Department, 2001; Göransson, 2002). This tightly coupled event (Perrow, 1984) led to a thirty-seven hour power failure in eight city districts inhabited by 50,000 people, and 700 companies employing another 30,000.

The power company publicly announced that the system would be restored by the evening (Karlsson, 2001; Birka Energi Press release, 2001). Thus most local stakeholders failed to recognize the severity of the situation. There was a gap between operational rescue service and societal coordination of crisis management efforts (Stockholm Fire Department, 2001; Hallander, 2002). The real dimension of the damage came to power company managers' attention eight hours into the blackout. A new press release, which initiated societal crisis management and coordination, stated that power would return on 13 March at 22:00. In accordance with a newly drafted plan, representatives of city agencies gathered at the Fire Department rescue center. Eventually operational experts found a temporary way to repair the damaged cables, thus ending the blackout before nightfall on 12 March.

However, makeshift repairs became the groundwork for crisis reoccurrence. The tunnel was not sufficiently decontaminated (Göransson, 2002) and repairs were not adequately controlled (Branger, 2002; Karlsson, 2002). Late afternoon on 29 May 2002, new faults in the same tunnel sparked a fire. Again operators interpreted events as minor and mundane, but further problem indications led to increased awareness. Experiences from 2001 made it reasonably clear that the cable fire had caused serious damage. As the rescue service mission was executed the city manager and fire chief again made plans for a coordinated response. The city command and control repeated the response from 2001. The blackout

lasted for fifty-four hours and ended as operational experts temporarily connected the local utility's network to the national grid (Tunnel-branden, 2002).

Organizational learning from the crisis episodes

By tracing the processes of the utility's crisis management during and following the first crisis event, twenty crisis-induced lessons were revealed. Most lessons originated from the operational level. They were in general single-loop inquiries into problems noticed by the management on how to minimize the consequences if a similar failure would occur again, rather than how to prevent a repeat of the failure. Looking back at the previous incident, the 2002 accident investigator commented on the changes made after the 2001 crisis:

From this list it may be concluded that many of the measures are (electro-) technical rather than fire protective, and most focussed on the 11 kV-side. No specific measures were taken towards redundant or fire separated cable design [and] the cable joints were not covered with fire protective paint after the repair work after the last fire (Göransson, 2002).

Process-tracing analyses provided some evidence of crisis improvisation at Birka Energi during the first crisis, but not for intracrisis learning based on prior experience. Possibly the limited managerial crisis experience within the company made lesson-drawing during the first event difficult and reflections were, deliberately or not, cast aside until the crisis aftermath (Markusson, 2002). Further, the one major lesson in the crisis aftermath that questioned imperfections in system design as an underlying cause of the accident – namely to increase network redundancy by building a new production plant – was not implemented. As the Operation Manager put it:

We probably thought that this would not happen again. Therefore everything that one in hindsight might think should have happened probably did not happen. But we were working with solutions [...] and we thought that we had taken care of the most acute stuff with the measures that we had taken while changing the design (Karlsson, 2001).

Process-tracing narratives of the city command and control unit's management of the events revealed nine lessons triggered by the 2001 blackout. These lessons related to the issue of minimizing consequences in the event of a similar crisis (i.e. how to improve performance). A possible reason that there were no lessons of prevention was that the capacity to really prevent a repetition lay within the powers of the utility, while the city could only call attention to issues of preventing crisis repetition. However, the city owned fifty percent of the company and could put pressure on the utility, not least through its consumer

power being one of the utility's largest clients. But as the city planned to sell its holdings, such a strategy could affect potential buyers' interest (Cederschiöld, 2003; Kleist, 2003).

The city's lessons from the 2001 incident were of the intercrisis type. Most lessons regarded structural single-loop learning pertaining to the rescue service mission, the structure of the coordination group, or information and communication routines (Kleist, 2001; Stockholm Fire Department, 2001; Svensson, 2001). All but one of the city's lessons was codified either in planning documents or by decisions made during the 2002 crisis.

In terms of the second crisis, the Vice President of the utility described the May 2002 cable fire and blackout as a technical and credibility failure and 'a disaster in terms of engineering.' Moreover, he added: 'In terms of the strictly technical aspects: unsuccessful repair work a year earlier and to not maintain the power supply [...]. That's really a low-water mark for us' (Gustafsson, 2002). However, the 2002 crisis was also an opportunity to put lessons of 2001 to the test. Several lessons that were first considered after the first episode were reiterated and implemented during the second blackout. In all seventeen lessons learned by the power company from the 2002 event were identified from process-tracing crisis narratives. Most pertained to minimizing consequences of the failure (or of a similar potential future failure), although six lessons focused on crisis prevention. There was a noticeable increase in the number of intracrisis lessons at the utility following the second incident, and there was a steep increase in double-loop learning lessons questioning organizational culture and working procedures (Gustafsson, 2002). Lessons were also implemented to a higher degree in 2002 than in 2001. This applies to intra- and intercrisis lessons, as well as single-loop lessons, and even more so to double-loop lessons (six out of seven). Taken together this suggests more soul-searching at the company after the second event compared to the first.

The process-tracing of the city's management of the second blackout points to five lessons learned by the city's command and control unit from the second event, all of which dealt with the issue of crisis response and how to minimize consequences of a similar future crisis. Three lessons required investigations into organizational routines during crises and were thus double-loop lessons. Most of these were also implemented. The first incident also led to a substantial learning program in the form of the city's long term crisis management investigation and overhaul of procedures and protocols. The program was called for by the Fire Department in the post hoc evaluation and subsequently sanctioned by the Commissioner of Finance eight months after the incident (Carlsson, 2002; Jidling, 2004). The second crisis, however, did not provide novel takes on learning. Similar to the actual crisis response, learning from the second crisis

in most accounts continued in previously established tracks. In the words of the City Manager:

The second time we had the answers, so we did exactly as the last time. I can't say we changed anything either. On the contrary, it ran more smoothly the second time. I think everyone felt more at ease. The first time there was some uneasiness. [...] But I think that everyone that was involved in this one felt more comfortable (Kleist, 2003).

The one notable exception from repeating procedures established from the first blackout was the city's intercrisis lesson to monitor the utility's pledged reforms more closely by a series of meetings, which shows that the city prioritized its accountability role more following the second event compared to the first.

Discussion

On a theoretical level, what can the learning analysis of the two blackouts tell us about what organizations learn from crisis? In general, an incident produces more inquiries into easy-to-notice crisis triggers and operational errors than into more concealed and underlying norms and procedures (van Duin, 1992; Toft and Reynolds, 1997). However, it is important not to overlook evidence of single-loop learning generated by crisis-learning analyses (Roux-Dufort and Metais, 1998). Many analysts see double-loop learning as the only true learning (Argyris and Schön, 1978; Dodgson, 1993). However, I argue that in-depth analyses of single-loop learning processes are equally important teachers of how learning processes come about and evolve from a theoretical as well as from a practical perspective. Nonetheless, and in line with previous research (van Duin, 1992; Boin et al., 2005), this learning analysis shows processes of organizations that mostly drew lessons of the single-loop learning type. Moreover, the double-loop lessons that were drawn did not relate to everyday organizational norms, objectives or working procedures. Instead they mostly related to organizational working procedures during crisis, which accordingly leads us to the first proposition.

Proposition 1: Organizational crisis-induced double-loop learning is more likely to pertain to specific crisis procedures and structures than to general organizational norms and policies.

The distinction between single- and double-loop learning has several merits, not least that it helps researchers operationalize the highly abstract and thorny construct that is learning (Levy, 1994; Stern, 1997; Berends et al., 2003). However, the Argyrian conceptualizations may underestimate the crucial dis-

inction between reflective and mechanistic learning. To settle what learning is and how it can be distinguished from less reflective change is not an easy task. Both single- and double-loop learning presuppose cognitive reflection. But as prior research on the topic shows, and as this study reiterates, such critical and deeper reflection is not a conventional response to crises. Rather than engaging in reflective cognition and analytical investigations in response to crises, managers tend to resort to mechanic adaptation and reflex reactions in response to failures and external threats (Staw et al, 1981).

Moving to the issue of what the focus of learning from crisis is, the traditional view on learning from crisis is understood as primarily preventing new accidents from taking place (van Duin, 1992). However, this learning analysis indicates that organizational response patterns can be contrary to this view. The case demonstrates organizations failing in crisis prevention, but picking up lessons on how to act in the event of a crisis. Further, crises that stem from technical system failures are complicated matters that rarely derive from a single root cause (Shrivastava, 1987). Rather these kinds of failures result from combinations of causes and multiple factors, embedded in the social and organizational environment (Perrow, 1984; Reason, 1990; Pidgeon, Turner, Toft and Blockey, 1992). Inquiring into causes is thus a complicated and resource intensive task; which may be a reason why – as did the organizations in the case under study here – crisis actors opt to delve deeper into issues of resilience and crisis management capacities rather than developing preparedness for unanticipated events (cf. Wildavsky, 1988). This brings us to the second proposition:

Proposition 2: Organizational crisis-induced learning is more likely to pertain to how to act in the event of a crisis than how to prevent future crises.

In terms of the issue of when learning takes place, previous research has emphasized that the crisis characteristics of time pressure, uncertainty and values at play make it difficult for actors to learn in the midst of a crisis (Dror, 1988; Lagadec, 1990; see also Moynihan, 2009). The learning analysis of the first incident supports this proposition. No clear traces of lesson-drawing during crisis were found from the analysis of the first crisis event. Single- and double-loop intracrisis learning was instead initiated during the second crisis. Possibly, these intracrisis lessons were in some respects connected to implicit contemplations raised by the first crisis. Surprisingly enough, however, I did not find a significant difference in the number of double-loop lessons drawn during crisis compared to double-loop lessons drawn post crisis, which suggests that organizations that are not experienced crisis copers are unlikely to enjoy sudden rises in intracrisis lesson drawing. Although there are examples presented in the literature of organizations without recent relevant experiences that learn during

crisis, as for example presented in the case of the outbreak and containment of Exotic Newcastle Disease among poultry in the state of California in 2002 (see Moynihan, 2009), inexperienced organizations required to manage a crisis seem likely to become too caught up in crisis management and operational activities to find time for intracrisis lesson drawing. But if crisis managers do find the time, creativity and reflection necessary for learning during the crisis, and implementation of such lessons, does not necessarily come harder than implementation of lessons post crisis. This brings us to the third proposition:

Proposition 3: Organizations with recent crisis coping experiences are more likely to initiate comprehensive intracrisis learning in the midst of the crisis than those who lack recent crisis experience.

The fourth and final question of this study concerned the issue of implementing lessons from crisis. Crisis-induced lessons may be blocked from implementation for a number of reasons depending on what kind of resistance and support the lesson may trigger in the organizational complex. In addition, as this study indicates, also double-loop lessons, that in hindsight may appear to be more or less 'given', may be blocked from implementation due to for instance shifting priorities, financial costs or excess attention on easier to implement single-loop lessons. This leads to the interesting issue of interaction between the two learning types. Single- and double-loop learning is not contrary to each other or mutually exclusive. But there are paradoxical elements here. Double-loop efforts may cause actors to overlook or forego useful single-loop lessons (van Duin, 1992; Argyris and Schön, 1996). Likewise, putting a great deal of attention on single-loop lessons may cause organizations to miss out on valuable double-loop learning. From my learning analysis I found that a large number of the power company's lessons triggered by the second incident were implemented (compared to lessons triggered by the first event). The study does not show specific differences in the ratio of implementation of intra- compared to intercrisis lessons. However, the case analysis does indicate that single-loop lessons become implemented as long as implementation does not come at what is interpreted as an extensive cost. Moreover, and based especially on case findings from the 2002 incident analysis, when critique and credibility loss increased, financial costs were set aside and lesson implementation came easier. This brings us to the fourth proposition:

Proposition 4: External critique toward the organization and credibility loss will increase the rate of implementation of crisis-induced lessons.

This proposition emphasizes the role of mass media and politics in crisis-induced learning. Thus it points to an impending risk of current crisis management. External critique clearly matters. But it does not necessarily mean that the 'right lessons' are being learned (Birkland, 2006). On the contrary, mediatization and politicization may cause crisis managers to lose track of operational lessons and underlying organizational lessons and instead pay excessive attention to symbolic crisis learning verbalized by and framed in terms of buzzwords that may hamper critical reflection (Hansén, 2009), or documented and laid down in merely rhetorical fantasy learning documents (Birkland, 2009).

Conclusions

Compared to some recent experimental approaches to the study of crisis and learning (Hansén, 2009; Elliott, 2009; Birkland, 2009), this study takes a slightly more orthodox approach to the topic by reviewing relevant literatures and outlining four specific aspects of the crisis learning process. Possibly and hopefully, the framework laid out here will help researchers to dissect and structure the complex process of crisis induced learning. The field is in need of structuration for at least two reasons. First, increased structuration may assist in fostering theoretical understanding of these intricate processes (Mitroff et al, 2004). Second, increased structuring may be helpful in enhancing practical capabilities to draw lessons from crisis experience, which is vital for creating robust and reliable organizations and for decreasing the risk of future crises (Argyris and Schön, 1978:5).

Although this study aimed to provide a conceptual analysis, the empirical component has also been clearly highlighted. Even more empirical studies on crisis-induced learning are required in order to increase knowledge about processes of how, when and what organizations learn from crisis experiences (cf. Moynihan, 2009). More specifically, we need to know more about deeper double-loop learning processes, and not least, more about seemingly mundane single-loop learning. Research on both types of learning processes is required for building knowledge on the complicated relation between single- and double-loop learning and how the one affects the other. I hope that this study, by clarifying key concepts and putting forth propositions for further research, has made a contribution to this crucial and growing field. Taken together the propositions presented here show the difficulties of learning from crisis, even in a case that offers conditions that are relatively conducive to crisis learning (such as similarity between crisis events, relatively short time between crisis events, and low personnel turnover in the management groups). This should make the call for further research on the topic even more pertinent.

Chapter 7

Learning from crisis: A framework of management, learning and implementation in response to crisis

The following study deals with the relationship between organizational flexibility, crisis response and learning.¹ As a point of departure I use previous research from the field of crisis management which tells us that experience can shape crisis responses in two ways: as a way of repeating former routines (Roux-Dufort and Vidaillet, 2003:130) or as a precondition for improvisation (Weick, 1993). Based on an abductive study I argue that the mandates of top-managerial teams, where I differentiate between centralized and decentralized, are closely connected to the way organizations learn – in behavioral or cognitive modes. My findings from two case studies show how the decentralized managerial group learned in a behavioral fashion by creating new formal policies and structures, while organizational members in the centralized managerial group relied on individual cognitive structures as a way of ‘storing’ lessons learned. The study ends by discussing the findings from a crisis management perspective, where I

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propose that the two modes of learning profoundly affect the crucial issue of flexibility in organizational crisis response.

Introduction

The insight that crises are costly for organizations and societies from a socio-political and economic perspective has led to increased interest in the debate on organizational learning from crises, major accidents and disasters (Reger and Larkin, 2002; Carley and Harrald, 1997). In academia the organizational learning debate has focused on the pessimist versus optimist perspective, inquiring into whether organizations are capable of learning from crisis (see e.g. Boin et al, 2005; Stern 1997; Kingdon, 1995; Smith and Elliot, 2007; Moynihan, 2008) and on the individual versus organizational perspective, dealing with who the learning agents are (Huysman, 2000; Lähteenmäki et al, 2001; Weick and Ashford, 2001; Argyris and Schön, 1978). This study sheds light on the nature of learning from a crisis management perspective by contributing to the latter debate and the discussion on learning agents. I argue that the issue of whether organizations or individuals learn should not be understood as a zero-sum game. It depends instead on the character of top managerial crisis groups. Public administration researchers interested in crisis management and specifically in the decentralization/centralization of crisis response have already noticed that organizational structures impact on crisis management response (‘t Hart et al., 1993). However, how top managerial groups affect learning from crisis has to date not been sufficiently examined.

Derived from an abductive approach and a reciprocal process between empirics and theories on learning aimed at theory development (Alvesson and Sköldberg, 1994; Dubois and Gadde, 2002), I use two case studies to propose a framework of how to understand learning based on different top managerial team styles. I focus on top managerial crisis responses since I believe that these play a pivotal role for organizational behavior processes, as they are able to ‘impute meaning to organizational events that subsequently influence the interpretations and actions of other organizational participants’ (Ford and Gioia, 2000; 706).

This study follows previous crisis management scholars who argue that experience can shape crisis responses in two basic ways: as a way of repeating former routines (Roux-Dufort and Vidaillet, 2003: 130) or as a precondition for improvisation and flexibility (Weick, 1993). Flexibility, in turn, is understood as a necessary capacity for organizational adaptation and change (Senge 1990; Sharfman and Dean 1993; Ford and Gioia 2000). Further, I emphasize that the way learning from crises is carried out depends on the organizational settings in which it takes place (cf. March and Olsen, 1976; Argyris and Schön,

1978). A crucial factor here seems to be the mandates and composition of the strategic crisis management group (see e.g. D'Aveni and MacMillan, 1990). This leads us to the following research question: How do organizational management structures affect crisis learning and implementation?

In an effort to answer this question I explore two cases of how two bureaucratic media organizations, similar in scope, mission, size and operations, demonstrated very different learning responses in the wake of big news media events. I refer to the organizations as bureaucratic, as both organizations are large and complex with a public service mission. Their day-to-day structure emphasizes hierarchy and centralization of power and influence. Roles are tightly defined and members depend on superordinates' monopoly of knowledge for information and strategies (Burns and Stalker, 1961:119-122). Yet they differed in their managerial responses to crises. The first case presents an organization (Sveriges Radio, SR) with a centralized managerial crisis management style of response, and the second (Sveriges Television, SVT) shows a more decentralized top managerial response.² Even though the organizations included in this study had an everyday bureaucratic structure, one transformed in the wake of the crisis into what Mintzberg (1993) would call 'a crisis organization.' This organization type is created by the centralization of power in the hands of chief executives as a way to reduce bureaucratization and to make room for fast and coordinated response. The organization in which the managerial group did not take on strong mandates kept to its bureaucratic structure. It should thus be noted that the centralized crisis response at SR was in itself an effect of learning, which underlines that organizations are dynamic and evolve over time. Elsewhere my colleague and I have studied the decision making structures within SVT and SR (Deverell and Olsson, 2002; Olsson, 2008; 2009). These studies led us to conclude that the managerial group at SR had a stronger mandate even in the everyday organization than SVT, where all three top managers lacked an overarching mandate for the whole organization. Thus in this study I posit that in order for organizations to centralize in the midst of a crisis, top managers are assisted by having strong mandates in daily work.

The study is structured as follows: First I discuss how my study relates to the ongoing debate on organizational learning. I then present the crisis definition before moving on to outline the research design. I continue by presenting the two empirical case studies of crisis response and learning. Based on these cases, the concluding section proposes a framework of how to understand the

2 In crisis management literature centralization commonly refers to the escalation of authority to higher managerial levels or to the reduction of the number of persons or units included within the loop of influence and power (Hermann, 1963; 1969; 't Hart et al, 1993).

relation between management, learning and its effect on crisis management capabilities.

Organizational learning

A key claim of organizational learning theory is that organizational learning is more than the sum of individual learning within organizations, and that it requires lesson-drawing and knowledge dissemination to become embedded throughout the organization (Argyris and Schön, 1978; 1996; Cook and Yanow 1993; Dekker and Hansén, 2004). However, researchers on organizational learning are often criticized for referring to organizations' learning while in effect reducing the phenomena to individual behavior (Huysman, 2000; Weick and Ashford, 2001). An individual-centered approach to organizational learning is utilized by for example Argyris and Schön (1978). Organizations, they claim, learn through the shared activities of individuals acting as organizational agents by encoding learned inferences from experience into organizational routines. The individual acts and learns with the organization as an arena (March and Olsen, 1976; Hedberg, 1981; Dodgson, 1993; Nicolini and Mezner, 1995). Individual organization members are seen as the primary learning agents and promoters of organizational behavior (Argyris and Schön, 1978; Shrivastava, 1983).

Other scholars advocate a more structural view of organizational learning based on a learning concept that emphasizes the importance of non-human repositories to store organizational knowledge. Repositories may include standard operating procedures, structures, strategies, routines, policies, ceremonies or cultural norms (Vera, and Crossan 2003; Lawson and Ventris, 1992). Learning then becomes organizational as lessons are incorporated into bureaucratic structures, i.e. embedded into the organization's formal rules, operational procedures and information systems (Dekker and Hansén, 2004).

The relation between individual learning and organizational learning is far from clear-cut. Cultural and social approaches add more ambiguity (Gherardi, Nicolini and Odella, 1998). Cook and Yanow (1993) argue that organizational learning consists of individual organizational members' knowledge and of the aggregate itself (Cook and Yanow, 1993:378). Elkjaer (2003) argues along similar lines by claiming that: 'Learning is not restricted to taking place inside individuals' minds but as a process of participation and interaction. In other words, learning takes place among and through other people. Learning is a relational activity, not an individual process of thought' (Elkjaer, 2003:439).

In relation to the overview presented above, this study contends that there are different types of learning depending on the respective context. Thus I agree with Elkjaer insofar as critical individual thoughts on organization become

important from an organizational view as soon as they are transferred from the individual mind to organizational members. In this study I define individual learning (herein referred to as cognitive learning) as a mode of learning that is not spread within the organization by standard operating procedures (SOPs), structures or policies, consisting instead of inferences from experience residing in the minds of top managers. On the other hand, organizational learning (herein referred to as behavioral learning) is characterized by learning that is disseminated within the organization by the creation of new organizational structures, and through development of planning documents and SOP's (Dekker and Hansén, 2004).

Defining crisis

Do media organizations experience crises in connection to reporting on big news events? Big news events can be characterized as crises from a news organization management perspective, according to a definition of organizational crisis proposed by Seeger et al (1998, cf. also Olsson, 2008). They assert that organizational crises are characterized by elements of surprise, threats to organizational values, and limited decision making time. I argue that the actual events were truly surprising news events, which challenged organizational decision and sense-making processes. Moreover, time for decision making was limited and the potential failure in reporting would jeopardize organizational legitimacy (cf. Boin et al, 2005; Coombs and Holladay, 2002; Horsley and Barker, 2002; Heugens, van Riel and van den Bosch, 2004).

As argued by Roux-Dufort (2007), the focus of prior research on large scale industrial accidents (like Three Mile Island, Bhopal, Challenger, Exxon Valdez and Chernobyl) has led crisis management research to generate more 'knowledge about accidents than organizations' which has hampered systematic theory building efforts on organizational management (Roux-Dufort, 2007:107). The cases presented here are not examples of highly significant accidents. By probing more low-key organizational crises, I choose to steer away from the event as such to focus on organizational processes related to crisis management, i.e. modes of organizational learning from crises. Further, this study differs from previous research as it deals with the relation between learning and crisis response. This means that I do not relate specifically to changes in day-to-day operations. Rather the gist of the argument relates to organizational change implemented by managers to improve future emergency response.

Research design

In one of few reviews that bring together the concepts of crisis and learning, Stern concludes that: 'it is often not until the next crisis comes that it is possible to evaluate the extent to which changes associated with the experience of the last crisis have contributed to enhancing or detracting from crisis-coping capacities' (Stern, 1997:82, see also Smith and Elliott 2006; 2007). In line with this claim, analysts should increase understanding of crisis learning by studying cases of repeated crises that affect recent crisis copers. Unfortunately, research on organizations that succumb repeatedly to crises are unusual (see for example Boin, 2008; Elliott and Smith, 2006; Rosenthal and 't Hart, 1990).

I attempt to bridge this gap with my case selection. I use detailed process tracing and case reconstruction analyses of how two organizations managed and learned from sequential crises. The cases under study are two national public service media organizations – one television station (SVT) and one radio station (SR) – and their learning responses following 11 September 2001 (and to some extent the assassination of Swedish Foreign Minister Anna Lindh on 10 September 2003).

The research design is based on pinpointing organizational triggers (the crises) in the respective organization, and on tracing managerial responses to these triggers. In order to make sure that I was measuring real organizational crisis events I searched for 'crisis triggers', which refers to points in time when the organizations experienced external and internal criticism (i.e. when organizational legitimacy is threatened) that paved the way for organizational change. I coded specific case-based information from case narratives relating to crisis-induced learning processes depending on the different type of learning, i.e. cognitive or behavioral modes of learning.

Due to the limitations of the study, i.e. two organizational responses to two organizational crisis events, it should be understood as a 'heuristic case study' aiming to generate hypotheses for further research rather than producing generalized knowledge. The choice of 'process tracing' as the research method follows a similar rationale: 'The process-tracing method attempts to identify the intervening causal process—the causal chain and causal mechanism—between an independent variable (and variables) and the outcome of the dependent variable' (George and Bennett, 2004:206).

Data gathering behind the process tracing effort included mass media articles, specialist press, in house magazines, e-mail correspondence, contingency plans and incident evaluations. The bulk of the data, however, was gathered from semi-structured interviews with key personnel (forty-five at SR, and thirty-sev-

en at SVT).³ Interviews took one to two hours, were tape recorded, transcribed and thoroughly reviewed by the authors. Statements were also balanced against internal documents, e-mail correspondence and media sources. However, as this study takes an interest in strategic management learning, I focus on the strategic level of the organizations and the top managerial responses. As I am interested in crisis-induced learning, questions were related to the actual crisis events as triggers for lesson-drawing, rather than specifically asking interviewees about lessons learned from the events. To make sure that I measured real learning processes and not merely instrumental changes from crises, I rely upon Argyris and Schön's (1978) notion of single- and double-loop learning. The change of routine and values within the organizations studied is accordingly accounted for in the empirical section.

Learning from crisis in practice

SR – a centralized crisis organization

Day-to-day work at SR is organized in a bureaucratic fashion. SR is a public service organization consisting of four main channels (P1, P2, P3 and P4), twenty-four local stations and a main news desk. Stations enjoy strong independence in terms of when and what to broadcast, decided upon by the respective channel manager. The news desk does not have a channel of its own, but broadcasts its news on SR's four main channels. The CEO has ultimate overall responsibility, though main broadcasting responsibility is vested in two Program Directors.

Crisis trigger event

September 11 was a landmark in world history and in SR's organizational history. SR conducted considerable program re-scheduling and broadcast extensively on the event. The notion that SR had failed during previous crises was shared within the organization and dated back to the assassination of the Swedish Prime Minister Olof Palme in 1986, when news on the event was broadcast more than two hours after the murder.⁴ Subsequent crises mentioned frequently by SR managers include the sinking of the ferry Estonia in the Baltic Sea on 28 September 1994 when 852 people died, the Gothenburg riots of 14-16 June

3 The 9/11 interviews were conducted at SR in January 2002 and at SVT in November 2002-February 2003. Interviews on responses to the murder of Foreign Minister Lindh were carried out in December 2003-January 2004.

4 The delay in reporting on the event was depicted as a failure for Swedish news media in general and at SR in particular since it took two hours before news of the assassination was broadcast. Embarrassingly enough the news even appeared in American news media before it was broadcasted by Ekot.

2001⁵ and the Gothenburg dance hall fire on 30 October 1998 in which sixty-three people died and some two-hundred people were injured. While the latter incident was a relative success in terms of SR's response, the prior two were failures. The head of the news desk at the time of the Estonia disaster went back to sleep after being alerted in the middle of the night and the organizational response was delayed. Lack of coverage on the Gothenburg riots was for example brought up in a debate article in SR's company magazine 'Radiotidningen', which asked the question 'Where is P1's and Ekot's preparedness for covering news after office hours?'

Since its start in 1954 SR has maintained a strong professional profile. National professional journalism is often said to have its roots in radio news (Weibull, 1997:146). Thus repeated crisis failures were devastating to organizational self-image and, as stated by the managers interviewed, 9/11 became a moment of reckoning and an opportunity to not repeat history's mistakes. The main lesson from previous crises was that SR had not re-scheduled to cover such occurrences. According to the managerial group, centralizing the organization was a direct response to previous failures. The notion of historical failures was prevalent in the organization. The notion also made up individual historical analogies in the minds of the two Program Directors (Khong, 1992, Brändström, Bynander and 't Hart, 2004). Important experiences of one of the Program Directors came from her tenure as head of news. There she learned the importance of removing organizational bureaucracy. This adhered to mediating between channels to find spots to broadcast crisis news, which for years hampered news desk efficiency. In the words of the Program Director: 'I have been fighting for so many years to get broadcasting space for newscasts. I know how important it is for the organization to know: we are changing the scheduling like this! Then everybody can focus on their job.' The experience that organizational bureaucracy may hamper operations was shared with the current heads of news. Due to bureaucracy and lack of organizational flexibility, crisis news had not received enough broadcasting space.

The impetus for change and the lessons learned from previous events was characterized by double-loop learning since it became obvious for SR that it had to provide more coverage of big news events to restore and maintain the image of itself as the main provider of quality news.

5 The Gothenburg riots started with a demonstration involving some 50,000 people in connection to a visit by US President George W. Bush and an EU Presidency summit.

Crisis response

SR's response to 9/11 differed from how the organization covered previous crisis news both regarding program scheduling and organizational structuring. For the first time, SR centralized the organization into a crisis management group. The group was led by the Program Directors. Normally, they have no operational role in news work. However, during 9/11 they were actively involved in rescheduling programs and restructuring the organization. The strong centralization of power to the Program Directors removed the normally independent channel directors from the decision making structure, especially those at the P1 and P4 channels that were used for live program broadcasts. This provided for a speedy restructuring of the organization. Consequently, the news program did not need to fight independent channels for broadcasting time. After the events of 9/11, the centralized decision making structure became institutionalized in planning documents (Sveriges Radio, 2002).

The Program Directors' own perception of their mandates is an important contextual factor that helps explain why the managerial group could centralize operations. The crisis group had not gathered before. The Program Directors, however, believed in their authority, which enabled them to surpass the independent channel heads. According to one Program Director, 'the responsibility is huge and the authority is boundless. I can make the decisions I want. I can order the people I want and the news desks that fall under my responsibility to do whatever it takes.' According to the other Program Director, clear organizational lines of division was a pre-condition for effective crisis response: 'People in this organization know the national Program Director is superior to the national heads of channels, and that I can make decisions I want on behalf of the local channels.' He knew from experience that SR's staff accepts authority: 'people fall into known roles and they question decisions to a very limited extent. There are never discussions about the line of command.' According to the heads of the channels that disappeared from the decision structure, centralization was accepted and necessary, since a decision on a joint live broadcast could not have been agreed upon between the heads of the channels themselves due to the strong independence in everyday work.

Organizational learning

Managerial inferences from experience were the most important factor explaining SR's response on 9/11. One of the Program Directors, while leading the news desk, had personal experience of not getting enough space for newscasts. These frustrating memories became an important pre-condition for the main decision taken on 9/11. Her frustration was based on the struggle to get airtime for extra newscasts on the various channels: 'It used to be a less flexible approach

and a rather formal decision making structure around things like this. [...] But we must use existing competencies and change our program scheduling to show [the audience] that we are on it.' The quote suggests that increasing organizational flexibility was an important lesson learned from 9/11 on how to increase abilities to broadcast extensively on crises. According to the head of news, previous experiences of failures were behind the decision to centralize news coverage and organizational structure. He emphasized that the most important things the managerial group did that day were deciding to broadcast jointly, forming the crisis group, and the fact that these decisions were made quickly, since 'the risk is – which has happened sometimes – that the decision to clear the schedule of other programs drags on.' Arguing along similar lines the Program Directors pointed to the fact that there was no planning in place except for the previous experiences from similar events: '[Previous events] have been exercises in handling these issues, and we have not managed all these events in a good way, but we have tried to learn and to evaluate these events.'

According to the same Program Director, successful crisis management requires top managers to be present in order to adjust the coverage to the situation at hand. Plans and procedures will not help in reaching the goal, 'rather, it is only about one thing: to be present and to be reachable.' For the Program Director the lesson was reinforced by the Gothenburg riots of 14-16 June 2001 when SR did not cover the event sufficiently. The Program Director blamed the response on her own lack of physical presence at SR that day, which prevented her from making necessary decisions. The painful experience taken from the riots was: 'We could have been better if I had been there.'⁶ The Program Director describes the gist of her crisis-induced lessons:

You cannot have fixed instructions. We have an apparatus and an organization with competent staff and the possibility to broadcast, distribute, inform, and expand the organization. So we should be able to solve it fast. We should have the competence to determine what measures are adequate.

After 9/11 some organizational changes were made at SR. These were based on ad hoc structures created that day. The biggest change was merging the news and current affairs programs. Another adjustment was a reorganization to centralize more power with the Program Directors at the expense of the channel heads (Resumé, 2002). Program scheduling was transferred from the channels to the central level and journalists were placed in subject-based groups instead

6 The matter was also discussed in private e-mails between the head of current affairs programs and the program director. The program director pondered why journalists working that particular evening did not broadcast more on the event. She concluded that 'I am partly to blame...' (e-mail from the Program Director, 2001-06-18. Author's translation).

of individual channels (Dagens Nyheter, 2002). The Program Directors' main motivation to enforce the change was to increase organizational flexibility:

This way I think the organization is finally working as it should. People now understand that [...] if we broadcast a two minute longer newscast, you might have to remove a 25 minute program. We do that now. Now heads of channels and programs understand that we must work to create this flexibility. That was not the case before.

An important aspect was to stress to P1 the need to adjust. A new head of P1 was appointed for that purpose: 'This new head of P1 understands that if P1 should continue to exist as a talk channel, we should use it as a channel that changes in accordance with big news events and becomes a news channel.' Evidently, cognitive learning in terms of inferences from experience in the minds of top managers promoted increased organizational flexibility – mainly by managerial presence and ad hoc decision making.

SVT – a decentralized crisis response

SVT is a big public service organization that during 9/11 was comprised of two analog channels, one digital and three news organizations. Compared to SR, SVT relied on policies and the day-to-day bureaucratic organization to cope with the event. Roles were defined according to specific responsibilities. For example the news desks controlled their own broadcasts, while the decision on when and where to broadcast was scheduled by a central planning department. Furthermore, during 9/11 the Program Director post was vacant and the deputy also acted as planning director. The top managerial group was made up of the Planning Director, the Director of News and Current Affairs and the head of the central news desk. The latter was responsible for central desk resources, and the director of news and current affairs took care of overall news program planning. However, no one in the top managerial team assumed responsibility for overarching scheduling.

Crisis trigger event

In contrast to SR, SVT's managerial group did not rely upon major lessons learned from previous events while responding to 9/11. Contrary to SR, which lacked policies for crisis news events, SVT had a firm policy focused on thoroughly worked through editorial newscasts broadcast at their ordinary times (mainly 7:30 and 9:00 pm). On 9/11 SVT stuck to their policy.

Unlike SR, which received good reviews for its management of the 9/11 crisis news event, SVT's reporting was heavily criticized.⁷ For the first time, SVT's main rival, the less established TV4, seriously competed for viewers.⁸ The director of news and current affairs at SVT explained how the terror attacks broke the viewing pattern: 'Even though we were still the biggest, TV4 was unusually large, which they usually are not. Normally the audience by tradition turns to SVT during big events, because it feels more reliable.' This view was reinforced by the head of news at SVT: 'The normal condition during crisis events is that the audience turns to SVT. They seek some sort of credibility here.' According to interviews with the managerial group, 9/11 was a traumatic experience and it became an impetus for organizational restructuring. As expressed by the director of news and current affairs: 'September 11 is carved into all of us. We will always remember September 11.'

The main reason for the critique was that SVT did not change its coverage enough and that it did not clear a channel to cover only the 9/11 story. Instead SVT jumped between its two channels to find spots on which to broadcast. The least experienced news program had to handle the bulk of reporting without additional resources. The pervasive criticism made SVT reassess its journalistic reporting principles. The policy to focus on thorough editorial products was replaced by a policy to show continuous presence to the audience. The director of news and current affairs explained the rationale: 'We might not have anything new to say, but we should stay with the issue [...] because the only thing that people want to know is if something new has happened, and if not, they want to know that too.' The value of showing presence trumped the previous policy of journalistic standards based on objectivity and accuracy, which is thus an example of double-loop learning.

Crisis response

It is striking that no one in SVT's managerial group perceived his or her role in terms of overall organizational responsibility. Each member focused solely on their own area of responsibility. Consequently, the managerial group had less influence on adjusting the organization ad hoc to the situation, at least in comparison to the managerial group at SR. Furthermore, SVT had a policy on how to broadcast big news events, which stated that it should direct resources

7 For instance Professor in Journalism Stig Hadenius (2001) evaluated the performance of SVT and TV4 in the most influential national Op-Ed page and concluded: 'TV4 did a better job than SVT'.

8 According to Media Monitoring in Scandinavia, SVT had 40.4 per cent of the audience and TV4 37.9 per cent on 11 September 2001. TV4 had an even larger audience than SVT on the time slots when SVT did not broadcast main news programs.

to ordinary news programs broadcast at regular times. The policy was not questioned during the acute response since the general perception was that it had always worked well during crises. That changed after 9/11. The main conclusion was that the organization did not work properly. Efforts were therefore made to overcome the flaws. Instead of relying on strong centralized managerial mandates to promote flexible response, decisions regarding extra newscasts were pushed further down the hierarchy. Decentralization then increased even further. The responsibility to do extra newscasts was removed from the relatively newly established news program at the SVT 24 channel, which was publicly criticized for failed reporting on 9/11. Instead, the responsibility for broadcasting extra news was assigned to one of the more established news programs. Previous big news event policies based on established news programs broadcast at ordinary times were replaced by a policy focusing on short newscasts.

Organizational learning

By not providing sufficient coverage of 9/11, SVT learned the same lesson that SR had already learned from previous incidents. The organization had to be adjusted to cope with the new task. In contrast to SR, adjustment did not include emphasizing strong managerial mandates and organizational flexibility, rather it entailed a new organizational policy on how to broadcast crisis news and how to restructure the organization to meet continuous-broadcast demands. The difference between the two approaches is worth noting: SR emphasized centralization, whereas SVT prioritized constructing a decentralized organizational response.

One of the main lessons learned was the importance of clearly establishing which news program should make extra newscasts, and moreover, how much extra news should be broadcast in response to a particular event.⁹ The ability to expand according to the magnitude of the crisis and to have pre-identified measures in place created a sense of security within the organization. According to the head of short newscasts, everyone in the organization now knows what types of measures should be instituted when crises occur. Another lesson learned on the same theme was to make the ad hoc current affairs program on 9/11 into a routine crisis response. The main idea was to avoid improvisation and rely on learned routines of crisis coverage. As stressed by the director of news and current affairs: 'We should not come up with totally new things for which there is no routine, but use the old safe cards.' The director of news and current affairs attributed the more coherent organization to (what she perceived as) the over-

⁹ For example: the first step is to extend the hourly three minute newscasts to fifteen minutes; the second step is to broadcast extra newscasts; and finally, when the news is really big, the schedule gets more or less wiped clean and a special crisis organization kicks in.

all successful response to the assassination of the foreign minister, when extra broadcasts had become a natural part of SVT's action portfolio. The head of short newscasts said that SVT now feels secure in handling big news events and that, 'I do not think that it will be a shipwreck as it has previously in history; 9/11 was one of those moments when most things went wrong.'

A main problem identified during 9/11 was the lack of a desk for producing extra newscasts. The policy of focusing on established news programs made the organization lack the mental preparation to cope with extra newscasts. Further, in connection to the murder of the Swedish Foreign Minister Anna Lind in 2003, the news and current affairs desks perceived coordination problems (Journalisten, 2003). According to the director of news and current affairs, in order to overcome this setback a 'crisis desk' was installed post-crisis aimed at creating an 'immediate synchronization on the same [organizational] spot.' The newly installed head of short newscasts described the organization as 'some sort of mini-crisis organization, where everyone nowadays knows what to do.' The extra broadcasting desk was incorporated into the everyday organization, and situated within an established news program (as opposed to 9/11 when it was located within the most recently established news desk). The head of news described the change as follows: 'it is better to use the everyday people. This is a lesson learned from other big news events in recent years.'

According to the interviewees, the main reason for removing one of the news programs was to increase organizational flexibility in reporting, since one of the main conclusions drawn from 9/11 was that SVT required a more flexible attitude to program scheduling. In contrast to SR, where flexibility was considered a result of centralized managerial decision making – which provided the ability to adjust to the situation at hand – SVT's take on flexibility was to institutionalize capacities to make short newscasts. As the director of news and current affairs recalled, the structure with the short newscasts 'is a way of thinking that is now institutionalized.' As the head of short newscasts puts it: 'today we are not afraid of such a situation, which we might have been a couple of years ago. There used to be confusion on how to do it. But today everyone knows – everyone has their role in this.' Another reason was to avoid top managerial involvement in live crisis response. According to the head of news, the most important change is that the news desk can now use its day-to-day structures for broadcasting extra newscasts. The main idea behind the re-organization was to keep the everyday organization during a big news event, but to 'strengthen it, expand it and give people the resources they need to work longer, better and faster.'

In contrast to SR, this sense of security did not come from increasing organizational ability for speedy decision making, but rather by spreading lessons learned into the organization by creating new policies and structures.

Strategic crisis management groups and their implications for learning

The main finding from the study was that the decentralized crisis management response organization relied on behavioral modes of learning by creating organizational policies and structures, while the organization with an ad hoc centralization style of response relied on a cognitive mode of learning by leaning toward individual inferences from experience. Based on these findings I propose that organizations characterized by decentralized crisis responses learn and implement lessons learned in a behavioral fashion, i.e. by creating new formal policies and structures. This mode of learning corresponds to the 'organizational learning argument' in regard to the discussion on 'learning agents'. The decentralized top managerial team perceived its mandate as weaker and it did not have the same trust in its ability for speedy decision making aimed at organizational restructuring as the centralized top-managerial team had. To compensate for this, lessons learned had to be spread and implemented into organizational structures and procedures so a routine response could be applied to a similar crisis situation. Accordingly, I propose that:

Proposition 1: A decentralized crisis management response is likely to lead to behavioral learning.

I further propose that organizations with centralized top managerial teams tend to rely on cognitive modes of learning to emphasize flexibility. Based on my cases, I assign the difference in learning to the fact that a managerial group that perceives itself as having a strong mandate relies on its ability to make speedy overarching organizational decisions in crisis. Accordingly it does not feel an urge to implement lessons by creating SOP's or new organizational structures. Organizational settings that transform into centralized managerial crisis groups tend to develop a cognitive mode of learning since learning is more likely to remain with the individual that drew the lesson without being disseminated throughout the organization. In accordance with the learning agent debate, the cognitive mode of learning corresponds to the 'individual learning' argument. Based on my conclusion from the two cases, I propose that top managers impact not only on the organizational response in terms of structure (e.g. decentralized or centralized response) but also on the way organizations learn from crisis through cognitive or behavioral modes. This leads to the following proposition:

Proposition 2: A centralized crisis management response is likely to lead to cognitive learning.

What are then the implications of the two modes of learning in terms of crisis management responses? In contrast to previous research on the dangers of centralized crisis management (Hamblin, 1958; Hermann, 1963; 1969; Billings et al, 1980; Staw et al, 1981; 't Hart et al, 1993; Benini, 1999), I found that the cognitive learning mode of the centralized managerial group promoted organizational flexibility to a larger extent than the behavioral mode.¹⁰ By building an ad hoc centralized response for crisis management, managers may quickly readjust responses to up-coming situations and pay attention to the specific nature of the response, especially if it is based on the notion of flexibility as an organizational norm (Silver and Mitchell, 1990:45).

However, centralization makes organizations vulnerable as they become dependent on the presence of top managers and their ability to make rapid and correct situation assessments. The absence of top managers might lead to a paralyzed organization lacking required competence to cope with crises, which is a generic vulnerability seen at organizations with a centralized crisis response (Boin et al, 2005; 't Hart et al, 1993). In these cases, crisis management may become a capability vested in specific managers and not spread out evenly throughout the organization. This may lead to shortcomings such as responses not anchored within the organization, or disagreements among organizational members regarding chosen measures. An aspect that facilitated the response in my analysis was that the roles of top managers and division line managers were well known and accepted. In line with what has been said above I propose that:

Proposition 3: Cognitive modes of learning promote organizational flexibility in crisis response (as long as the top managers who learned the lessons remain in the organization).

In contrast to the centralized response, the decentralized top managerial responses incite structured organizational reforms as a basis for dissemination of lessons learned throughout the organization. The advantage of such an approach is that crisis awareness and knowledge about action and strategy makes the organization less dependent on top managers to initiate and manage crises. This organization

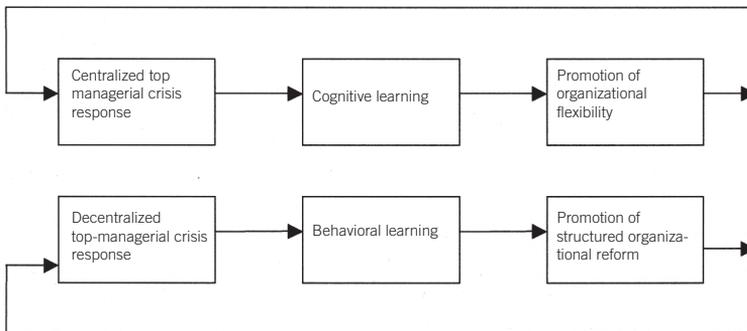
10 Prior studies in the field of disaster research have long dealt with the importance of flexible behavior in disaster response, often referred to as emergent behavior. For instance, the humanitarian and policy disaster of Katrina has been blamed on the overemphasis placed on structure to the detriment of flexibility after the 9/11 attacks (Harrald, 2006:265). However, Harrald (2006) argues that the practical structural reform of the US emergency management system and the social science researchers' emphasis on nonstructural factors such as improvisation, adaptability and creativity are not in opposition. Rather emergency response designers need to ensure that both discipline (structure, doctrine and process) and agility (creativity, improvisation and adaptability) are achieved (Harrald, 2006:257).

type is in general less dependent on individuals, since the behavioral mode of learning remains in the organization even if individuals that learned the lessons leave. However, this type of learning might also have some downsides. First, the behavioral mode of learning is contrary to the notion of flexibility in crisis response, since implementation is based on lessons learned from the last crisis, which might lead organizations to learn the ‘wrong’ lessons. The implications of learning such lessons will be exacerbated if lessons become embedded into organizational procedures and structures since they will be harder to alter than the cognitive learning of top managers located in individual managers’ minds. Second, research tells us that organizations with set policies on how to deal with contingencies show limited motivation in looking for new solutions, even in cases where such a response would be beneficial (March and Olsen, 1976; Nutt, 1984; Carley and Harrald, 1997). The comparably weak position of the managerial group will complicate adjustment to new situations since actions require support from affected divisions and staff. This kind of organization provides for a response that might lack in flexibility. Hence, my case analysis leads me to propose that a behavioral mode of learning may hamper flexibility and creativity in crisis response.

Proposition 4: Behavioral modes of learning hamper organizational flexibility in crisis response.

The propositions for further research are summarized schematically in Figure 1.

Figure 1. A framework of management, learning and implementation in response to crisis



With this framework of propositions I hope to generate further research on the connections between top managerial crisis teams, modes of learning, crisis response strategies and flexibility in different organizational settings. As the data set used in this study pertains to organizations in the media industry an

interesting question for further research is to explore further the applicability of these findings to other organizations from varying sectors of importance for crisis and emergency response.

Chapter 8

General discussion

Introduction

This chapter aims to discuss and contrast the findings from the empirical chapters in relation to the questions posed in the introduction and the research gaps identified in the literature review. In order to increase understanding of the phenomenon of crisis response and crisis learning in public organizations, I posed four specific research questions: 1) What mechanisms affect organizations' ability to restructure in order to cope with acute crisis management challenges?; 2) How does organizational rigidity and flexibility affect public organizations' crisis response and crisis learning?; 3) How can we analyze organizational learning during and after crisis and what criteria should be part of the analysis?; and 4) How do organizational management structures affect crisis response, learning and implementation? Different research strategies were used in the four studies to answer the respective research questions. The studies outlined in Chapters 5 and 6 were explorative in nature, as they suggested and assessed ways to study crisis management and learning processes. The studies presented in Chapters 4 and 7, on the other hand, were explanatory as they searched for explanations to why some of the organizations differed in their crisis response and learning outcomes. Each question worked as a point of departure for each of the four empirical studies presented in Chapters 4-7. Taken together the propositions presented in the empirical chapters are further deliberated upon in relation to themes suggested by previous research to impact on crisis management and

learning outcomes. These themes, which were also discussed in the review section of this dissertation are: 1) previous experience among managers and organizational members; 2) the degree of organizational adaptability (on a scale from rigidity to flexibility); and 3) the degree of centralization or decentralization in response. Further, this final chapter also deals with the findings relating to the conceptual categorizations of single- and double-loop learning and intra- and intercrisis learning.

In closing, I construct from the key hypotheses generated by the empirical studies a proposed framework of the crisis response and learning process. This endeavor is also an effort to shed light on the questions: 'How do public organizations respond to crises?' and 'How do public organizations learn from crises?', which were the overall research questions posed in the introduction to this dissertation.

The role of experience

In this dissertation I have argued that organizations play a key role in crisis response and crisis-induced learning. In the first empirical study of the dissertation I delved deeper into this issue with an aim to shed light on what specific factors affect organizational crisis management capacities. In dealing with this issue, Chapter 4 emphasized the importance of organizational culture. Structural aspects on the other hand were explored in Chapter 7. These formal and informal features influence how strategic managers and operational staff adapt to threats and crises, how they alter strategies in line with changing threat perceptions, and to what extent the organization follows suit and adapts in line with the crisis management strategy. Previous research posits that although organizational cultures and structures are usually understood as relatively rigid features, they may be altered as a result of experience (Popper and Lipshitz, 1998). This proposition is supported by the cases analyzed in this dissertation, at least in respect to timely shifts in organizational features at the advent of crisis episodes. Moreover, although the case analyses revealed a few instances of learning opportunities lost, the impact of prior experience on crisis response and crisis learning is also evident in several of the cases.

Empirically, the study draws heavily on the two organizational responses analyzed in the context of the 2001 and 2002 Stockholm blackouts. These cases provided an opportunity to study how two organizations act in response to crises when they have recent experience of crisis management and when they lack crisis experience. The dissertation draws to a considerable extent on these two case studies as propositions and conclusions presented in Chapters 4, 5 and 6 relate to the cases in question. The fact that the research design enables comparing of organizational behavior before and after crisis experiences led to

an unusually clear visualization of the otherwise abstract learning process. With this research design issue in mind it is hardly surprising that this dissertation sees experience as an asset with the potential to foster organizational resilience and individual awareness.

The role of experience was explored in some detail in Chapters 4 and 5. Chapter 4 presented a careful examination of three case studies of organizational crises in public perception. Highly varied response patterns among the three cases were found. Moreover, responses seemed to vary due to the management systems and styles, which in turn were affected by the organizational cultures. Culture, in turn, was at least temporarily influenced by previous crisis experience, which varied between the studied organizations. The Fully Adapting Organization (TV4) had purposefully cultivated an organizational culture with flexibility as a key value. On the other hand, the Semi-Adapting Organization (FOI) and the Non-Adapting Organization (Birka Energi) were characterized by expert cultures (academic and technical), which were not as easily adapted in the heat of the crisis.

These three different organizational crisis response and adaptability processes were used as ideal types to construct a typology of organizational adaptability in response to crisis (presented in Table 2).

The typology underlines the value of experience for crisis management. In the case of the Fully Adapting Organization, crisis experience was the backdrop against which resilience planning was established. Organizations with lesser experience of crisis found adaptation harder. In the mid of the continuum we find the Semi-Adapting Organization, which exploited vicarious experience from the US anthrax letter case to restructure the organization. However, vicarious experience was not sufficient for restructuring the organization into full crisis mode. Patterns of everyday bureaucratic and academic organizational culture on the operational level and the strategic level, respectively, obstructed the adaptation in line with the management strategy. Lastly, and completing the typology, the Non-Adapting Organization basically lacked prior crisis management experience. When the same organization was studied for the sake of the articles presented in Chapter 5 and 6, however, the case was different. Here it should be noted that the study in Chapter 4 only comprised the power company's response to the first crisis in 2001. By the time of the second crisis in 2002 the power company had fresh crisis management experience. At this time the organization and its members responded with intent to balance its technical culture. These efforts are described in more detail in Chapters 5-6.

An interesting question in regard to the typology in Table 2 is what it would take from a public organization to fit in the Fully Adapting Organization type cell (based on TV4's response to 9/11). In all probability, much like a high reliability organization, such an organization would need to be attentive to threats,

vigilant to changes in the external environment and primed toward the possibility of a crisis occurring (Roberts, 1989; Klein et al, 1995). Another way of interpreting the Fully Adapting Organization cell is that it signifies organizations with only a limited gap between the organization's everyday operations and its crisis management processes. A public organization that displays everyday management processes that resemble its crisis management processes is likely to have operational tasks and operational components that match its crisis management capacities. Examples of such organizations may be found among 'blue light sector' organizations such as fire brigades or police and ambulance services, but also in for instance the news media. Public service media organizations continuously evaluate their day-to-day operations (Olsson, 2008). By building cumulatively on experience they establish the organizational experience needed to adapt in order to broadcast and report on rapidly emerging threats and crises. In line with this discussion, the scale of prior crisis experience may be translated into how closely associated the crisis strategy is with regular strategy. According to the same logic, an organization that manages a crisis that is relatively close to everyday operations is likely to also possess a fairly large experience bank to draw lessons from. It seems reasonable to assume that TV4 was the most adaptive of the three organizations, because its crisis strategy fitted its day-to-day activities. This leads to the following proposition:

Proposition 1: The bigger the gap between everyday organizational strategy and crisis strategy, the more problematic the crisis adaptability.

The proposition points to the difficulties of making sense of uncertain situations as they unfold (cf. Boin et al, 2005; Weick, 1993). This is one of the biggest challenges to crisis managers. The difficulties of crisis sense-making were further discussed in Chapter 5. The study in question examined Birka Energi's and the Stockholm City command and control unit's responses to two black-outs through an analysis that distinguished between rigidity and flexibility in response. Findings from the two case studies indicated that public organizations tend to respond rigidly in the early stages of crises. Further, recent crisis experience tends to not impose differences in early responses to risk and crisis. Even at the time of the second crisis onset – when the organizations had prior crisis management experience – they acted rigidly. However, making generalizations on account of the study in question is difficult since it was based on only a one-country/two-case sample. Notwithstanding this caveat, the difficulties demonstrated by the two organizations in providing initial, rapid, flexible and effective response – even in a case of recurring events within little more than a year – is a reminder that crisis management experience is not a sufficient factor for organizational sense-making. This finding also leads to the following proposition:

Proposition 2: Public organizations with crisis management experience, as well as public organizations without crisis management experience, are likely to act rigidly in response to early warnings, signals and threats.

These findings may be interpreted as contrary to the findings related to the so-called crisis management proper phase in Chapter 5 as well as the findings from Chapter 4, which stressed the value of experience for crisis response. However, these findings are not necessarily divergent, at least not if we incorporate the appropriateness of the response into the equation. The rigidity patterns demonstrated by the Stockholm City command and control unit and Birka Energi, while they were managing the second crisis, were not dysfunctional. Rather, the fact that the incidents were highly similar; that only a short amount of time had passed between the crises; and that therefore only minor changes in the environment had taken place, made the rigid response based in prior experience a successful one. Hence, as empirical evidence from Chapter 5 indicated, the vigilance in crisis response displayed by the public organizations – once signals turned to noise – suggest that experience is especially important for producing capable organizational responses in crisis situations characterized by only limited uncertainty.

This kind of experiential learning shares characteristics with the concept of historical analogies, which refers to mental shortcuts based on prior experience to comprehend the situation at hand (Khong, 1992). Using analogies means that ‘actors recycle old solutions to new problems’ (Moynihan, 2008:351). Previous research states that a response based on historical analogies may become rigid since it may hinder deviation from previously tested measures and thus undermine improvisation, which is commonly known to be beneficial when managing crises (Moynihan, 2008; Brändström et al, 2004; Borodzics, 2004; Stern, 2001:215-216). Nevertheless, according to the examination of rigidity versus flexibility in crisis response and learning conducted in Chapter 5, a response based on experience and historical analogies may be efficient, at least when managing repeated incidents highly similar to initial events.

Indeed, the flexibility/rigidity analysis emphasized the importance of experience and analogical reasoning. When comparing the two organizational crisis responses before and after recent crisis experiences, I found that experience facilitated the response the second time around. For instance, the most critical lapse recorded in the process tracing and case reconstruction analysis of the 2001 crisis management episode: i.e. the time-consuming gap between operational rescue service and strategic interorganizational cooperation (see Deverell, 2003 for more details), did not reoccur during the second crisis when both organizations had fresh memories of crisis response.

Interestingly enough, the finding that a response based on historical analogies may be efficient (when managing repeated incidents highly similar to initial events) might be contrary to the argument presented in Chapter 7. This study was based on the responses of the media organizations SR and SVT to extraordinary news events and on lesson drawing at these organizations in the wake of 9/11. In the media organization study, I distinguished between organizations with set responses to crises based on formal planning and documented lesson-drawing, and organizations with crisis responses based on tacit knowledge and individual inferences from experience. Next, I claimed – based on careful process tracing and reconstruction of the two cases – that the organization type with set crisis management policies was likely to be more rigid, by avoiding improvisation and novel approaches. When compared to the findings in Chapter 5, these two somewhat contrary takes on set policies and crisis management lead to the conclusion that set policies may work if events are similar and if the environment has not changed drastically. As indicated above in the case of the Stockholm City command and control unit's and Birka's response to the blackouts of 2001 and 2002, since there were no radical differences between the incidents, the response based on crisis analogies reduced the threat and mitigated the repeated crisis. Such stability of organizations over time (due to the short time that passed between the incidents) is, however, rarely the case when studying crisis management processes. In general, new crises do not occur in the same way as previous ones (Roux-Dufort, 2007: 108). Hence, the specific circumstances regarding the case of the Stockholm blackouts, i.e. that the second incident was almost a repeat of the first, places it closer to a 'least likely case' than a 'most likely case' (Eckstein, 1975:118; Nohrstedt, 2007). The fact that the two Stockholm blackouts were unusually similar incidents also explains why responses based in inferences from previous experience were relatively successful.

Crises are unforeseen and unexpected. It is in this essence of crises that we find the challenge to organizations to adapt in ways that go beyond repeated behavioral patterns, planning and previous experience. This becomes evident when the responses of the city and the utility to the blackouts are contrasted against the media organization cases. In terms of the media organizations substantial changes occurred post 9/11 in parallel to the crisis experiences, not least in regard to the public's expectations on mass media and fast crisis coverage. Clearly, at least in the Swedish national perspective, the reporting on 9/11 set a new standard for crisis broadcasting. Expectations regarding the speed and quantity of reporting changed, as did awareness of the importance of crisis reporting (Olsson, 2008).

Another vital distinction between these cases is the issue of learning on the basis of one or two cases (as in the case of the blackouts) or on the basis of a

larger number of cases (as in the case of the media organizations). The broader the breadth of the experiential base, the more reliable the lessons learned. The breadth of the experiential base then has implications for theory development and generalization. Learning on the basis of a single incident means that responses are based on a single inference. Such learning may cause bias. Learning on the basis of two or more incidents – as demonstrated by the studies on the media organizations, whose managers referred to a gamut of crises that they drew lessons from – means that systematic experiential learning is taking place.

In summing up, the analyses of public sector organizations presented in this dissertation found that experience is an important driving force for crisis-induced learning. However, as far from all crises lead to learning, experience per se is not a sufficient variable for organizational learning from crises. For a learning response to crisis to be realized, the crisis needs to be understood as a frame breaking event (Kingdon, 1995). This was the case in the study of SR, SVT and TV4 during 9/11. Although the crisis responses were relatively close to day-to-day strategy and activity for the organizations under study, the event in itself was without doubt identified as a ‘frame-breaker’. This managerial framing provided for flexible cognitive processes aimed at post hoc change. On the opposite end of the spectrum we find the case of the power company Birka Energi after the first blackout in Stockholm in 2001. The utility interpreted the cable fire and blackout as an isolated event. The rigid interpretation thwarted comprehensive double-loop learning processes and set the stage for crisis repetition fourteen months later.

The role of flexibility

Crises per definition bring great uncertainty to the managerial realm, which in turn tends to cause changing conditions and assumptions for decision making and new demands from a variety of stakeholders. Thus, in line with prior research on crisis management (see e.g. Borodzics, 2004; Weick and Sutcliffe, 2007), it seems reasonably clear that flexibility – defined as the capacity to readily adapt to changing demands (Reason, 1997; Senge, 1990; Sharfman and Dean, 1993; Ford and Gioia, 2000) – will be fruitful for crisis response. This previous research finding is reiterated in my claim that it is advantageous for organizations to respond to crisis with flexibility as a guiding principle in the strategic managerial response as well as in the operational core. A flexible stance is likely to lead to new understandings and intentional adaptive behavior based on that understanding. Hence, organizational flexibility will be helpful for crisis learning in public organizations. This dissertation thus argues that organizational flexibility is a link between crisis response and crisis learning in public organizations. However, the relation between experiential learning and flex-

ibility is not as clear-cut as the relation between flexibility and crisis response. Prior research posits that experience can lead to a set response based on previous analogies which may equate to rigidity rather than flexibility (Moynihan, 2008). A problem here is that many studies tend to conflate the concepts of flexibility and creativity by stressing that a response based on flexibility diverges from the norm and thus from previous behavior and experience (Sharfman and Dean, 1993; Nutt, 1993). Unlike these claims, the studies presented in this dissertation found that flexibility indeed may result from experience (see also Flin, 1996; Klein, 1993). The crucial issue here is the number of inferences from previous experience (which was also emphasized in the previous section). The larger the number of inferences from experience used by the organization is, the more likely it is that the organization will present a flexible crisis response. This, in turn, should be understood as a sign of organizational crisis-induced learning (Reason, 1997; Weick and Sutcliffe, 2007).

Chapters 4 and 5 dealt explicitly with the degree of flexibility in crisis response and crisis-induced learning. First, Chapter 4 posed the question: What mechanisms affect organizations' ability to restructure in order to cope with acute crisis management challenges? More specifically this question related to how organizational cultures may affect organizational abilities to change strategy and adapt their strategic and operational levels to cope with crises. Second, Chapter 5 posed the question: How does organizational rigidity and flexibility affect public organizations' crisis response and learning (in the chronological phases of crisis lead-up, crisis management proper and crisis aftermath)? These questions are intertwined. In short, Chapter 4 explored both strategic managerial and operational adaptability to crisis triggers. Chapter 5 also dealt with crisis adaptability, but here adaptability was operationalized through a continuum of flexibility to rigidity in response. In essence then, the flexibility and rigidity concepts presented in Chapter 5 and the degrees of adaptability discussed in Chapter 4 are interchangeable.

Furthermore, Chapter 4 dealt with cultural aspects of adaptability in the initial stages of crisis. The study revealed how managers in three organizations with public service tasks were put under pressure to present a strategy to deal with the threat when a crisis occurred. The study demonstrated how managers are affected by the culture of their organizations during these sense-making processes and how organizational culture is affected by previous experiences of the managers. Chapter 5 also dwelled upon how experience affects adaptability in the initial stages of crisis (referred to as the crisis lead-up). The analysis concluded that public organizations with limited or no experience of crisis management are likely to react rigidly to threats. What is more, as underlined in proposition 2 presented above, the study posited that rigidity in response to

threats is the likely response also from public organizations with recent crisis management experiences.

The study presented in Chapter 4 indicated that organizational flexibility in crisis management may come as a result of centralization to top managers. This finding is interesting, not least since it is contrary to prior influential propositions such as for example the threat-rigidity hypothesis (TRH). The TRH, which was outlined in some detail in Chapter 5, posits that centralization of decision-making may be contrary to flexible threat and crisis management (Staw et al, 1981). On account of my small n case study I do not claim to dismiss the TRH. Rather, my findings point to the value of top managers in crisis response as they may use organizational centralization to fit top managerial strategy implementation with an operational crisis response. Further, as the analysis in Chapter 4 indicated, flexibility seems to be required for fitting managerial crisis strategies and managers' personal leadership styles to changing circumstances brought on by the crisis. Flexibility is also required for fitting the operational levels and staff dealing with the event to the new situation at hand. Thus flexibility is required throughout the organization and its hierarchies for an apt crisis response.

An interesting question in this regard, however, is if this means that flexibility is equated with success in crisis response. And further: if flexibility leads to success, does it also mean that rigidity is a likely recipe for failure? This dissertation answers the latter question negatively. A rigid response may be appropriate, at least under circumstances of no or minor environmental change (see also e.g. Staw et al, 1981). Regarding the former question, it seems reasonable to posit that flexibility will in most cases assist crisis management as the essence of crisis management includes responding to uncertain, dynamic and altering threats.

The typology of crisis adaptability (presented in Table 2) reiterated the importance of a flexible organizational culture to produce a flexible crisis response. At a closer glance we find that the organization with most flexibility incorporated into its culture focused more on promoting organizational flexibility in the crisis response. Before the crisis, the Fully Adapting Organization (TV4) defined its organizational culture in terms of flexibility and the managers' leadership styles and compositions were focused on promoting organizational flexibility. In addition, and relating to the structural side, the Fully Adapting Organization also had flexible contingency plans in place. The remaining organizations under examination then followed on a falling scale. The top managers at the Semi-Adapting Organization (FOI) were aware that the crisis response demanded increased flexibility. But in the midst of the crisis the bureaucratic expert organization culture could not respond sufficiently to the flexibility call. The Non-Adapting Organization (extracted from the Birka Energi case) demonstrated the least flexible approach to crisis. The utility did not pay attention to the need of

organizational flexibility until the crisis was over and the company was criticized for lapses in its management.

Chapter 5 also related to flexibility in crisis management by illustrating how crisis-induced improvisation tends to come about in the acute phase of the crisis management proper. In this context, improvisation was defined as a deliberate and temporal fit of design and execution of novel actions (Miner et al, 2001: 314; Chelariu et al, 2002: 142). In practice this means deliberately going beyond routine and standard operating procedures to address short-term emergencies (Weick, 1993; Roux-Dufort and Vidaillet, 2003), which presupposes a flexible approach to operations and crisis countermeasures. The analyses of both public organizations examined in Chapter 5 (during both events) provided evidence of organizational inquiry and creative improvisation in operational and managerial crisis response. However, results pertaining to the crisis aftermath were more ambiguous. On the one hand, the analysis indicated rigid learning patterns in the crisis aftermath. This finding was to a large extent based on the utility's response to operational maintenance and the issue of financial compensation for damages brought on by the blackout, which by the second crisis was managed in a sluggish and reactive manner. On the other hand, the case also uncovered five critical episodes of organizational learning. The episodes were: first, when the city launched a previously unusual public seminar debate after the first crisis; second, as the city merged crisis evaluation in 2001 into programs dealing with the societal preparedness and crisis management capacities; third, when the city instigated interorganizational discussions on the power company's strategies for dealing with the incidents; fourth, when the power company commissioned an external investigation into the incident; and fifth, as the power company reassessed system design and risk assessments. In essence, these noticeable occasions are empirical evidence of organizational flexibility (cf. Nicolini and Meznar 1995; Hedberg et al, 1976).

The episodes outlined above indicate that public officials and politicians may play important roles in the crisis aftermath, which is somewhat contrary to prior beliefs. Research on politicization tends to conceive political involvement as a constraint on flexibility and organizational learning (Bierly and Hämäläinen 1995; Brändström and Kuipers 2003; Commons 2004). However, my findings support prior research on the nexus between politicization and crisis-induced learning, stressing that political involvement in the crisis aftermath may facilitate learning provided that it encourages institutionalization of organizational lessons (Dekker and Hansén, 2004). In line with this discussion, the following propositions were outlined in Chapter 5.

Proposition 3a: Public organizations that are subjected to crises are likely to act rigidly in the crisis aftermath.

Proposition 3b: Politicization of public organizational learning processes in the crisis aftermath may increase organizational learning flexibility.

In line with the studies in Chapters 4 and 5 discussed above, the study presented in Chapter 7 also stressed the importance of incorporating flexibility in crisis response and crisis learning. In Chapter 7, I explored further the issues of crisis aftermath, learning and flexibility. The study presented a framework based on case studies of the public service media organizations SR and SVT and their responses to broadcasting challenges on September 11, 2001 and learning patterns in the wake of the attacks. The crisis responses and learning patterns were benchmarked against the response to the murder of the Swedish Foreign Minister Anna Lindh in 2003. The framework indicated that the way organizations structure their crisis responses impact on the crisis learning patterns. In particular, as previously depicted in Figure 1, the framework showed how different organizational crisis response in terms of the degree of centralization, impacted on the structure of the learning implementation design. More specifically, I claimed in the study that arrangements for implementing lessons from crises in organizations seem to vary in regard to the cognitive-individual or organizational-behavioral structure. Further, this structure affects how flexibility becomes infused into the designs, and thus how it influences the level of formal design in the implementation of lessons learned from crisis. The study also suggested that a behavioral mode of learning that takes the form of developing formal policies and structures may be contrary to flexibility in crisis response. This finding supports previous research, which indicates that a structure-laden response based on SOP's might lack flexibility (Smart and Vertinsky, 1977:654; Carley and Harrald, 1997; March and Olsen, 1976; Nutt, 1984).

The SVT case analyzed in Chapter 7 is an example of implementation of formal structures based on crisis-induced lessons. Such experiential learning implementation is risky if lessons lean on a single inference. The fact that the essence of a lesson pertained to a previous crisis does not mean that it will pertain to another. The next crisis is likely to be different from the previous one and the external environment along with the public's expectations are likely to have changed. In other words there is an evident risk in investing in fixed plans, planning and structural reorganizations. There are no guarantees that structured lessons set in plans are adequate. If lessons become embedded into organizational procedures and structures, implications may be exacerbated. Such lessons are harder to alter than for instance top managerial cognitive learning vested in the minds of a number of individual managers. This learning pattern was demonstrated by SR, the second case in the study. In sum, behavioral structural learning approaches are rigid compared to cognitive analogical approaches, which are more flexible.

Notwithstanding the risks involved in set planning and predetermined crisis management, such a response may under certain circumstances be advantageous. Set policies may work if they are developed from the management of prior crisis episodes that were similar to the crises in which the developed plans will be used, and if the environment has not changed dramatically between events. Interestingly enough, these preconditions were noticed in the Stockholm blackouts case. The case entailed two very similar events that affected the same organizations in a limited scope of time. In line with the discussion above pertaining to the study in Chapter 7 and as indicated in the examination of the case explored in Chapter 5, the following proposition is presented:

Proposition 4: A rigid crisis response based on set crisis policies may be effective if the crisis in question is similar to previous crises and if the environment has not drastically changed.

Returning again to Chapter 7, the analysis there concluded that the behavioral mode of learning may hamper flexibility and creativity in response, as opposed to cognitive learning. Cognitive modes of learning, on the other hand, may promote organizational flexibility in crisis response, at least as long as the top managers who learned the lessons remain in the organization. The rationale behind this finding is the following: An organization with a managerial group that holds a comparably weak position will find it hard to adjust to new situations since adjustment also requires support from organizational divisions and staff. Such support may be difficult and time consuming to muster if actual and interpreted mandates are limited. This finding, in turn, leads to the following proposition:

Proposition 5: The way in which organizations implement their crisis-induced lessons, in terms of the degree of formal to informal reform in learning implementation design, will affect the degree of organizational flexibility in the next crisis response.

The proposition is a comment on how different types of learning processes promote flexibility. It is an argument for flexibility in crisis management planning and against a 'one size fits all' response to crisis (see Weick and Sutcliffe, 2007: 66f). As organizations vary in their structures and cultures as well as in their previous experiences, various solutions are likely to apply differently to different organizations. Hence, managers are advised to fit crisis response structures to the characteristics and experiences of the organization in question.

To summarize: flexibility understood as the capacity to readily adapt to changing demands is a key capacity for crisis management and crisis learning. It is required to mitigate regular public sector ambiguity as well as crisis uncer-

tainty. However, a single case experience does not necessarily improve organizational flexibility, but an organization that experiences a number of crises and that has the learning capacity to reflect on and process those experiences is more likely to react according to a flexible, experientially-based response when faced by a new crisis.

Centralization and decentralization

This dissertation posed two questions that relate to the issue of how the degree of centralization in management affects the processes of organizational crisis response and crisis-induced learning. Chapter 4 took an interest in what mechanisms affect organizations' ability to change strategy and adapt their strategic management and operational levels to deal with acute crisis management challenges. Chapter 7 probed a similar problem. Here, however, the focus shifted from the initial crisis response phase to the crisis aftermath of learning and reform implementation.

In an effort to answer the question 'how do organizational management structures affect crisis learning and implementation', Chapter 7 connected two learning modes (cognitive and behavioral) to the role of managerial groups by distinguishing between centralized and decentralized top managerial groups. The empirical study covered two public service media organizations (SR and SVT) and their responses to scheduling and reporting challenges of 9/11 (and to some extent the response to the murder of Anna Lindh in 2003). When analyzing the responses, I found that SR provided an ad hoc centralized managerial crisis management response. Decision-making power was vested in the two Program Directors at the highest hierarchical level. They, in turn, relied on cognitive modes of learning by utilizing their individual inferences from previous crisis experiences, and by storing the individual lessons learned in their minds. In doing so, the Program Directors purposefully prioritized flexibility in the learning implementation. This indicates that top managers' reliance on individual inferences from experience may foster a flexible approach to crises given that the bank of experiences is continuously updated and reflected upon. Based on the results of the SR case study, I proposed the following proposition:

Proposition 6: A centralized crisis management response is likely to lead to cognitive learning

However, as argued in Chapter 7, response structures based on individual managerial experience may make organizations vulnerable, as their ability to make rapid and correct situation assessments and take apt action hinges upon top managerial presence. Organizations with centralized ad hoc structures in place

might become paralyzed in the event that key top managers are absent (Boin et al, 2005; Hart et al, 1993). In highly centralized organizations, crisis management may become a capability vested solely in a few key managers. In these types of organizations bottlenecks and tardy emergency response may appear, especially if key managers are absent. Therefore it is favorable for the organization to have roles and mandates well known and accepted. This is another case finding from the analysis presented in Chapter 7.

The analysis also revealed how SVT provided a decentralized approach to crisis management within the management group. The usually influential Program Director post was held by a deputy who also held the important post of Planning Director. Decisions were taken collectively without a specific overall mandate awarded to specific team members. The response relied on behavioral forms of learning by creating new formal policies and relatively set structures. The description and discussion above lead to the following propositions:

Proposition 7: A decentralized crisis management response is likely to lead to behavioral learning.

Propositions 6 and 7 do not entail that learning always happens after crisis. Rather they are a comment on how the degrees of centralization in crisis response affects the way organizations learn from experience. The logic behind the propositions is that centralized responses lead to lessons that are channeled through the minds of the top managers. This learning response corresponds with cognitive learning. An organization that relies on a decentralized crisis management response, on the other hand, needs to create more structures for learning in the form of plans and policies spelling out how to act in the event of a crisis. This, in turn, corresponds to behavioral learning.

In the next step of the analysis, the organizational outcomes of the centralized and decentralized managerial responses were used as ideal types in a construct framework of crisis response and learning implementation. The framework as presented in Chapter 7 (and visualized in Figure 1) outlined a cognitive and a behavioral way for managerial team compositions to impact on learning, which in turn affects future organizational crisis response. The study indicated that a decentralized managerial response may incite structured organizational reforms, which sets the stage for the dissemination of lessons learned throughout the organization. Widely distributed crisis awareness and knowledge about action and strategy makes the organization less dependent on top managers to initiate and manage crisis responses. This kind of redundancy may be advantageous for crisis response. Moreover, this organization type is in general less dependent on individuals and their experiences, since the behavioral mode of learning will

remain in the organization even when individuals that learned are no longer members of the organization in question.

I used parts of the findings in Chapter 7 to discuss how centralization and decentralization in crisis management design and process influence organizational outcomes. The study indicated (similar to what was found in Chapter 4) that centralization may promote organizational flexibility in crisis response. This somewhat counterintuitive finding, given previous research on centralized crisis management (Hamblin, 1958; Hermann, 1963; 1969; Billings et al, 1980; Staw et al, 1981), is a comment on the degree of centralization at the same time as it is a comment on the importance of roles, mandates and expectations. Further, as Chapter 7 illustrated, centralization to strategic top managers may lead to adaptability in crisis response. The empirical support for this finding points to the role of experience and reflective management. Mandates in the SR case were clearly appreciated firstly by the actual managers, and secondly by the rest of the organization. The importance of matching mandates, roles and tasks is also emphasized in Chapter 4, which found that decentralization of strategic issues to operators may be contrary to adaptability in crisis situations. In addition, unlike findings drawn from previous research on HRO's – where operators are responsible for organizational output and managers are confined to their administrator role (Roberts, 1993), most mainstream organizations employ managers that on a day-to-day basis manage assignments similar to crisis management tasks. Examples of such tasks include keeping a strategic outlook, accessing strategic information, interacting with stakeholders and managing public expectations (see e.g. Weick and Sutcliffe, 2007).

Rather than developing designs for centralization or decentralization in crisis management, then, it seems more fruitful to prioritize a separation of strategic and operational tasks and roles. Given the relative resemblance of strategic management tasks and crisis management tasks suggested above, operational and strategic roles should be more likely to become blurred in an organization that responds to crisis by decentralization compared to an organization that responds in a centralized way.¹ As the case study of Birka Energi's response to the 2001 Stockholm blackout (presented in *inter alia* Chapter 4) indicated, decentralized crisis management response may run the risk of blurring the lines between operational and strategic issues. However, this does not entail that cen-

1 However, organizations with centralized crisis responses also run the risk of blurring strategic and operational tasks. Here the most evident risk is that managers may take on operational tasks, which may be contrary to effective and constitutional crisis management. One of the most blatant cases of such centralization in the Swedish context is found in the case of the West German Red Army Faction terrorist seizure of the West German Embassy in Stockholm in 1975. At the time the Swedish Minister of Justice took on an emergency operational role by managing direct conversations and negotiations with the terrorists (Hansén, 2007).

tralized responses cause flexibility. For the centralization-flexibility hypothesis to be valid, managers should be sufficiently mandated. Mandates and roles need to be communicated to organizational members and embedded in the managers' self image. These findings find further support in the framework explored in Chapter 7. The framework suggested that the self-perceived mandates of the managerial group are of importance when explaining the degree of crisis-induced learning in organizations. This finding is based on how SR's managers perceived roles and mandates in the organization, and not least on the strong and self perceived mandates of the two Program Directors at SR. However, as the study is based on limited empirical data, it would be desirable to see further studies on this topic. In any event, as indicated in Chapter 7, this dissertation argues that self-perceived mandates are advantageous for an apt centralized crisis response. Based on the crisis responses of the two media organizations, I further proposed that a group with a strong mandate may rely on its ability to make rapid and overarching organizational decisions during crisis. These managers are therefore not likely to feel the urge to implement lessons by creating new formal structures in terms of policies or procedures. In a similar vein, a top managerial team which perceives its mandate as less strong will be more likely not to trust fully in its ability for fast decision making aimed at restructuring the organization. The lack of trust and mandate may instead be compensated for by implementing and disseminating lessons into organizational structures and procedures aimed at constructing a routine response that may be applied to future crises.

Much like the two cases depicted in Chapter 7, the three organizational crisis responses analyzed in Chapter 4 also differed in terms of centralization. Placed in the typology of three temporal organizational responses to crisis (previously presented in Table 2), the different types of responses suggested a continuum of adaptability in crisis response. The typology indicated that organizations with strong centralization of decision making power within the top managerial body (the Fully Adapting Organization, TV4) are more ready to conduct a situational adaptation. Placed in the middle of the continuum was the Semi-Adapting Organization (FOI) in which managers tried to centralize the response, but where the feasibility of the operation was related to the strong organizational culture (democratic expert culture in the present case). At the end of the continuum was the Non-Adapting Organization (Birka Energi), which did not change its day-to-day strategy and working ways and thus did not centralize authority.

Based on this typology, I concluded that top managers are crucial for crisis management response as they are responsible for indentifying new stakeholders and for managing manager-stakeholder relations. This is important from a crisis

response perspective, as crises bring new stakeholders to the fore (Acquier et al, 2008; D'Aveni and Macmillan, 1990).

Further, the study found that for an apt top managerial crisis response, managers need to adjust their leadership to fit new strategies related to the crisis response. Existing organizational culture may be a hindering or an enabling factor in this respect. If culture is seen as a hindering factor for adaptability, it can be advantageous for strategic management to actively balance the organizational culture in its crisis management response (much like Sveriges Radio's response to 9/11 depicted in Chapter 7 or Birka Energi's response to the second blackout in 2002 depicted in Chapters 5 and 6). These findings point to the importance of establishing awareness of organizational behavior and of structural and cultural factors likely to affect collective thought and action. However, balancing organizational cultures in the heat of crisis is difficult (Schein, 1992; Meek, 1988) and may cause value conflicts. Such conflicts may be avoided by engaging in discussions on cultural shortcomings beforehand and anchoring the results of such discussions within the organization.²

In sum, it is difficult and probably not that rewarding to argue in favor for or against the relative appropriateness of a centralized or decentralized response to crisis. The appropriateness of a crisis management response is contextually bounded. To be able to respond in accordance with the organization's capacities and preconditions and stakeholder expectations, it seems more feasible to balance centralization and decentralization in organizations. Awareness of the weaknesses and the strengths inherent in both types of response is required for state of the art organizational crisis management and learning.

Intra- and intercrisis learning

The present dissertation has delved into the issue of learning from crisis. Learning from crisis in this respect relates to learning that takes place during the management of a specific crisis as well as learning that takes place after the crisis in question. Chapter 5, and in particular Chapter 6, emphasized a distinction between the processes of intracrisis learning – learning that goes on during crises to improve current response – and intercrisis learning – learning processes that occur after crises to improve reliability and capacities to deal with future crises (Moynihan, 2008). The research question that related to this issue read: How can we analyze organizational learning during and after crisis and what criteria should be part of the analysis? The rationale behind this question – and a key

2 One way to engage the organization in such discussions in practice is via scenario training games and simulation exercises (Boin, Kofman-Bos and Overdijk, 2004; Wenzler and Chartier, 1999).

claim of this dissertation – is that the relationships between crises, organizational crisis management response and learning are understudied (Carley and Harrald, 1997; Nohrstedt, 2007; Smith and Elliott, 2007). Research on learning under crisis conditions, i.e. research on intra-crisis learning, has been even more unusual (Moynihan, 2008: 352). Therefore this dissertation addressed processes of intra-crisis learning as well as processes of intercrisis learning. Moreover, in an effort to develop theory on the relation between the two types of crisis learning, I attempted to examine these processes in conjunction. These attempts were outlined in Chapters 5 and 6.

An underlying assumption behind the studies was that individual learning is most commonly recognized as a lifelong and ongoing process. Therefore it is peculiar that learning theories linked to crisis management so far have dealt almost solely with post crisis learning, while learning that goes on simultaneous to the crisis management process has not been given the same attention. Consequently, the relation between crisis and learning has been discussed in regard to the aftermath stage, while less is known about how crises affect learning in the emergency phase of the crisis management process. Hence, in Chapters 5 and 6, I tried to find ways to bridge the gap between the acute-phase crisis response and the aftermath of reform, and how these processes affect organizations' crisis management and learning capacities (seen as an interwoven process).

In Chapter 5, I examined the crisis management and crisis learning of two Swedish public organizations during a sequence of two failures using a framework of rigidity versus flexibility in response. The study dealt with how organizations restructure and adapt to face crisis challenges and how they make use of crisis-induced lessons from one crisis to the next. Chapter 5 (much like Chapter 6) also argued for the need of increased understanding of the process of crisis-induced learning in the acute crisis phase. The empirical basis of both studies was Birka Energi and the Stockholm City command and control unit's management of the 2001 and 2002 Stockholm blackout. These organizations had limited previous crisis experience. The only event that had been important in this regard was Y2K (when nothing out of the ordinary happened). This had implications on the ratio of intra- versus intercrisis learning. Creative and novel ideas took the form of improvisation during the first crisis management proper, while similar activities the following year were based on prior crisis experience and thus became crisis-induced learning. Hence, according to the definitions presented in the present dissertation, previous crisis experience becomes the differentiating factor between improvisation and intracrisis learning.³ Based on

3 This perspective differs somewhat from other approaches. For instance Moynihan (2009) emphasizes the importance of learning remaining collective and embedded while improvisation is seen as individual, ad hoc and temporary.

this discussion, and from the analysis presented in Chapter 6, the following proposition was generated:

Proposition 8: Organizations with recent crisis coping experiences are more likely to initiate comprehensive intracrisis learning in the midst of the crisis than those that lack recent crisis experience.

The proposition is on the one hand a cautionary note regarding the short life span of singular experiences, and on the other an argument for the value of experience, which also is a key finding of the dissertation. This does not mean that organizations without recent relevant experiences cannot learn during crisis. In two recent studies of the outbreak and containment of Exotic Newcastle Disease among poultry in the state of California in 2002, Moynihan (2008; 2009) presented empirical evidence of crisis learning where organizations lacked previous experience to fall back on. In this case continuous reflection and analysis regarding actions and procedures triggered intracrisis learning. In line with Moynihan's studies, my analysis presented in Chapter 7 indicated that intracrisis lessons, if implemented carefully, may become standard operating procedures for organizational members to act in accordance with during the next crisis as well as in everyday activities. Besides the structural implementation, the study also found that crisis-induced lessons may become institutionalized in the minds of organizational members as historical analogies that provide the basis for informal behavioral guides.

In addition, the analysis presented in Chapter 5 found that creative improvisation and organizational learning processes are not necessarily less likely to come about in the acute operational crisis management phase typified by time pressure and clashing values, than in the aftermath phase characterized by relative ease and time for reflection. From these reflections, I drew the following proposition:

Proposition 9: Public organizations with recent crisis management experience are as likely to produce creativity and learning in the acute phase of crisis response as in the crisis aftermath.

This proposition is somewhat contrary to prior crisis management research. Research in line with the influential 'crisis reform thesis' sees the crisis management aftermath as the period in time that is the most fitting for lesson-drawing and implementation. The 'crisis-reform thesis' argues that 'key institutional constraints that militate against non-incremental reforms are temporarily relaxed in the immediate wake of crisis' (t Hart and Boin, 2001:39). However, as displayed above, this dissertation has discovered empirical evidence indicat-

ing that chances for learning in the crisis response and in the crisis aftermath are likely to be equal.

Triggered by the underlying intention to discuss the distinction between intra- and intercrisis learning, among other things, Chapter 6 posed the seemingly generic question: When is crisis-induced learning carried out? The subsequent analysis then showed how the first blackout in Stockholm in 2001 only promoted a few instances of lesson-drawing during crisis from the two examined actors (the city's command and control unit and the power company). Most intracrisis lessons were instead initiated during the second crisis. Possibly, these lessons were at least in some respects connected to contemplations brought to the fore by the first crisis. Surprisingly enough however, the examination did not indicate a significant difference in the number of double-loop lessons drawn during crisis, compared to double-loop lessons drawn post crisis, which suggests that organizations which lack crisis experience are unlikely to suddenly increase intracrisis lesson drawing. Instead organizations with limited or no crisis management experience are likely to become tangled up in operational crisis management to such an extent that they will not find time for intracrisis learning. If crisis managers do grasp the opportunity, however, creativity and reflection to learn during the crisis – and implementation of such lessons – will not necessarily come harder than implementation of lessons post crisis. Thus Chapter 6 demonstrated that there is not necessarily a difference in the ratio of implementation of intracrisis lessons compared to intercrisis lessons.

To summarize: this dissertation has embarked on a path to bridge the gap between emergency crisis response and the aftermath of reform, and how these processes affect organizational crisis management and learning outcomes. Contrary to commonsensical expectations, and unlike what has been indicated by prior investigations into the 'crisis reform thesis', the case study analyses presented in this dissertation indicates that there are no vast differences in the chances for learning in the phases of crisis aftermath and in the more complex and stressful phase of crisis response.

Single- and double-loop learning

The constructs of single- and double-loop learning are possibly the most well known concepts of organizational learning theory (Lipshitz, 2000). The concepts have an evident appeal to practice and scholarship. Interestingly enough, the practitioner and academic realms seem to differ in how the two learning processes relate to one another. In the literature, there is an inclination to disregard evidence of single-loop learning in favor of double-loop learning (Huysman, 2000:141). In practice, on the other hand, attention given to single-

loop learning tends to remove attention from double-loop learning (van Duin, 1992; Argyris and Schön, 1996).

This dissertation has argued for the value of analyzing single-loop learning for theory development and practice. In line with this undertaking I posed a research question in Chapter 6 that related directly to the conceptualization of learning in single- and double-loop learning processes. The question read: How can we analyze organizational learning during and after crisis and what criteria should be part of the analysis? The study then presented an exposition of basic theoretical concepts useful in the crisis-learning analysis. Single- and double-loop learning are examples of such concepts. Furthermore, Chapters 5 and 7 also related explicitly to the distinction between single- and double-loop learning as a means to separate incremental learning from collective structural and cultural learning based on crisis experience.

With a firm base in the concepts of Argyris and Schön, among others, the study presented in Chapter 6 proposed a conceptual framework for studying organizational crisis-induced learning processes. The framework was tested on a case study of crisis-induced learning at two public organizations, viz. Birka Energi and Stockholm City command and control unit. The study discussed the relation between single- and double-loop learning processes. It also underlined that the two learning processes are not contrary to each other or mutually exclusive (Argyris and Schön, 1978). However, double-loop efforts may cause actors to overlook useful single-loop lessons (see also van Duin, 1992; Argyris and Schön, 1996). Likewise, giving much attention to single-loop lessons may cause organizations to ignore valuable double-loop learning. Thus what kinds of lessons are learned, and what kind of learning processes are invested into, may have profound effects on lesson implementation and what degree of reflection and effort are invested into learning processes in the wake of crises.

Furthermore, I used the concepts of single- and double-loop learning as types of learning processes and answers to the question: What do organizations learn from crisis? From an in-depth examination of the learning processes at two public organizations, the study found support for the claim that crises tend to trigger inquiries into operational errors rather than inquiries into fundamental norms and procedures (see also e.g. van Duin, 1992). Moreover, the study stressed the importance of not neglecting such evidence of single-loop learning. For theory development as well as for practice, single-loop learning processes and findings may be just as important objects of analysis as double-loop learning processes – not least since there is more data available regarding the former. Accordingly, the learning analysis presented in Chapter 6 showed organizations mostly drawing lessons of the single-loop learning type. In addition, the processes of double-loop lesson drawing that were analyzed were not notably more reflective than the processes of single-loop learning. Further the

double-loop lessons did not relate to day-to-day organizational norms or procedures. Rather they mostly relate to organizational working procedures during crisis. These findings served as the basis for the following proposition:

Proposition 10: Organizational crisis-induced double-loop learning is more likely to pertain to specific crisis procedures and structures rather than to general organizational norms and policies.

According to the proposition, adapted crisis management procedures are a more likely result of crises than changed norms or structures related to everyday work and strategy. This proposition then implies that a crisis is unlikely to fundamentally alter an organization.

In Chapter 6 I maintained that the distinction between single- and double-loop learning has several virtues. For instance it may assist learning scholars to operationalize the complicated and abstract learning concept (cf. Berends et al., 2003; Levy, 1994; Stern, 1997). However, the study also claimed that the conceptualizations may underestimate the crucial distinction between reflective and mechanistic learning. A related issue is to distinguish learning from less reflective change. Both single- and double-loop learning presupposes some kind of cognitive reflection. But as the analysis reiterated, such critical and deeper reflection is not the conventional crisis response (Staw et al, 1981; Sharfman and Dean, 1993). Instead, managers tend to resort to reflex and mechanic adaptation, rather than engaging in reflective and analytical investigations when responding to and learning from crises. The lack of reflection in the organizational responses to the Stockholm blackouts was supported also in the examination of what was the focus of learning. Here I found evidence of organizations failing in the complicated area of crisis prevention, but instead learning lessons in the more straightforward task of how to act at the event of a crisis. Further, the public organizations under study prioritized issues of resilience and crisis management capacities rather than preparedness for unanticipated events (see Wildavsky, 1988).⁴ Based on these findings, the following proposition was put forth:

Proposition 11: Organizational crisis-induced learning is more likely to pertain to how to act in the event of a crisis than how to prevent future crises.

⁴ According to Wildavsky (1988), the focus on avoiding error by means of anticipation, rather than encouraging resilience through trial and error, has increased risk among the public instead of decreasing it.

To summarize: analyses of the learning patterns of the public organizations under study in this dissertation propose that the bulk of organizational lessons from crisis are single-loop learning rather than double-loop learning. Further, it seems that organizational crises do not necessarily change organizations in their structural or cultural foundations, nor do they affect everyday work and strategy. Instead, crisis-induced double-loop learning tends to affect procedures and protocols designed to improve future crisis management.

Summary

The scope of this dissertation has been to generate new propositions on the relation between crisis response and crisis-induced learning in public organizations. From four empirical analyses based on six case studies, I distinguished a number of salient propositions about the crisis and learning process. Taken together these propositions should be seen as a contribution to new knowledge on how public organizations respond to and learn from crises, which in essence was the purpose of the general research questions posed in the introduction to this dissertation.

In closing then, what are the implications of my findings for crisis response and learning at public organizations? As previous research has asserted and as this dissertation has further indicated, most public organizations are not designed to look for trouble (Boin, 2004a; Weick and Sutcliffe, 2007). This means that many public organizations will find it difficult to detect and respond to early warnings, signals and threats. As this dissertation has shown, this weakness does not only apply to organizations that lack previous experience of crisis management. Public organizations with recent experiences of managing crises are also likely to act rigidly in the phase of crisis incubation. As indicated by the Fully Adapting Organization in the typology presented in Table 2, however, there are organizations that find it easier to adapt to threat. A caveat should be mentioned here. The case study that this cell in the typology is based on differs slightly from the remaining public organizations of the study as it is smaller and more streamlined in its day-to-day operations.

The relatively bleak conclusions relating to rigidity in initial crisis response at organizations – irrespective of if they have recent crisis management experience or not – are complemented by more optimistic findings on the relation of crisis, experience and learning. One or two crisis experiences do not necessarily mean that organizations will respond more vigilantly in the crisis lead-up phase. However, this dissertation also stressed the value of prior crisis management experiences for crisis management proper and crisis learning. The claim referred to learning on the basis of one or two cases – as in the case of Birka Energi, the city of Stockholm and FOI – and even more so to learning on the basis

of a larger number of cases – as in the case of the media organizations where informants referred to a number of crisis experiences as instrumental in shaping organizational crisis response. Hence, I conclude that the broader the breadth of the experiential base is, the more reliable are the lessons learned. This claim also relates to the value of a close association between crisis strategy and regular strategy for adaptability to crisis mode. Organizations subjected to a crisis that resembles its daily operations are likely to preserve a string of experiences that may be used as crisis management repositories.

Several of the analyses in this dissertation also stressed the value of flexibility in organizational crisis response. Organizational flexibility is understood as a vital link between crisis response and crisis learning in public organizations. Further, the dissertation posits that an organizational crisis response based on flexibility in the strategic managerial level and in the operational level will be beneficial, as crisis response means responding to uncertain and dynamic threats. However, a rigid response may also be an appropriate response to crisis, at least during crisis episodes that display no or minor environmental change.

The six cases of public organizations portrayed in the four studies characterize different types of organizational crisis responses and learning patterns. They either presented responses based on centralization or decentralization and characterized by organizational flexibility or rigidity. The case studies candidly pointed out shortcomings as well as virtues with both designs. Further, the dissertation questioned the notion of learning as a process occurring in the aftermath of crises. This idea was developed by studying crises as they occurred through process tracing and case reconstruction methodology. The design led me to avoid the ‘learning as a post-crisis activity bias’. Instead I found that much innovation and learning occurs during the relatively acute crisis management phase characterized by value conflict, time shortage and uncertainty.

Lastly, this dissertation has demonstrated how learning from crisis experience in public organizations to a large extent is signified by single-loop learning. In addition, when the organizations did engage in double-loop learning, these lessons did not pertain to everyday work, procedures or norms. Rather they related to developing specific procedures and structures planned to come into play in the event of a new crisis. In the long run this indicates that crisis induced learning in public organizations tends to deal with issues of how to act in the event of a crisis. This does not, however, indicate that these organizations learn how to prevent future crises.

Proposing a framework of crisis response and learning

This dissertation has been based on case studies limited in numbers albeit not in scope. This led me to paint a relatively broad-brushed picture of the crisis response and crisis-induced learning process in public organizations. In the dissertation I have distinguished a number of propositions and findings from the empirical chapters, which are also significant factors that should help us understand and assess the process of crisis response and crisis-induced learning in public organizations. In closing, I wish to present an attempt to bring these factors together to comprise a visual schematic of the key variables of the study. This schematic is presented in Figure 2. It should be seen as a way to deal with ambiguities concerning the nature of crises and crisis management processes and to arrive at more sensible conceptualizations of main concepts (cf. Mitroff et al, 2004).

The proposed framework was developed through an abductive research strategy that entailed cross-fertilization of inductive and deductive approaches. It is based on the inductive process tracing and case reconstruction of six case studies, which in turn, were further analyzed through the use of constructs selected from previous research and outlined in the literature review. In other words, the framework is based on the theoretical concepts that are focused upon in the four empirical studies presented in Chapter 4-7.

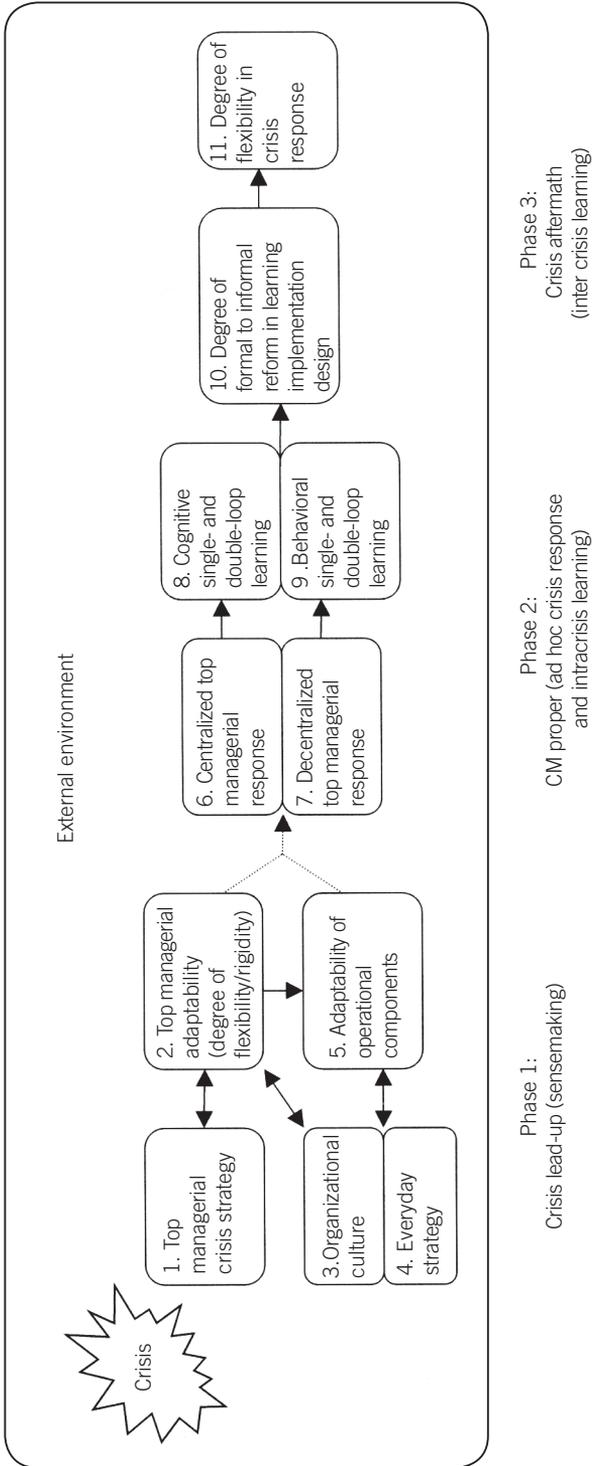
In short, Figure 2 proposes that top managers (box 1) are of great importance for the initial lead-up phase of a crisis (phase 1), in which making sense of the event is the main challenge. While many organizations respond to threats with organizational rigidity (box 2), centralization of leadership structures (box 1; 2) is likely to lead to a change in strategy in response to stakeholders in the external environment, including the media and public. Furthermore, managerial adaptability, that is, the degree of flexibility to rigidity in managerial crisis lead up response (box 2), is affected by organizational culture (box 3) as well as the everyday strategy (box 4). Both (box 3; 4) in turn deeply affect, and are affected by, top managerial adaptability (box 3) as well as the adaptability of the operational components (box 5). The degree of organizational adaptability (box 4 and 5) impinges on the crisis response: that is, the crisis management proper (phase 2), which may be based on a response characterized by centralization (box 6) or decentralization response (box 7). The crisis management proper phase (phase 2) is also where flexibility is likely to occur and also where intracrisis learning may come about, at least if the organization has previous experience of crisis management. Moreover, the degree of centralized to decentralized crisis management response (box 6; 7) affects the degree of cognitive (box 8) to behavioral learning (box 9). These may be based on single-loop or double-loop

lessons. The degree of cognitive (box 8) to behavioral learning (box 9) in turn influences the degree of formal to informal reform in learning implementation design (box 10). Lesson implementation takes place in the crisis aftermath (phase 3) and is likely to be carried out to a greater extent if policy-makers and other external environment stakeholders act in favor of institutionalizing lessons learned. Finally, the way lessons are implemented in formal structure and policies or in informal cognitive modes based in individuals' minds (box 10) has a bearing on the degree of flexibility in future crisis response (box 11).

The framework of the processes of crisis response and learning is a response to the overall research questions posed in the introduction of this dissertation in regard to how public organizations respond to crises and how they learn from crises. In essence, the framework highlights tradeoffs in organizational crisis response and crisis-induced learning arrangements. However, it is important to examine the framework within its context. As this dissertation has emphasized, some crisis management and learning arrangements will be well suited in some cases and less well suited in others. So rather than suggesting centralized or decentralized, cognitive or behavioral and rigid or flexible responses, the framework needs to be understood in the context of a wider discussion of the pro's and con's of the respective arrangement and behavior. Furthermore, it is beneficial to keep in mind that increased degrees of one or the other kind of behavior will affect subsequent phases in the crisis management and learning process.

The framework is a suggested and hypothesized bird's eye view of the crisis management and learning process. But in line with the dissertation's 'heuristic case study' and theory development objective, the framework is composed of a number of propositions to be tested by further research. Moreover, it is essential to keep in mind that the framework presents a relatively short perspective in time, from the crisis lead up and sense-making phase, to crisis response and the learning implementation of the crisis aftermath. It relates to ad hoc strategies, structures and adaptation that follow from crisis events. Figure 2 is thus not aimed at describing extensive policy processes spanning decades or slow burning and creeping crises that take a long time to develop and even longer to terminate (Sabatier, 2007; 't Hart and Boin, 2001).

Figure 2. A proposed framework of the crisis management and learning process



Further research: Toward a model of crisis response and learning

Learning more about organizational crisis response and crisis-induced learning is vital to assist organizations and societies in becoming truly robust, safe, and reliable. So far however, research on the topic has focused on impeding and enabling factors, and only at times has it been conducted systematically. This dissertation made an attempt to move beyond those factors by focusing instead on the integral process of crisis management and crisis-induced learning. The study of these processes has previously proven to be problematic as the field is in need of structuration (Boin, 2004b; Mitroff et al, 2004; Giddens, 1979). Therefore, this dissertation attempted to shed light on conceptual building blocks that should assist in structuring crisis management research and in arriving at feasible models.

However, the limitations of this study in terms of the number of cases selected for scrutiny should be acknowledged. In doing so, I call for the need of further empirical research on crisis management and crisis-induced learning. Research and practice is in need of increased empirical knowledge of what, how and when organizations learn from crisis experience. I can only hope that this dissertation is a contribution in that regard. The propositions suggested here should be further developed by additional empirical studies and tested on a larger selection of cases. On that note, I would like to point out a few potential avenues for future research:

From hypothesis generating to hypothesis testing

In this dissertation I identified evidence of learning from crisis management processes by qualitative analysis of six case studies. The purpose of the studies was to generate hypotheses. The results presented here may be complemented and developed further by a hypothesis testing approach. The dissertation suggested a number of hypotheses that may be tested on a more extensive set of quantitative data. There are many ways to follow up on a research project of this kind. For instance, it would be interesting and valuable to carry out a survey of public organizations (in Sweden or in another like-minded state) that have experienced a major crisis in recent years. Initially, cases could be selected through content analysis of media and government sources. From case narratives key players like the CEO, head of operations, directors of continuity planning, or managers of security could be identified. The next step could be to draw up a questionnaire asking basic questions arising from this dissertation (cf. Pauchant and Mitroff, 1992). Factors to be addressed could include for instance the breadth of previous experience, the level of formal to informal centralization/decentralization

and organizational flexibility/rigidity in response, learning and implementation. In order to elucidate the analysis and add clarifying and deeper qualitative data, the questionnaires could be complemented by semi-structured interviews. Results from a project of this kind could be generalized to verify or falsify the hypotheses on how public sector organizations respond to and learn from crises that have been suggested in the present dissertation.

The need for a model of crisis management and learning:

The field of crisis management and learning studies has been critiqued for lacking an overall theoretical model (Elliott, 2008; 2009). In essence the critique holds that researchers within the field delimit themselves to produce individual case-based findings, which in turn lack the potential to develop knowledge about the crisis management and learning process that is not idiosyncratic (Lalonde, 2007). Hopefully the propositions generated and the hypothesized framework suggested in this dissertation can be developed further by additional cases of organizational crisis management and learning processes. Thus the dissertation could contribute to a generic model of crisis management and learning. At least three steps are required in order to build such a model on crisis and learning. The first step (which the present dissertation has taken) is to produce thick case studies of crisis-induced learning in order to develop and extract hypotheses and proposed frameworks. The second step, which was described in the section above, is to test prior and newly generated hypotheses on a larger population of cases. Thus a comprehensive theoretical model of the entire crisis management and learning process may be constructed from the hypotheses that have been proven to be valid.

Admittedly, this idea is not completely novel. Prior crisis management researchers have presented process models. Relating to crisis decision making, Hermann (1963) presented a model of organizational factors that might delimit organizational crisis response. The model was a suggestion of potential phases and caveats that organizations might run into during crises. The reach of the model was on the initial stages of crises. Smart and Vertinsky (1977) presented a model of crisis decision and implementation processes. Like Hermann's model this one was exclusively focused on risks of dysfunctions and cognitive pathologies. These prior models of crisis management tend to neglect the crisis induced learning phase while paying more attention to the emergency phase of crisis decision making. Integrated approaches to crisis management and learning are unusual. With this claim, I refer to models that deal with the chronological phases of learning during crisis response all the way through learning in the crisis aftermath. Hopefully, the propositions put forth in the present dissertation may assist in building such an integrated crisis learning model. However, a

model of this kind would need to take certain delimitations into consideration. Below some examples of such limitations are listed.

Acute crises instead of creeping crises

Empirical cases backing up a model of crisis response and learning should derive from crises that present a relatively short perspective in time. In cases of this kind the temporal effects of ad hoc strategies, structures and adaptation that are results of initial crisis signals come in to play. These ad hoc features of the crisis management process should be utilized in order to reach crisis termination (Boin et al, 2005). A future model should thus not be aimed at describing slow burning and creeping crises like for instance long-lasting economic downturns, corporate recoveries or chronic environmental crises ('t Hart and Boin, 2001). Indeed, these processes are different from rapidly emerging crises. It is important that a feasible model of crisis response and crisis-induced learning is based on empirical cases of emergencies and acute crises rather than on processes that are ongoing or still to erupt.

Research on single-loop learning processes

By clarifying key concepts like single- and double-loop learning and by putting forth propositions for further research related to these constructs, this dissertation should make a contribution to the growing interest on the issue of crisis-induced learning. Future research on crisis-induced learning needs to focus not only on deeper double-loop learning, but also on more mundane single-loop learning. This will also help us to understand the complicated relation between single- and double-loop learning and how the one affects the other.

Research on non-catastrophic crises

Many accidents and crises occur in 'fairly linear, loosely coupled systems' and it is important that these events are not neglected (Rijpma, 1997: 22). In line with Rijpma's (1997) claim, future empirical research should look at organizations that suffer organizational crises rather than catastrophic events. Catastrophic events, large-scale disasters and industrial crises are unusual and not necessarily helpful in teaching us how organizations respond to threat and crisis-like conditions. For that matter it is more useful to turn to more low impact organizational crises that now and then challenge organizations.

Learning from innovative fields

Although organizations differ much like people's personalities, it is important to keep an open mind to lessons from non-traditional settings. Studies, evaluations, reports or histories from different contexts may work as crucial guides of vicarious learning. Factors may relate to reliable and prepared organizations other than the actual line of work. As empirical contributions to this dissertation have indicated, organizations may learn a lot about crisis response and learning from seemingly non-mainstream organizations such as media organizations. Media organizations operate in rapidly developing fields. Media organizations are primed toward crisis events in their environment. Most media organizations also play important roles in terms of public service. Further studies on how these specific organizations and other innovative sectors respond to crises and extraordinary events may be of use for a broader field of organization theory and crisis management practice.

Involving managerial and operational levels

The foci of this dissertation have been primarily on strategic response, and to a lesser extent on operational components. This had implications for the framework presented in this study. Further, while the strategic level in crisis management is relatively well researched (Hamblin, 1958; Ulmer, 2001; Boin et al, 2005; Brockner and Hayes James, 2008), additional research is needed on how operational units respond to crises in organizations. There is a lot of research on how these units respond to threats, risks and common incidents as proposed by the literature on safety cultures, HRO theory and NAT theory (Roberts, 1990; Dufort and Metais, 1998), but there is only a few works on how these units respond to crises (see e.g. Roe and Schulman, 2008; Flin, 1996; Klein, 1993; Weick, 1993; Dynes, 1970). Most of these, moreover, refer to organizations involved in emergency management trained for making decisions under pressure, which makes findings from these studies hard to apply to organizations in the government proper or to other public sector environments besides first responders of the blue-light sector. Furthermore, there is a lack of empirical assertions on how the strategic level and the operational level affect each other, especially in emergency situations. This gap should be bridged by further research, but this research should be empirical in nature and intended to trace and reconstruct processes of both strategic and operational crisis management and learning in organizations.

Samenvatting in het Nederlands

Crises en leerprocessen in publieke organisaties

Hoe gaan publieke organisaties om met crises? Hoe leren publieke organisaties van crises? Deze ogenschijnlijk fundamentele kwesties zijn nog steeds concrete vragen voor de onderzoekers van crisismanagement.

De afgelopen decennia is de belangstelling voor crisismanagement als object van wetenschappelijke studie toegenomen. Het is een terrein dat zich ontwikkelt en waarbinnen een toenemend aantal sociale wetenschappers vrij los van elkaar opereren en onderzoek doen naar uitzonderlijke gebeurtenissen, hun gevolgen en de manier waarop daarmee wordt omgegaan door autoriteiten, organisaties, beleidsmakers en andere belangrijke partijen. Op het terrein van het onderzoek naar crisismanagement zijn er verschillende lacunes die om aandacht vragen. Centraal in dit proefschrift staan vier van deze lacunes in de huidige literatuur over crisismanagement.

Ten eerste is er behoefte aan verklaringsmodellen die een scherper beeld geven van de belangrijkste factoren die van invloed zijn op het proces van crisismanagement. In dit proefschrift probeer ik deze kloof te overbruggen door theorie te ontwikkelen over crisisrespons *en* leerprocessen als gevolg van crisis. Met crisisrespons bedoelen we georganiseerde activiteiten die worden ondernomen door een belanghebbende wanneer een organisatie een directe bedreiging ervaart van kernwaarden, waarvoor een oplossing moet worden gevonden onder omstandigheden van onzekerheid. Onder leerprocessen als gevolg van crisis verstaan we doelgerichte organisationele onderzoeks- en veranderinspanningen, geïnitieerd naar aanleiding van een crisisgebeurtenis, die uitmondend in gedragsaanpassingen binnen de betreffende organisatie(s).

Ten tweede spelen organisaties een sleutelrol in crisismanagement. Des te verbazingwekkender is het dat het onderzoek op het gebied van crisismanagement slechts beperkt zicht heeft op de manier waarop organisaties op crisis reageren. Tot nu toe vertelt de literatuur ons meer over de dynamiek van crises als zodanig dan over de manier waarop in organisaties met crises wordt omgegaan. Daarom behandelt dit proefschrift de relatie tussen crisismanagement en leerprocessen binnen publieke organisaties.

Ten derde hebben onderzoekers van crisismanagement zich tot nu toe vooral beziggehouden met crisisreparatie en de acute responsfase, terwijl leerprocessen als gevolg van crisis nog relatief onontgonnen terrein zijn. Het relatief geringe aantal studies naar leerprocessen als gevolg van crisis richten zich vooral op leren *na* een crisis (intercrisis learning), terwijl de theorie over leren *tijdens* de crisis (intracrisis learning) minder ontwikkeld is. Mijn belangstelling voor leerprocessen zowel tijdens als na crises maakt het noodzakelijk om crisisrespons en crisis

in samenhang te bestuderen. Dit leidt tot onderzoek naar de manier waarop organisaties op crises reageren en het leerproces dat zij tijdens en na deze episodes doormaken. Door processen van crisisrespons en leren in een stresssituatie in het middelpunt te plaatsen – in plaats van precisis-planning, inzicht in dreigingen, risicomanagement en paraatheid – wordt in dit proefschrift nagegaan hoe organisaties en hun leden lessen uit een crisis trekken, verwerken, gebruiken en implementeren in de periode tot de volgende crisis.

De hierboven aangegeven lacunes vormen in dit proefschrift de theoretische uitgangspunten voor het onderzoek naar de mate waarin publieke organisaties lering trekken uit crises. Het globale doel van dit proefschrift is derhalve om het begrip te bevorderen van crisisrespons en leerprocessen binnen publieke organisaties als gevolg van crisis. Dit doe ik in de vorm van een abductief onderzoek naar de manier waarop publieke organisaties op crises reageren en naar hun leerprocessen tijdens en na deze gebeurtenissen. De term ‘abductief’ verwijst naar een onderzoeksstrategie die wordt gekenmerkt door een proces van heen en weer bewegen tussen theorie en empirische gegevens.

De eerste stap in het onderzoeksproces heeft zijn uitgangspunt in de empirische wereld. De empirische bijdrage bestaat uit het nauwkeurig in kaart brengen van processen en het reconstrueren van omstandigheden met betrekking tot zes casestudy's van organisaties in de Zweedse publieke sector. In het hoofdstuk betreffende de methodologie (hoofdstuk 3) beschrijf ik de basis van de empirisch gefundeerde casestudy-benadering en de methode van reconstructie van de omstandigheden en van het in kaart brengen van de processen. Ten behoeve van verdere analyse zijn zes casestudy's van crisismanagement en leerprocessen bij organisaties geselecteerd. De casestudy's waren gebaseerd op een groot aantal bronnen, waaronder post hoc ongevalonderzoek, artikelen, documenten van organisaties en 129 uitgebreide semi-gestructureerde interviews met eindverantwoordelijke crisismanagers. Het in kaart brengen van processen en de reconstructies resulteerde in casebeschrijvingen die vervolgens werden geanalyseerd: er werden dilemma's en kritieke besluitvormingsmomenten geïdentificeerd die nader werden bestudeerd.

In dit proefschrift worden de volgende cases gebruikt: de aanpak door het Zweedse energiebedrijf Birka Energi van twee kabelbranden die in maart 2001 en mei 2002 leidden tot een grootschalige stroomstoring in Stockholm; de aanpak door de gemeente Stockholm van de stroomstoring van 2001 en de herhaling ervan in 2002; de reactie van de Dienst voor Nucleaire, Biologische en Chemische Bescherming van het Zweeds Bureau voor Defensieonderzoek FOI op de nepbrieven met anthrax in 2001; en de benadering door drie Zweedse mediaorganisaties (de Zweedse publieke omroeporganisatie Sveriges Radio, de Zweedse particuliere televisiezender met publieke taken TV4, en de Zweedse publieke televisiezender Sveriges Television) van de uitdagingen op het gebied

van uitzendingen en nieuwsvoorziening op 11 september 2001 en na de moord op de Zweedse minister van Buitenlandse Zaken Anna Lindh in september 2003.

Zoals uit de selectie van cases blijkt, zijn niet alle onderzochte organisaties pure overheidsorganisaties. Drie organisaties (Birka Energi, Sveriges Radio en Sveriges Television) zijn bedrijven in publiek eigendom, en één (TV4) is een mediaorganisatie met een private eigenaar. De term 'publieke organisatie' wordt in dit proefschrift dus niet gebruikt in de zin van overheidsorganisatie, maar in bredere zin als organisatie met een publieke functie.

De theorievorming die met dit proefschrift wordt beoogd, leidt ertoe dat de casestudy's een 'heuristisch' karakter hebben. Het proefschrift is eerder gericht op het formuleren van nieuwe hypothesen voor verder onderzoek dan op het voortbrengen van veralgemeniseerde kennis. Daarom worden de casestudy's verder geanalyseerd met behulp van concepten en methoden die zijn aangedragen door eerder onderzoek. Deze tweede stap in het onderzoeksproces wordt meer gedetailleerd behandeld in hoofdstuk 2. De literatuurbespreking in dit hoofdstuk heeft tot doel het onderzoek op het gebied van crisismanagement te verrijken met inzichten uit het onderzoek van organisaties. De bespreking omvat relevante studies op de terreinen crisismanagement, organisatiewetenschap (met bijzondere aandacht voor de theorie van de organisatiekunde) en openbaar bestuur en management. De bespreking leidt tot een tweeledige conclusie: er is behoefte aan meer kennis, niet alleen van crises en de manier waarop zij zich ontwikkelen, maar ook van de manier waarop zij in de praktijk door publieke organisaties worden aangepakt. Tot nu toe was het onderzoek op het terrein van crisismanagement met betrekking tot het management van publieke organisaties echter vooral gericht op hetzij politieke besluitvorming met betrekking tot internationale conflictsituaties, hetzij het functioneren van zeer specifieke 'high reliability' organisaties in de pre-crisisfase. Hoofdstuk 2 sluit af met een kader voor deze studie door de schijnwerper te richten op relevant onderzoek. Het hoofdstuk bespreekt de problemen van het definiëren, categoriseren en operationaliseren van sleutelbegrippen zoals crisis, crisismanagement en organisational learning.

In de derde fase van het onderzoeksproces worden de casestudy's verder geanalyseerd met behulp van verschillende theoretische benaderingen over de manier waarop organisaties in de publieke sector op crises reageren en leren van ervaringen die zij hebben opgedaan in een crisissituatie. De afzonderlijke artikelen zijn gepubliceerd of voor publicatie geaccepteerd door de tijdschriften *Journal of Contingencies and Crisis Management*, *Journal of Homeland Security and Emergency Management*, *Public Management Review*, en *Risk Management*. De artikelen zijn hier opnieuw gepubliceerd in vier empirische hoofdstukken (hoofdstuk 4-7) die de kern vormen van dit proefschrift. Hieraan zijn inlei-

dende en concluderende hoofdstukken toegevoegd om de discussie onder één noemer te brengen en de toegevoegde waarde van het proefschrift duidelijk te maken.

In hoofdstuk 4 presenteer ik de eerste empirische analyse. Hier wordt onderzocht op welke manier de organisatiecultuur van invloed is op de strategie en het aanpassingsvermogen bij crisismanagement. De centrale vraag bij deze analyse is: *welke mechanismen hebben invloed op het leervermogen van organisaties om het hoofd te bieden aan acute uitdagingen op het gebied van crisismanagement?* In dit onderzoek presenteer ik een typologie van de manier waarop organisaties in de publieke perceptie reageren op crisis. De typologie is gebaseerd op het vermogen van organisaties om hun strategie te wijzigen en om hun bestuurlijke en operationele niveaus aan te passen om een crisis aan te pakken. De empirische gegevens die zijn gebruikt om deze typologie op te stellen, hebben betrekking op drie gevallen waarin door een organisatie wordt gereageerd op een crisis: 1) de aanpak door het Zweedse energiebedrijf Birka Energi van een kabelbrand die in 2001 leidde tot een 37 uur durende stroomstoring in Stockholm; 2) de reactie van de televisiezender TV4, met name op het gebied van organisatie en uitzendingen, tijdens de terroristische aanvallen van 9/11; 3) de reactie van het Zweeds Bureau voor Defensieonderzoek FOI op de paniek in verband met de anthrax-brieven in 2001 en 2002. De verschillende reacties van organisaties die in de typologie worden onderscheiden, laten afzonderlijke aspecten zien van de manier waarop organisaties omgaan met crisismanagement. Volgens de typologie slaagt de Fully Adapting Organisation (TV4) erin om zowel zijn strategie als zijn beleidsbepalende en operationele niveaus aan te passen om de crisis het hoofd te bieden. De Semi-Adapting Organisation (FOI) wijzigt zijn strategie maar mist het vermogen om zijn beleidsbepalende en operationele niveaus aan de nieuwe strategie aan te passen. De Non-Adapting Organisation (Birka Energi) ziet niet in hoe belangrijk het is om van strategie te veranderen. Deze drie inductieve casestudy's leiden tot de conclusie dat organisatiecultuur een belangrijke rol speelt in dit proces, waarbij de Semi-Adapting Organisation en de Non-Adapting Organisation werden gedomineerd door een sterke deskundigheidscultuur die minder geneigd bleek tot verandering. De Fully Adapting Organisation daarentegen had bewust een organisatiecultuur gecreëerd waarin flexibiliteit – in de zin van het vermogen om zich gemakkelijk aan te passen aan veranderende eisen – een hoeksteen vormde.

In hoofdstuk 5 wordt het tweede empirische onderzoek gepresenteerd. Dit hoofdstuk behandelt het vraagstuk van flexibiliteit en rigiditeit met betrekking tot crisisrespons en het leerproces als gevolg van crisis bij twee Zweedse publieke organisaties. Uitgangspunt van dit onderzoek is de constatering dat de relatie tussen crises, de respons en het leerproces van organisaties op het gebied van crisismanagement tot nu toe te weinig zijn bestudeerd. Deze studie onderzoekt

de respons van twee publieke organisaties die met twee opeenvolgende storingen worden geconfronteerd. De empirische gegevens zijn gebaseerd op het nauwkeurig in kaart brengen van processen en het reconstrueren van cases met betrekking tot de manier van aanpak door het energiebedrijf Birka Energi en de gemeente Stockholm van twee grootschalige stroomstoringen in maart 2001 en in mei 2002. De centrale vraagstelling van het onderzoek luidt: *op welke manier beïnvloeden organisatorische rigiditeit en flexibiliteit crisisrespons en het leerproces als gevolg van crisis bij publieke organisaties?* In het onderzoek wordt gebruikgemaakt van een schema waarin ten aanzien van de respons rigiditeit tegenover flexibiliteit wordt gesteld. De uitkomsten worden vervolgens besproken in relatie tot hun implicaties voor het verband tussen crisis en leerproces. Het onderzoek mondt uit in vier voorstellen voor verder onderzoek.

Het derde empirische onderzoek wordt gepresenteerd in hoofdstuk 6. Dit onderzoek wil een bijdrage leveren aan de discussie over leerprocessen bij organisaties als gevolg van crisis, door licht te werpen op het verschijnsel van crises als initiators van leerprocessen. In dit onderzoek is de centrale vraagstelling: *op welke manier kunnen leerprocessen van organisaties tijdens en na een crisis empirisch worden onderzocht en welke criteria moeten in het onderzoek gehanteerd worden?* Ten einde patronen bloot te leggen met betrekking tot de manier waarop leerprocessen van organisaties als gevolg van crisis zich voordoen en zich ontwikkelen, stel ik een conceptueel kader voor dat is opgebouwd aan de hand van vier fundamentele vragen: welke lessen worden er geleerd (single- of double-loop)?; waarop zijn deze lessen gericht (preventie of respons)?; wanneer worden deze lessen geleerd (intra- of intercrisis)?; leidt het leerproces tot implementatie of wordt deze geblokkeerd (vervluchting of implementatie)? In de analyse onderzoek ik de praktische toepasbaarheid van het paradigma met gebruikmaking van dezelfde empirische casestudy's als in hoofdstuk 5. In de laatste paragraaf worden vier voorstellen gedaan voor verder onderzoek.

In hoofdstuk 7 wordt het laatste empirische onderzoek gepresenteerd. Ik stel hier een model voor van management, leerproces en implementatie als respons op crisis. Mijn uitgangspunt is een stelling uit eerder onderzoek op het terrein van crisismanagement, die stelt dat eerdere ervaring van invloed kan zijn op crisisrespons zodat deze ofwel de vorm krijgt van een herhaling van eerdere procedures, ofwel van een uitgangspunt voor improvisatie. De centrale vraagstelling voor deze analyse luidt: *op welke manier zijn organisatorische managementstructuren van invloed op crisisrespons, op leerprocessen als gevolg van crisis en op implementatie van lessen?* In deze analyse betoog ik dat flexibiliteit nauw verbonden is met de manier waarop organisaties leren: met de nadruk op gedrag of op kennis. Deze leerprocessen hangen bovendien samen met de rol van groepen in het management, waarbij ik onderscheid maak tussen gecentraliseerd en gedecentraliseerd topmanagement. Verder bevat dit hoofdstuk twee casestudy's

van de manier waarop twee bureaucratische mediaorganisaties (Sveriges Radio en SVT) zijn omgegaan met, en lering hebben getrokken uit buitengewone gebeurtenissen in het nieuws: in het bijzonder 9/11 en de moord op de Zweedse minister van Buitenlandse Zaken Anna Lindh. De resultaten laten zien op welke manier de gedecentraliseerde managementgroep een leerproces doormaakte dat het gedrag beïnvloedde, en nieuwe formele beleidslijnen en structuren ontwikkelde, terwijl leden van de organisatie van de gecentraliseerde managementgroep vertrouwden op individuele cognitieve structuren als een manier om de geleerde lessen te 'archiveren'. Deze analyse eindigt met een bespreking van de resultaten vanuit een perspectief van crisismanagement, waarbij ik stel dat de twee typen leerprocessen van grote invloed zijn op het cruciale vraagstuk van flexibiliteit bij de crisisrespons binnen organisaties.

In het afsluitende hoofdstuk 8 worden de resultaten en de voorstellen die het resultaat zijn van de vier afzonderlijke empirische onderzoeken besproken en naast elkaar gelegd. Er wordt met name aandacht besteed aan de rol van organisatiestructuur en organisatiecultuur, door recapitulatie van specifieke organisatorische factoren die gevolgen lijken te hebben voor het crisismanagement en de leerprocessen van organisaties, zoals eerdere ervaringen, flexibiliteit en rigiditeit in crisisrespons en leerprocessen alsmede centralisatie en decentralisatie. Deze factoren zijn ook aangegeven in de literatuurbespreking. Aanvullend empirisch ondersteunend materiaal betreffende de manier waarop deze factoren van invloed zijn op crisisrespons en leerprocessen als gevolg van crisis binnen organisaties werd gevonden in de vier empirische analyses.

Verder staan de resultaten van de empirische studies ook in verband met verschillende typen leerprocessen zoals intra- en intercrisis leerprocessen en single- en double-loop leerprocessen. Daarom wordt ook in de laatste paragrafen van dit proefschrift aandacht besteed aan deze concepten. Om de voorstellen en argumenten nogmaals op een rij te zetten, wordt ten slotte een schema aangedragen voor het proces van crisismanagement en het leerproces. Hierbij is het belangrijk om zich de beperkingen van dit schema, en van dit proefschrift als geheel, bewust te zijn. Aangezien het slechts is gebaseerd op gegevens van zes gevallen van crisisrespons van Zweedse publieke organisaties, is het schema niet meer dan een visuele schematisering van een aantal hypothesen die door verder onderzoek nader moeten worden getoetst en gevalideerd. Het schema heeft echter ook enkele verdiensten. Het is een poging om de onduidelijke aard van crises en processen van crisismanagement te benaderen. Het schema kan ook een stap zijn op weg naar meer waarneembare en praktische begripsvorming en ons zo naar definities leiden die nauwer aansluiten op het dagelijks handelen van degenen die in de praktijk betrokken zijn bij crisismanagement.

Trefwoorden: Leerprocessen als gevolg van crisis, leerprocessen binnen organisaties, crisismanagement, publieke organisaties, casestudy's, flexibiliteit, centralisatie.

Sammanfattning på svenska

Kriser och lärande i offentliga organisationer

Hur hanterar våra offentliga organisationer kriser? Hur lär sig våra offentliga organisationer av kriser? Dessa till synes enkla frågor utgör fortfarande regelrätta pussel för krishanteringsforskare. Och detta trots att vi under senare år har kunnat skönja ett ökande intresse för krishanteringens praktik och teori. I denna doktorsavhandling belyser Edward Deverell problematiken kring vår bristande kunskap om hur organisationer hanterar och lär sig av kriser med utgångspunkt i ett par kritiska kunskapsluckor i samtida krishanteringsforskning.

Intresset för krishantering som forskningsfält har ökat under senare år. Forskningsfältet drivs av ett växande antal löst sammanfogade samhällsvetenskapligt intresserade forskare med fördjupad kunskap i och intresse för frågor om stora olyckor, kriser och extraordinära händelser. Deras fokus ligger på krisers konsekvenser och myndigheters, organisationers och beslutsfattareshantering av dessa. Men det finns fortfarande ett stort antal kunskapsluckor i krishanteringslitteraturen. Denna avhandling använder sig av fyra sådana kunskapsluckor som utgångspunkt.

För det första: Inflytelsesrika forskare inom krishanteringsområdet har förespråkat en ökad strukturering av fältet. Detta förutsätter en utveckling av praktiskt tillämpbara teoretiska modeller som i sin tur bör hjälpa oss att förstå och förklara kritiska faktorer som påverkar krishanteringsprocessen. Avhandlingen försöker överbrygga denna klyfta genom att utveckla teori om krishantering *och* lärande. Med krishantering avses i detta sammanhang organiserade handlingar utförda av medlemmar i en organisation. Dessa handlingar utförs i en situation som karakteriseras av ett uppfattat hot mot grundläggande värden, tidspress och betydande osäkerhet. Lärande definieras som avsiktligt utförda handlingar, utlösta av en krishändelse, och utförda av medlemmar i en organisation som arbetar gemensamt. Handlingarna leder till att ny förståelse skapas samt att ett nytt beteende kopplat till den nya förståelsen anammas.

För det andra: Organisationer spelar en viktig roll i samhällets krishantering. Överraskande nog har krishanteringsstudier hittills endast ägnat begränsat utrymme till hur organisationer hanterar kriser. Litteraturen har än så länge lärt oss mer om kriser som händelser än om hur dessa extraordinära händelser faktiskt hanteras. En trolig orsak är att krishanteringsforskningen tenderar att fokusera på mycket ovanliga och omfattande katastrofer samt stora industriella olyckor. I denna avhandling riktar jag istället mitt intresse mot kriser som drabbat enskilda organisationer snarare än hela samhällen eller nationella regeringar. Fokus förflyttas därmed från krisen till de organisationer som hanterar den. I linje med detta empiriska vägval för avhandlingen på ett teoretiskt plan ihop

diskurser om krishantering och lärande från kriser utifrån ett organisationsteoretiskt och ett förvaltningspolitiskt perspektiv.

För det tredje: Krishanteringsforskningen har till dags dato mestadels behandlat akut krishantering inklusive frågor om krisbeslutsfattande och ledning, samt frågor som aktualiseras före krisen, som exempelvis krisplanering, hot- och riskhantering samt beredskap. Efterfasen och lärande av krisen utgör fortfarande relativt obruten mark. Även om denna studie inser vikten av god krisplanering, medvetenhet och beredskap, bör det inte leda till att frågan om att lära av krisen försummas. Att lära av krisen är angeläget eftersom kriser är sällsynta och för med sig allvarliga konsekvenser och långsiktiga följder. Kriser erbjuder därmed möjligheter till att dra lärdomar för att förbättra framtida krishantering och för att tillse att krisen i fråga inte upprepas.

För det fjärde: De relativt få studier som berör kriser och lärande har fokuserat på lärande *efter* krisen (intercrisis learning), medan den teoretiska kunskapen om lärande *under* krisen (intracrisis learning) inte är lika väl utvecklad. Med ett intresse för båda former av lärande tar denna studie ett mer omfattande grepp om kriser och lärande genom att studera krishantering och lärande tillsammans som likvärdiga delar i en sammanhållen process. Avhandlingen studerar med andra ord hur organisationer reagerar i den inledande fasen av en kris, hur de hanterar kriser i den akuta fasen, och hur de lär sig under och efter dessa erfarenheter. Fokus placeras på krishanterings- och lärandeprocesser som drivs av aktörer under press. Avhandlingen fördjupar sig i hur organisationer och deras medlemmar hanterar kriser samt hur de tar på sig, använder sig av och implementerar lärdomar från en kris till nästa.

Kunskapsluckorna som har nämnts ovan fungerar som teoretiska utgångspunkter för avhandlingens övergripande mål att fördjupa sig i frågan om och i vilken utsträckning offentliga organisationer lär sig av kriser. I linje med detta är syftet att öka förståelsen för hur krishantering och lärande sker i offentliga organisationer. Med detta syfte som vägledning genomförs en abduktiv studie av hur offentliga organisationer hanterar kriser och hur de lär sig under och efter dessa händelser. Begreppet 'abduktiv' avser här en forskningsstrategi som kännetecknas av kontinuerlig rörelse mellan teori och empirisk data.

Studiens och forskningsprocessens första steg är förankrat i den empiriska myllan. Avhandlingens empiriska bidrag är en noggrann processpåring och rekonstruktion av sex fall av svenska offentliga organisationers krishanterings- och lärandeprocesser. I avhandlingens metodkapitel (kapitel 3) beskrivs grunderna för den utvalda forskningsansatsen, metodvalen och de empiriska bidragen som består av fallstudier utförda i enlighet med en metod för processpåring och fallrekonstruktion.

Sex fallstudier av svenska organisationers krishantering och lärande valdes ut för vidare analys. Det första steget i ansatsen var att ställa samman fallstudierna

med hjälp av en rad olika källor, bland annat olycksutredningar, nyhetsartiklar, interna dokument samt 129 omfattande intervjuer med centrala krishanterare inom respektive organisation. Processpåringarna ledde till kronologiska narrativ av vart och ett av fallen. Narrativen dissekerades sedan genom att dilemman och prekära beslutssituationer identifierades ur underlagen. Dessa så kallade beslutstillfällen djupstuderades sedan i detalj.

I avhandlingen används följande fall: Det svenska energibolaget Birka Energis hantering av två kabelbränder som orsakade omfattande strömavbrott i Stockholm i mars 2001 och maj 2002; Stockholms stads hantering av samma händelser; Totalförsvarets forskningsinstitutets avdelning för NBC-skydds (FOI NBC-skydd) hantering av de så kallade mjältbrandsbrevet 2001; samt tre svenska medieorganisationers (Sveriges Radio, Sveriges Television och TV4) hantering av nyhetsarbete och organisatoriska utmaningar den 11 september 2001 och under mordet på utrikesminister Anna Lindh i september 2003.

Även om studien handlar om offentliga organisationers lärande av kriser kan flera av fallen som omfattas av undersökningen knappast beskrivas som renodlade statliga myndigheter i den offentliga sektorn. Tre organisationer (Birka Energi, Sveriges Radio och Sveriges Television) var när undersökningen genomfördes offentligt ägda företag, medan en (TV4) är en privatägd medieorganisation, om än med vissa public service-inslag. Enligt det synsätt som avhandlingen förespråkar är inte själva ägandeförhållandet det enda måttet på 'offentlig' verksamhet. Medieorganisationer kan exempelvis vara verktyg i både demokratin och allmänhetens tjänst oavsett ägandeskap. Begreppet 'offentlig organisation' används alltså inte i denna avhandling i en betydelse som jämför organisationen i fråga med regeringsmakten eller renodlade myndigheter, utan i förhållande till den grad som politiskt inflytande påverkar organisationen.

Den teoriutvecklande ansatsen som denna avhandling antar innebär att fallstudierna som presenteras här är 'heuristiska' fallstudier. Fallstudierna syftar till att utveckla hypoteser för fortsatt forskning snarare än att producera generell kunskap. För detta ändamål har fallstudierna analyserats ytterligare med hjälp av ett antal teoretiska infallsvinklar. Detta, det andra steget i forskningsansatsen, beskrivs i litteraturgenomgången i kapitel 2. I litteraturgenomgången framförs argumentet att krishanteringsforskningen är i behov av influenser från organisationsteori. Litteraturgenomgången presenterar relevanta studier från forskningsfälten krishanteringsstudier, organisationsteori (här ägnas särskild uppmärksamhet åt litteraturen om organisatoriskt lärande) och förvaltningskunskap (public management). Genomgången drivs med hjälp av två argument: Det finns ett behov av ökad kunskap om kriser och hur de utvecklas, samt inte minst om hur kriser faktiskt hanteras av offentliga organisationer. Den forskning som hittills har bedrivits om krishantering, och som har bäring på organisationer och offentlig förvaltning, har oftast baserats på väldigt specifika

förhållanden. Stora delar av forskningen har berört den högsta politiska nivån av beslutsfattare i utrikespolitiska kriser, eller i mycket specifika organisationer som karakteriseras av 'hög tillförlitlighet' (high reliability organizations) och hur dessa fungerar före kriser. Slutsatser dragna utifrån studier av sådana organisationer blir dock svåra att generalisera till att även gälla vanliga offentliga organisationer. Organisationsteori och förvaltningskunskap bör därför kunna spela en större roll i forskningen om kriser och krishantering.

Litteraturgenomgången erbjuder också ett ramverk för avhandlingen genom att belysa relevant forskning. I kapitlet diskuteras problem med att definiera, kategorisera och operationalisera centrala begrepp som kris, krishantering och organisatoriskt lärande.

I forskningsprocessens tredje steg analyseras fallstudierna ytterligare med hjälp av teoretiska ansatser som syftar till att ta fram hypoteser om hur offentliga organisationer hanterar kriser och hur de lär sig av dessa erfarenheter. Målet med analyserna har varit att producera fristående artiklar ämnade att publiceras i framstående internationella vetenskapliga tidskrifter. Därmed skiljer sig avhandlingen något från de gängse avhandlingarna inom svensk (och för den delen holländsk) statsvetenskap och förvaltningskunskap eftersom den, till skillnad från en monografi, består av flera analyser presenterade i ett antal artiklar. Artiklarna har publicerats eller accepterats för publicering i tidskrifterna Risk Management; Public Management Review; Journal of Contingencies and Crisis Management; och Journal of Homeland Security and Emergency Management. Artiklarna återges i fyra empiriska kapitel (kapitel 4-7), vilka också utgör avhandlingens kärna. De inledande och de avslutande kapitlen syftar till att sammanföra diskussionen och understryka avhandlingens bidrag till ny kunskap.

Den första empiriska analysen återges i kapitel 4. Studien berör hur organisationskultur påverkar organisatorisk strategi och anpassningsförmåga under kris. Den centrala forskningsfrågan är: Vilka mekanismer påverkar organisationers förmåga att omstrukturera för att hantera akuta utmaningar under krisers inledande fas? I studien föreslår jag en typologi för hur olika organisationer tillfälligt kan byta strategi och anpassa ledning och den operativa nivån för att hantera kriser. Typologin är baserad på empirisk data från tre exempel av organisatorisk krishantering: Birka Energis hantering av en kabelbrand som orsakade ett långvarigt strömavbrott i Stockholm 2001; TV-stationen TV4:s hantering av utmaningar beträffande hur kanalen skulle organisera sig och sända under terroristattacker den 11 september 2001; och FOI NBC-skydds hantering av floden av falska mjältbrandsbrev 2001 och 2002. De olika krishanteringsutfallen fungerar som typfall i typologin och organisatoriska exempel på olika aspekter av organisatorisk krishantering. Enligt typologins indelning lyckades den 'helt anpassningsbara' organisationen med att anpassa både sin strategi, ledning och operativa nivå för att hantera krisen. Den 'delvis anpassningsbara'

organisationen lyckades ändra strategi, men saknade förmågan att anpassa ledning och den operativa nivån till den nya strategin. Den 'icke-anpassningsbara' organisationen lyckades överhuvudtaget inte förstå att en förändrad strategi behövdes för att hantera krisen.

En slutsats från analysen är att organisationskultur spelar en viktig roll i kris- hanteringsprocessens initiala fas. Detta då den 'delvis anpassningsbara' organisationen och den 'icke-anpassningsbara' organisationen dominerades av starka expertkulturer som visade sig vara mindre benägna att förändras. Däremot hade den 'helt anpassningsbara' organisationen medvetet främjat en organisatorisk kultur där flexibilitet, det vill säga förmågan att snabbt anpassa sig till förändrade krav, var en hörnsten.

Den andra empiriska analysen, som presenteras i kapitel 5, behandlar frågan om flexibilitet och rigiditet i krishantering och lärande hos två svenska offentliga organisationer. Utgångspunkten för studien är att sambandet mellan kriser, organisatorisk krishanteringsrespons och lärande hittills inte har studerats i tillräcklig omfattning. I ett försök att utveckla teoretiska kunskaper om sambandet mellan kris och lärande analyseras krisresponsen i två offentliga organisationer under två kriser. Det empiriska materialet kommer från en grundlig processpå- rning och fallstudierekonstruktion av hur elbolaget Birka Energi och Stockholms stads ledning hanterade två omfattande strömavbrott i mars 2001 och maj 2002. Den centrala forskningsfrågan lyder: Hur påverkar organisatorisk rigiditet och flexibilitet offentliga organisationers krishantering och lärande? Ett teoretiskt ramverk bestående av rigiditet kontra flexibilitet används som ett raster på fallstudierna. Resultaten diskuteras sedan i förhållande till deras betydelse för kopplingen mellan krisen och lärande. I studien slutsatser lyfts fyra hypoteser fram för vidare forskning.

Den tredje empiriska analysen presenteras i kapitel 6. Studien syftar till att bidra till debatten om organisatoriskt lärande från kriser genom att belysa krisen som en drivkraft för lärande. Forskningsfrågan som studien fördjupar sig i lyder: Hur kan vi analysera organisatoriskt lärande under och efter krisen och vilka kriterier bör ingå i analysen? I syfte att hitta mönster för hur organisatoriskt lärande från kriser kan uppstå och utvecklas, föreslås ett konceptuellt ramverk baserat på kategoriserade svar på fyra grundläggande frågor: Vad lär sig organisationer från kriser (det vill säga är lärdomar grundade i processer av enkel- eller dubbelkrets lärande (single-loop learning eller double-loop learning)); Vad är lärdomarnas fokus? (förbättra krisförebyggande eller krisrespons); När dras lärdomarna (under krisen eller efter); Implementeras lärdomarna eller blockeras lärandet innan lärdomar implementeras? Ramverkets praktiska tillämpbarhet utforskas i en analys av samma empiriska fallstudier som användes i kapitel 5. Studien avslutas med att föreslå fyra hypoteser för vidare forskning.

Den fjärde och sista empiriska studien presenteras i kapitel 7. I studien föreslås ett ramverk för krishantering, lärande och implementering av lärdomar. Utgångspunkten är ett påstående från tidigare krishanteringsforskning som säger att tidigare erfarenheter kan påverka krisresponser på två sätt: som ett sätt att upprepa tidigare rutiner eller som en förutsättning för improvisation. Den centrala forskningsfrågan är: Hur påverkar organisatoriska ledningsstrukturer krishantering, lärande och implementering? Studien framhåller att flexibilitet är nära kopplat till hur organisationer lär sig – på ett beteendemässigt eller kognitivt sätt. Dessa inlärningsmodeller går dessutom att koppla till ledningsgruppers roll. Ledningsgrupper kan enligt detta synsätt vara antingen centraliserade eller decentraliserade. Det analytiska ramverket appliceras sedan på två fallstudier av hur två byråkratiska medieorganisationer (Sveriges Radio och SVT) hanterade och lärde sig av de extraordinära nyhetshändelserna 11 september 2001 och mordet på utrikesminister Anna Lindh 2003. Resultaten visar hur den decentraliserade ledningsgruppen lärde sig på ett beteendemässigt sätt, genom att skapa nya formella policier och strukturer, medan medlemmar i den centraliserade ledningsgruppen återopade individuella kognitiva strukturer som ett sätt att 'lagra' erfarenheter. Studien avslutas med att diskutera resultaten ur ett krishanteringsperspektiv. Här föreslår jag att de två olika typerna av lärande har långtgående konsekvenser för frågan om flexibilitet i organisatorisk krishantering.

Det avslutande kapitlet diskuterar och kontrasterar de mest intressanta slutsatserna och hypoteserna som genererats från de fyra empiriska analyserna. Här betonas vikten av organisatoriska faktorer baserade i formella organisationsstrukturer och informella organisationskulturer genom särskilda faktorer såsom tidigare erfarenheter, flexibilitet och rigiditet i respons och lärande, och centralisering och decentralisering. Dessa faktorer beskrevs också tidigare i litteraturgenomgången. Dessutom har ytterligare empiriska bevis från de fyra analyserna tagits fram som understryker hur de aktuella faktorerna påverkar krishantering och lärande i organisationer.

Vidare sätts resultaten från fallstudierna i samband med olika typer av lärandeprocesser som lärande under och efter kris (intra- och intercrisis learning) och enkel- och dubbelkrets-lärande (single- and double-loop learning). Följaktligen diskuteras också dessa begrepp i det avslutande kapitlet. I ett försök att sammanföra diskussioner och hypoteser avslutas avhandlingen med att föreslå ett ramverk för krishanterings- och lärandeprocessen. Det är i detta sammanhang viktigt att påminna om avhandlingens och därmed ramverkets begränsningar. Eftersom avhandlingen endast är baserad på data från sex fall av svenska offentliga organisationers krishantering och lärande, kan ramverket endast beskrivas som en visuell och schematisk bild av ett antal hypoteser som behöver testas och förhoppningsvis valideras med hjälp av ytterligare empiriska krishanteringsfall.

Men ramverket har också sina fördelar. Det är ett försök att dels skapa klarhet i de tvetydigheter som omger krishanteringsstudier och praktiska krishanteringsprocesser. Ramverket kan även utgöra ett steg på vägen mot mer förnuftiga och användbara definitioner och mot en begreppsanvändning som ligger närmare den praktiska verkligheten. Därmed försöker denna avhandling även bidra till att bygga broar mellan krishanterare på praktisk och akademisk nivå. Detta är också ett mål som Nationellt centrum för krishanteringsstudier (CRISMART) vid Försvarshögskolan (FHS) har arbetat med sedan organisationen grundades för drygt tio år sedan. Denna avhandling har skrivits vid CRISMART inom ramen för projekten, 'Erfarenhetsåterföring som förebyggande strategi' och 'CM Europe'. Båda projekten har erhållit generöst stöd från Myndigheten för samhällsskydd och beredskap (MSB).

Appendices

Appendix 1: List of interviews

Case 1) Birka Energi's management of the 2001 and 2002 Stockholm blackouts

1. Vice President, Birka Nät
2. Regional Manager Stockholm, Birka Nät*
3. Operation Manager Stockholm, Birka Nät (2001)
4. Operation Manager Stockholm, Birka Nät (2002)*
5. Operation Manager Stockholm, Birka Nät
6. Operation Command and Duty Engineer, Birka Energi*
7. Operation Engineer, Birka Nät*
8. Operation Manager Stockholm, Birka Nät (control interview)
9. Security Manager, Ericsson Radio Systems (control interview)
10. Chairman of Husby Center Business Association (control interview)
11. Security Coordinator, Kista District Administration (control interview)
12. Manager for Printing and Distribution, Dagens Nyheter (control interview)

Case 2) The city of Stockholm Command and Control Unit's management of the 2001 and 2002 Stockholm blackouts

1. Commissioner of Finance, Stockholm City Hall
2. City Manager (2001), City Executive Office
3. City Manager (2002), City Executive Office
4. Negotiations Manager (2001), City Executive Office
5. Negotiations Manager (2002), City Executive Office
6. Fire Chief (2001), Stockholm Fire Department
7. Fire Chief (2002), Stockholm Fire Department
8. City District Director (2001), Kista City District Administration
9. City District Director (2002), Kista City District Administration
10. City District Director, Rinkeby City District Administration
11. City District Director (acting), Rinkeby City District Administration
12. Principal Fire Engineer, Stockholm Fire Department
13. Rescue Commander (2001), Stockholm Fire Department
14. Fire Engineer, Stockholm Fire Department
15. Fire Engineer and Rescue Commander (2002), Stockholm Fire Department
16. Rescue Commander (2002), Stockholm Fire Department

Case 3) The Swedish Defence Research Agency Division for NBC Protection's management of the hoax anthrax letters in 2001

1. Head of Division, NBC Protection**
2. Head of Department, Threat Assessment**
3. Head of Department, Environment and Protection**
4. Head of Department, Medical Countermeasures**
5. Reader/Associate Professor, NBC Analysis
6. Research Engineer and Head of P3 Laboratory, NBC Analysis***
7. Principal Researcher, Environment and Protection
8. Principal Researcher, Identification of biological Warfare, Defence Medicine
9. Research Engineer, NBC Analysis***
10. Research Engineer, NBC Analysis***
11. Research Engineer, NBC-protection
12. Research Engineer, NBC-analysis
13. Research Engineer, Laboratory Assistant, Medical Protection ***
14. Radiation Biologist, Defence Medicine***
15. Researcher, Bioinformatics, Defence Medicine***
16. Researcher, NBC Analysis
17. Secretary, Environment and Protection
18. Secretary, Threat Assessment

Case 4) Sveriges Radio's management of broadcasting challenges on September 11 2001

1. Program Director National (SR National Programming Service)
2. Program Director Local/National (SR Local and National Programming Services)***
3. Director of Personnel
4. Director of Security***
5. Head of P1 (channel)
6. Head of Planning, P1***
7. Head of Current Affairs Programs, P1***
8. Group Leader, Studio Ett (current affairs program)***
9. Producer, Studio Ett***
10. Group Leader, P1-morgon***
11. Producer, P1-morgon (morning show)***
12. Head of Cultural Programs, P1***
13. Editor-in-Chief, Cultural News***
14. Editor-in-Chief, Science Editorial Department

15. Head of Ekot (news program)
16. Head of News, Ekot
17. Head of News, Ekot
18. Head of Development, Ekot
19. Head of Foreign Desk, Ekot
20. Ekot's correspondent in New York
21. Ekot's correspondent in Cairo/Jerusalem***
22. Ekot's correspondent in Delhi***
23. Ekot's correspondent in Washington
24. Head of P2 (channel)
25. Head of P3 (channel)
26. Deputy Head of P3
27. Head of P4 National (Channel)
28. Editor-in-Chief, P4 National
29. Head of Technique and Development, P4 National
30. Producer, Efter 3 (talk show broadcasted in P4)
31. Head of SR, Jönköping (local channel)***
32. Editor-in-Chief, SR Jönköping***
33. Head of SR Örebro (local channel)****
34. Editor-in-Chief, SR Örebro ****
35. Head of P6 (international broadcast channel)***
36. Editor-in-Chief, P6***
37. Deputy Editor-in-Chief, P6
38. Deputy Editor-in-Chief, P6***
39. Head of Sisuradio (Finnish-speaking channel)***
40. Head of news, Sisuradio***
41. Head of SR's Web (New Media Department)
42. Coordinator, OPC (plant management)
43. Coordinator, OPC
44. Computer Operator, OPC

Case 5) TV4's management of broadcasting challenges on September 11 2001

1. CEO***
2. Program Director***
3. Broadcasting Director***
4. Planning Director***
5. Director of News***
6. Director of Current Affairs Programs***
7. Head of Back-Office Department***

Case 6) Sveriges Television's management of broadcasting challenges on 11 September 2001 and during the assassination of Foreign Minister Anna Lindh in 2003

1. Planning Director***
2. Head of News, SVT***
3. Director of News and Current Affairs***
4. Head of Rapport (regular news program, main broadcasting time 7:30 pm)***
5. Head of Aktuellt (regular news program, main broadcasting time 9 pm)***
6. Deputy Head and Editor of A-Ekonomi (financial news)***
7. Head of Foreign Desk***
8. Deputy Head of Foreign Desk***
9. Editor, Rapport***
10. Editor, Rapport (4 pm news program)***
11. Editor, Aktuellt (7.30 pm news program)***
12. Editor, SVT 24 (24 hour digital news program)***
13. Editor, SVT 24***
14. Editor, Sportnytt (sports news)***
15. Editor, Text TV***
16. SVT correspondent in Washington***
17. Program Presenter, Agenda (current affairs program)***
18. Head of News, SVT 24***
19. Reporter, SVT 24***
20. Head of Uutiset (Finnish-speaking news program)***
21. Head of News, Uutiset***
22. Head of Cultural News***
23. Editor, Cultural News***
24. Special correspondent, Cultural Department***
25. Head of News, ABC-nytt (regional news program)***
26. Editor-in-Chief, ABC-nytt***
27. Editor, ABC-nytt***
28. Program Presenter, ABC-nytt***
29. Editor, ABC-news***
20. Editor, Web Department***
31. Editor, Web Department***

* Interview conducted by Christoffer Källström

** Interview conducted by Kerstin Castenfors

*** Interview conducted by Eva-Karin Olsson

**** Interview conducted by Anders Johansson

Appendix 2: Interview guide

Mapping the course of events

When did you find out about the event in the first place?

From whom/how did you find out what had happened?

Which contacts did you make initially? With what means did you contact people? Why specifically did you contact these individuals?

What was your understanding of your mandate/area of responsibility in relation to the situation?

Mapping of the most important decision making occasions

In your opinion, which were the most important decisions made by the organization?

Which were the most important decisions that you made?

Who initiated the decisions?

Were other alternatives discussed? If so, which were these and who were they proposed by?

Did the practical execution of decision(s) result in the intended outcome(s). If not, why?

Group processes in the most important decisions

Did you make the decision(s) yourself? If not, who else was involved?

How would you characterize your relationship with the other group members?

Who initiated the decisions?

Were there any discussion leading up to the decision(s) being made? If so, who participated in these?

Who was the formal leader in the decision making group?

Did anyone assume an informal leader role?

Was the group used to working together?

Preparedness

Were there any contingency plans in place to address such events? If so, what kind of events?

Was any formal alarm triggered?

Cognitive aspects

Perception

What was your reaction/perception regarding the event(s)?

Stress

How did you perceive the stress level during the day in question? Did this change throughout the day(s)/week?

Did stress affect your work? If so, in what way(s)?

Did stress affect the work of the organization? If so, in what way(s)?

Did you have the opportunity to thoroughly consider strategic decisions?

When did you start to feel that a set of routines, formal or informal, began to guide work?

Value conflicts

Did you have to prioritize between different urgent tasks? If so, which ones?

Did that change over time?

Were there any economic prioritizations made? If so, which ones?

How did these affect your work, if at all?

Analogies

Were there any previous events similar in nature to the events in question that affected your way of working? If so, which were these? How did these affect your work?

Were these analogies yours personally, collected by others within the organization, or gathered from something that you had either read or seen?

Did these analogies affect the organizations' way of working?

Routines and improvisations

Which were the established decision making processes?

Were they followed?

Was there any improvisation in your work processes? If so, can you provide examples? Who initiated improvisational work practices?

Was there any uncertainty as to who should make the decisions? If so, what affect did this have?

Co-ordination

Internal co-ordination

How was work organized within your department?

Did work assignments and routines during the crisis period depart from everyday routines? If so, in what way and how did it affect your own work?

External co-ordination

How did your department co-ordinate with other departments?

Did co-ordination depart from normal routines? If so, how did that affect the work of your department?

Communication

Communication 'top-down'

How were decisions communicated to staff members?

Did communication procedures depart from normal routines? If so, in what way?

Communication 'bottom-up'

What kind of information did you require from the staff members?

How did you receive information from staff members?

Cognitive aspects of information

Did you perceive that you had enough information in order to perform your work?

Did you receive too much or too little information? If so, how did that affect your work?

Resources

Was the manning sufficient? If not, how was the issue dealt with?

How was manning at the managerial level dealt with?

How was manning on the operational level dealt with?

Who made decisions regarding manning?

Were the organizational members pleased with the decisions made in this regard?

Technical and physical preconditions

Were there any technical limitations affecting your work? If so, was anything done in order to deal with them and if so, by whom?

Where there any physical limitations affecting your work? If so, was anything done in order to deal with them and if so, by whom?

Learning and change

Have any organizational changes been made or suggested after the event(s)? If so, which ones?

Appendix 3: An introduction to Swedish administration and crisis management

Introduction

The present dissertation aims to develop new knowledge on how public sector organizations manage crises and how they learn from crisis events. The cases selected for analysis in this dissertation are all cases of Swedish public sector organizations. This shared empirical frame of the analysis warrants a more detailed description of the context of the research. This chapter aims to explain the setting and the external environment in which the organizations selected for case study scrutiny operate. Organizational theory sees the external environment as a factor with explanatory power when investigating organizational problems. Context and external environment enable as well as restrain organizational behavior. However, I will not discuss the issue of contextual environments in detail here. I will instead provide a brief and basic empirical overview of the institutional context surrounding the cases analyzed in the dissertation. Below I outline the specific fundamentals for crisis management at Swedish public sector organizations and the latest development on the system level. As three of the six cases used in this dissertation are Swedish media organizations, I end this chapter with a section on the Swedish public service media landscape.

The Swedish politico-administrative system

The Swedish state is unitary and decentralized (Pollitt and Bouckaert, 2004: 285). The politico-administrative system is based on relatively large authorities and municipalities. Authorities are relatively independent in relation to the Cabinet.

As stated in the national constitution, Sweden is a constitutional monarchy with a monarch as head of state. The monarch's responsibility is ceremonial and he or she (depending on the current order of succession) lacks real political powers (Regeringsformen, 1974:152). The legislature is the popularly elected parliament (Riksdagen), which is accountable to the people. Executive power is vested in the Prime Minister and the Cabinet (Regeringen). The Cabinet is accountable to the Parliament. The Cabinet governs the nation by executing parliamentary decisions and suggesting new laws or amendments. The Cabinet makes decisions collectively, which is relatively unusual compared to other European countries (Hansén, 2007). The Cabinet is assisted in its tasks by the Government Offices, which is a government agency consisting of several ministries, the Prime Minister's Office and the Office for Administrative Affairs,

along with some 300 central agencies, authorities, boards and public companies (Regeringen, 2009; Lundgren, 2009).

Most public authorities are responsible to the Cabinet.¹ Authorities may independently make decisions regarding government control and application of laws according to the constitution. This operating procedure prohibits so called 'ministerial rule', which signifies direct interference of ministries and ministers in the everyday work of agencies. Instead the Cabinet may suggest amendments to the laws that it finds should be clarified or altered (Regeringen, 2009; Lundgren, 2009). Preparing of legislation and policy advice are the main tasks of the ministries (Pollitt and Bouckaert, 2004:287).

Sweden is divided into twenty-one regional administrative counties. The County Council (Landsting) and County Administrative Board (Länsstyrelse) manage political tasks on the regional level. County Council decision makers are elected by citizens of the county. The County Administrative Board political decisions are made by a popularly elected assembly (Landstingsfullmäktige), which is the highest decision making regional body (SKL, 2005; Lundgren, 2009). The regional county council is responsible for public service tasks such as especially health and regional development (Hälso- och sjukvårdslagen, 1982:763; Lundgren, 2009). The County Administrative Board is responsible for regional public administration. The County Governor is decided upon by the Cabinet to lead the County Administrative Board (Lundgren, 2009; Förordning 2002:864).

On the local level Sweden is divided into 290 municipalities, each of which has a publicly elected assembly to decide on important and principal decisions. The municipal assembly (Kommunfullmäktige) also selects the Municipal Board (Kommunstyrelsen), which is the central administration in the municipality, and committees for municipal operations. Committees are in charge of administration and executive decisions by the assembly (Regeringen, 2008; Lundgren, 2009).

Swedish crisis management reform

As in most Western states, the system design of national crisis management dates back to measures relating to planning and preparing for civil defense emergencies (Lundgren 2009). In the 1980s and 1990s the practical interest for crisis management issues grew. Meanwhile events of national crises occurred. Major national crises include the grounding of the Soviet submarine U137 in 1981, the assassination of Prime Minister Olof Palme in 1986, the sinking of the ferry MS Estonia in 1994, the Gothenburg fire disaster in 1998, the riots during the

¹ Some are responsible to the Parliament.

EU summit in Gothenburg in 2001 and the national responses to 9/11. During these years, formal commissions suggested several improvements of Swedish national crisis management capacities. The most influential commission was established in 1999 (Government Report, 2001a). The Government commissioned the 'Commission on Risk- and Vulnerability' to suggest new forms for system planning of preparedness issues (Government Report, 2001a:36-37). In May 2001 the commission report was presented. The following Government Bill (Prop. 2001/02:158) suggested a set of principles on which to build a new and more holistic system for safety and vulnerability spearheaded by a new government authority and by inaugurating crisis management as a new area of politics. Consequently, the Swedish Agency for Civil Emergency Planning (ÖCB) was discontinued and the Swedish Emergency Management Agency (KBM) was established. The geographical territorial responsibility was emphasized, which means that there must be an organization for coordination of resources and actions within a (national, regional, or local) geographical area (i.e. the Government, County Administrative Board or municipal executive boards) (Prop. 2007/08:92, p. 77). Furthermore, three guiding principles for crisis management were proposed (Prop. 2001/02:10, p. 77; Lundgren, 2009).

The 2002 reforms still make up most of the overall framework for Swedish crisis management. It is grounded in everyday administrative structures, the geographical territorial responsibility and the three central crisis management principles of 'accountability', 'similarity' and 'vicinity'. The principle of accountability connotes that the same parties that normally are accountable for a societal field should be accountable for the same field in times of crisis (Prop. 2008/09:1, p. 71). The principle also applies to private organizations (Lundgren, 2009). The principle of similarity means that the normal organization structure and location of activities should as far as possible be the same in times of crisis, and that changes should not be more comprehensive than necessary. The principle of vicinity is an argument against centralization. It means that crises should be managed at the lowest possible level in society as close as possible to those that are affected, and by those who are responsible (Prop. 2005/06:133, p. 51). Taken together these principles place municipalities in the crisis management driver's seat.

The structure based on the 2002 reforms have been put to the test a number of times as real crisis events have occurred. Examples include the Bali bombings in 2002 that led to five Swedish casualties, the murder of Foreign Minister Anna Lindh in 2003, local floods in the Småland region in 2004, the Southeast Asian tsunami of 2004, Hurricane Gudrun in 2005, the evacuation of Swedish citizens from the Lebanon in 2006 and Hurricane Per in 2007.

The 2004 Southeast Asian tsunami and the 2005 Hurricane Gudrun left particularly long shadows. 225,000 people died from tsunami waves crashing in

on coastline villages and resorts of Sri Lanka, Thailand and adjacent countries early in the morning of 26 December 2004. Some 17-30,000 Swedes were in the affected area at the time and 543 were among those killed (RSOS, 2005). The humanitarian disaster on location became a national political crisis in Sweden. The slow national response was critiqued en masse and subsequently led to the dismissal of the Foreign Minister and removal of the Prime Minister's most trusted aide. Some even argue that the failed crisis management (in terms of meeting the public's expectations) was a contributing factor to the incumbent Social Democratic government's loss in the elections of 2006 (Henderson and Sitter 2007:207).

On 8-9 January 2005, Hurricane Gudrun swept over southern Sweden. The hurricane brought winds of forty-two meters per second. The winds caused havoc in their wake. At least ten people died in the storm or in its aftermath. The hurricane caused blackouts among 500,000 customers and telephone network power cuts at 300,000. Some network cuts lasted for weeks. 150 million trees fell with a cost of around twenty billion SEK (SKL, 2005; Lundgren, 2009).

The formal investigations of the events called for fundamental changes in the national system for crisis management. Commissions established to investigate the structures of national crisis management capacities (Government Report, 2005:104; Government Report, 2007a; Government Report, 2007b) suggested reforms regarding technical systems for early warning, information sharing and operational communication systems, as well as programs regarding large scale interorganizational simulation exercises. In 2005 the Preparedness and Analysis Unit (EBA) was established within the Government Offices. In October 2007, the investigation 'Crisis Management in the Government Offices' (Krishantering i Regeringskansliet) presented additional crisis management reforms, such as a clearer crisis management role and responsibility for the Prime Minister's Office and a new Crisis Management Secretariat within the Prime Minister's Office (Government Report, 2007a:24). The Secretariat was established on 1 March 2008. Meanwhile three central agencies for crisis preparedness and management merged (Government Report, 2007b). This reform was initiated on 1 June 2007 as the Government commissioned an inquiry into the operations of the Swedish Rescue Service Agency, the Swedish Emergency Management Agency and the Board of Psychological Defence. The following report (Government Report, 2007b) suggested the merger and establishment of a new government agency for protection from accidents, crisis preparedness, and civil defence. In line with the suggestion put forth by the Government Bill (Prop. 2007/08:92) 'Stärkt krisberedskap – för säkerhets skull', the new agency The Swedish Civil Contingencies Agency became operational on 1 January 2009 (Lundgren, 2009).

Swedish crisis management

Is there a 'typical' Swedish way of managing crises? Previous research on Swedish crisis management decision making shows that the cooperation climate is relatively favorable to consensus seeking and cooperation. The use of established forums helps politicians reach a common ground that legitimates actions and gives the impression of national unity (Sundelius et al, 1997: 150-151). Recent crisis management experiences and the intrusion of more emphasis on public relations into day to day and crisis politics seem to have changed this description (cf. Government Report, 2005:104).

In general the Swedish crisis management system is characterized by a high degree of decentralization, even though some areas within the national, regional and local areas of responsibilities seem to be moving toward more centralization. In line with the principle of responsibility, operational crisis management is usually carried out by the task-responsible actors at county councils and municipalities (Statskontoret, 2004: 10-11; Lundgren, 2009). Municipal self rule is a cornerstone of the Swedish model of administration, and responsibility for crisis management is mostly vested in municipalities.

Sweden has a highly institutionalized crisis management system on the local and regional levels. These levels are clearly regulated in laws regarding what actor has main responsibility for managing crises. On the national level, however, regulations are not as clear and issues tend to be handled ad hoc. Another characteristic of Swedish public management is the delegation of issues and decisions to lower levels in the hierarchical system (Statskontoret, 2005: 39; Lundgren, 2009). Hence the crisis management system is known for being professionalized rather than politicized. Although legal mandates for crisis management are found on the political level, the Swedish crisis management system is characterized by a professional responsibility over operational tasks on the local, regional and national levels. However, there are tendencies towards an increasing political interest in these affairs, especially on the local level (Lundgren, 2009).

The Swedish public service media landscape.

Media has long been seen by policymakers as immensely important for influencing democratic public opinion. For instance, freedom of the press was established in the National Constitution in 1810. However, the Swedish overall policies for print press and broadcasting media have been fundamentally different. While newspapers have been organized according to liberal media ideology based on private ownership and free establishment, a social responsibility ideology prevailed in the organization of radio and television in the form of public service (Hadenius and Weibull, 1999:20-21).

The Constitutional Law of Freedom of Speech (*yttrandefrihetsgrundlagen*), the Radio and TV Act (*radio- och TV-lagen*) and the broadcasting licenses given by the government are the main laws and regulations for public service media. Public service media consists of three state owned companies organized under the Ministry of Culture: the Swedish Educational Broadcasting Company (*Sveriges Utbildningsradio AB*), Swedish Radio (*Sveriges Radio AB*) and the Swedish public service broadcaster (*Sveriges Television AB*). For many years the public service companies had no real competition, as privately owned channels were not allowed. The state monopoly of the radio and television sector lasted for six decades until it was gradually dismantled (Hadenius and Weibull, 1999).

Today *Sveriges Radio* broadcasts in four nationwide channels and twenty-seven local channels. The Chairman of the Board is appointed by the government. *Sveriges Television* has two main channels with two news programs, and a number niche channels. It is a limited company owned by a foundation whose eleven members are appointed by the government. Traditionally, policy-makers have had a decisive influence on the organization of radio and television (Hadenius and Weibull, 1999:191). The government, the Swedish Radio and TV Authority (*Radio- och TV-verket*) and the Swedish Broadcasting Commission (*Granskningsnämnden för radio och TV*) are responsible for the licencing and scrutinizing of national broadcasting media. Despite the close ties to the government, the media companies are operated according to a principle of 'regulated independence' (Hadenius and Weibull, 1999:230-234).

Despite recent fragmentation of the national media landscape, the public service companies still hold a strong position (Hadenius and Weibull, 1999:192). The strongest challenge has come from *TV4*, which is a private national television channel financed by advertising. In 1991 the government gave *TV4* the concession to broadcast television as the third Swedish terrestrial channel. *TV4* was initially regarded as a state regulated public service channel. Licence fees and content regulations were settled in a formal agreement with the government. At least from a legal point of view *TV4* was a public service company, which had to follow the same regulations as *SVT* regarding local program production as stipulated by the Radio and Television Act (Hadenius and Weibull, 1999:226-230). Further, broadcasting licenses for *TV4* and *SVT* are still similar in requirements, time and scope and like *SR* and *SVT*, *TV4* has an agreement with the Swedish Civil Contingencies Agency regarding the national public warning and information system (*Viktigt Meddelande till Allmänheten*) (*SRV*, 2007).

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