

## IS BEST PRACTICE ALWAYS THE BEST? LEARNING TO BECOME BETTER CRISIS MANAGERS

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### Abstract

This article argues for a reassessment of the idea of learning from critical incidents and crises in organizations. Crisis management research looks upon crisis-induced learning as highly desirable albeit immensely challenging. This paper argues that, although learning from crisis is important for crisis management performance, the idea of crisis-induced learning holds an intrinsic contradiction, which becomes one of the main challenges to building crisis management capacities and competencies from lessons learned from previous crisis experiences. As crises are dynamic and evolving processes permeated by uncertainty and elements of surprise, learning from prior crisis experiences will not suffice for an effective future crisis response. Empirical episodes from inductive case studies are used to show that learning from crisis can lead to rigid structures and behavior hampering crisis management and organizational resilience. The study concludes by discussing conditions that need to accompany crisis-induced learning processes in organizations in order to avoid rigidity in future crisis response.

### Introduction

This article is about how critical incidents and crises can be unhelpful teachers for organizations. The overall purpose is not to discard learning from crises. Instead it is to infuse a critical perspective to the study of crisis-induced learning. We define a 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). Crisis-induced learning, in turn, is defined as *efforts triggered by a crisis event, carried out by members of an organization, leading to new understanding that guides future behavior* (Boin, ‘t Hart, Stern and Sundelius, 2005; Dekker and Hansén, 2004; Argyris and Schön, 1978). Even though individual organizations and their managers may only rarely be subjected to a crisis (Boin et al, 2005), learning is a lifelong activity. It is the basis for a continual increase of knowledge within and between individuals.

The specific aim of the article is to reassess theories on learning from crisis and critical incidents in organizations by presenting a critical perspective that puts into question the linear and normative idea of improvement by best practice based on experience in general, and crisis-induced learning in specific. By using illustrative empirical episodes from inductive case studies, we show that learning from crisis *can* lead to rigid behavior hampering future crisis management and organizational resilience. This means that even in cases where organizational members manage to use lessons from crises to foster new knowledge and implement change, organizations are not necessarily better prepared when a new, different and dynamic crisis occurs (cf. Senge, 1990). Thus, learning from crisis is not enough to foster vigilant crisis management capacity or to build resilient organizations.

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### About the author

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The article begins by outlining what crisis management research so far has taught us about crisis-induced learning. The next step is to turn from theory to practice by presenting descriptions of episodes from qualitative and inductive case studies of how crisis-induced learning can turn into barriers to vigilant crisis management. Six hypotheses on the relation between past crises, crisis-induced lessons and application of the lesson to a new crisis are drawn from the case descriptions. The article ends by discussing the potential implications of the hypotheses on crisis management theory and practice.

### **The Crisis Management Perspective**

Crises can alter the way organizations are perceived by the public and stakeholders. Crises challenge organizational behavior, structures and cultures, as day-to-day operations and procedures are pushed to the limit and dilemmas are brought to a head (Seeger, Sellnow and Ulmer, 2003; Rosenthal, Boin and Comfort, 1989; Deverell, 2010). Yet crises occur constantly on different levels and arenas affecting a variety of actors and organizations. Typically, mass media makes us aware of large scale crises or disasters that reap havoc, cause mass casualties, affect multiple jurisdictions and undermine the functioning of organizations, governments, or policy sectors (Ansell, Boin and Keller, 2010). Examples of such recent crises include the Japanese earthquake, tsunami and nuclear incident crisis 2011, the Norwegian shootings at the island of Utöya and bombing of the government headquarters in Oslo 2011 and large scale terrorist attacks such as 9/11 in the US 2001, the 3/3 Madrid train bombings in 2004 and the 7/7 London bombings in 2005. But incidents do not need to be of such large scale to be categorized as a crisis. Firms are challenged by downturns in business, product recalls, workplace violence, or unethical conduct of the CEO. All these types of events have in common that they are situations in which decision makers perceive time pressure, uncertainty and threats to core values (cf. Boin and 't Hart, 2006; Sundelius and Stern, 2002; Stern, 1999; Rosenthal et al, 1989). It is the combination and concurrency of these three criteria that challenge decision makers coping capacity. Five tasks are especially critical for crisis management from a leadership perspective. These are the capacity of leaders to make sense of unfolding events, make crucial decisions to mitigate consequences, communicate and add meaning to the event and the response, return to normalcy and draw lessons for the future (Boin et al, 2005).

Scholars using a crisis definition based on the aforementioned criteria tend to focus on the subjective perceptions of strategic decision makers. This leads to a strategic perspective on crisis leadership and decision making, which notices the 'un-ness' of crises (unlikely, unwanted, unpleasant, unprecedented, unmanageable) (Hewitt, 1983: 10; Rosenthal and Kouzmin, 1997: 289), while also emphasizing the opportunity for strategic action, including the potential to alter political support by purposeful action and rhetoric (Boin, 't Hart and McConnell, 2009). With an empirical base in case study research, crisis management scholars have generated much theory on foremost crisis decision making and crisis communication (Brockner and James, 2008; Coombs and Holladay, 2002; Flin, 1996; Dror, 1988). The focus of attention in this cross-disciplinary research field has been on processes before and during crises, rather than processes after crisis, when learning is traditionally considered to take place (see, however, Turner, 1978; Carley and Harrald, 1997; Smith and Elliott, 2007 for exceptions). Consequently, empirical studies on how organizations and their members learn from crises are scarce (Dekker and Hansén, 2004; Boin et al, 2005: 134; Nohrstedt, 2007: 7; Carley and Harrald, 1997: 317; Boin, 2006). As theories on crisis-induced learning remains sparse, the issues of whether and how public organizations and agencies learn from crises is still relatively unknown. The limited research on the topic seems to encourage analysts to rely on the idea that critical incidents, crises and disasters are breaking points bringing about

progress and reform (Boin et al, 2005; Keeler, 1993; Kingdon, 1995; Pressman and Wildavsky, 1984).

This article challenges such conventional views on learning from crisis and argues that crisis learning will not suffice in the pursuit of better practice. Instead, lessons learned from past crises need to be embedded within flexible organizational procedures and structures. Flexibility is required to fit former lessons to new and dynamic crises. In this way flexibility is critical for a successful crisis response (Borodzics, 2004; Boin and Lagadec, 2000; Roux-Dufort, 2007) and for learning and resilience (Borodzics, 2004: 419). However, studies rarely go into detail regarding what that flexibility actually entails. Instead flexibility tends to be linked to crisis management best practices such as creativity and improvisation (Stern, 1999, Borodzics, 2004). Mainstream management and business literature offer some further insights to the flexibility concept. This literature describes flexibility as a necessary capacity for organizations to adapt to a changing environment (e.g. Ford and Gioia, 2000; Reason, 1997; Senge, 1990) and as a requirement for new ideas, assumptions and choices that organizations need for adaptations and change to occur (Sharfman and Dean, 1993). In sum, organizations need flexibility to respond to crises and to adapt to crisis management mode as crises are dynamic and unpredictable situations signified by great uncertainty.

### **The Crisis and Learning Equation**

As this article investigates learning from crisis experiences in organizations, it is necessary to briefly outline what organizational learning means in this study. In line with Weick and Ashford (2001) and Argyris and Schön (1978), this article perceives organizational learning as a metaphor for what happens in organizations when individuals inquire into and learn about their performance, their environment or about how the collective does or should operate in interaction and competition with other organizational members. This makes the individual members of the organization the primary learning entities and the true learning agents (Argyris and Schön, 1978; Dodgson, 1993).

When organizational learning is triggered by a crisis, we talk about crisis-induced learning (Deverell, 2010). A pragmatic and slightly simplified look at the literature on crisis-induced learning gives us an optimistic and a pessimistic approach. Both approaches put forth plausible claims. They tend, however, to focus on different aspects of the crisis and learning equation. Scholars investigating crisis and learning from a pessimistic perspective tend to focus on impediments to learning such as opportunism and denial, hindering lesson drawing (Stern, 1997) or political conflicts of interest regarding what needs and can be done and how (Boin et al, 2005). Other phenomena that turn the attention from lessons learned to high politics and infighting are blame games and scape-goating (Hood, 2002; Brändström and Kuipers, 2003). According to the pessimistic perspective, when learning from crisis does occur, it is as a slow and incremental process (van Duin, 1992). Mostly, learning after crisis will lead to correction of minor errors by routine, while the fundamental principles, values, norms and operating procedures behind the crisis are not inquired into (c.f. Argyris and Schön, 1996; 1978: 29ff).

Analysts with an optimistic perspective are inclined to expect learning to follow from crises and disasters (Fiol and Lyles 1985; Seeger et al, 2003; Common, 2004). Research on crisis-induced learning entails a gamut of perspectives inspired by several scholarly fields. The public policy and agenda-setting literatures, for instance, deal with learning from crisis, identified as trigger events (Cobb and Elder 1983), external perturbations (Sabatier, 1993) and focusing events (Birkland, 1997), with potential for comprehensive policy change. Researchers in this field moreover claim that “windows of opportunity” for learning are opened in the crisis aftermath (Keeler, 1993; Kingdon, 1995; Schwartz and Sulitzeanu-

Kenan, 2004). This literature supports the idea that large scale crises and disasters can influence and drive policy change. However, the public policy literature does not support a linear relation between crisis experiences and learning. Rather new problems tend to be connected to old solutions and knowledge (Birkland, 2006; Kingdon, 1995).

To sum up the discussion so far, the many barriers to lesson drawing and implementation after crisis make learning from crisis difficult. When learning from crisis does occur, lessons tend either to be selected from existing policy ideas or they stop at correcting minor errors in small steps. At the same time learning from crisis experience is essential for best practice and for fostering organizational resilience (Deverell, 2010). Why then is learning in the wake of crisis not the norm? This is an interesting issue worthy of further empirical investigation for at least two reasons. First, crises are unwanted events with large consequences and we need to learn from these episodes to improve future crisis management (Hillyard, 2000; 9). Second, crisis-induced learning may assist in preventing crisis repetition (Argyris and Schön, 1978: 5; Toft and Reynolds, 1997).

### **Learning From Crisis Experience**

Learning from experience is a cornerstone in the learning literature based in disciplines such as psychology, pedagogy and education (Dewey, 1938; Kolb, 1984; Illeris, 2006). Generally, the view on experiential learning is that it produces improvement (Haunschild and Sullivan, 2002). At the same time experiential learning is behind many mistakes. James G. March sums it up pretty nicely in the following quote: “Experience may possibly be the best teacher, but it is not a particularly good teacher” (March, 2010: 115). Experience is ambiguous as it occurs at different levels in organizations. Further, experience is interpreted by the ones experiencing it and by other actors interacting in complex ways (March, 2010). An interesting question in this regard is how crisis-induced learning is distinguished from other experiential learning.

Crises are rare, specific, and extraordinary compared to the everyday rhythm of life in organizations, firms, or government. In a similar vein, crisis learning differs from routine experiential learning. One such distinguishing factor is that the experience of crises is more unusual than the experience of other routine incidents (Boin and Lagadec, 2000). Increasing attention given to crises from a variety of perspectives leads to the idea that crises seem to be occurring more often today than some twenty years ago (Kouzmin, 2008; Boin, Kofman-Bos and Overdijk, 2004). However, many officials can still work an entire career and only experience a few bona fide crises (Boin et al, 2005). In any event, crisis learning differs from regular learning as the latter occurs cumulatively over time while the former leads learning actors to learn “in categories”, one crisis at a time (Carley and Harrald, 1997: 313).

Another factor setting learning from crises apart from learning from routine incidents is that the former is more challenging than the latter. Crisis-induced learning takes place when the need to learn is at its greatest and while it is the hardest to achieve (Dekker and Hansén, 2004; Moynihan, 2009). The criteria that characterizes a crisis event and that make sense making, decision making, communicating and coordinating during the crisis ever so complicated – that is values at stake, time constraints and uncertainty – are also integral parts of crisis learning. Indeed, drawing lessons from experiences digested under circumstances characterized by challenges that differ from the ordinary and the routine is demanding. Crises increase stress levels (Hermann, 1979; Staw, Sandelands and Dutton, 1981). Consequences of decisions, actions and tragic choices may be difficult to deal with, evaluate and to learn from. This becomes even more evident in the phase that follows when the acute crisis has been terminated and politically motivated debate and investigations begins and discussions on blame and accountability are pushed to the fore (Hood, 2002; Brändström and Kuipers,

2003). Such discussions often lead to critical scrutiny, not least in the media. If actors that are expected to learn from the crisis, frame increased media and public scrutiny as a threat, critical media coverage may cause narrowed attention fields and rigidity in response (Staw et al, 1981; James, Wooten and Dushek, 2011). Such a framing of public attention and media coverage may affect learning in a negative way. In these cases the managerial knee-jerk response is characterized by symbolic rhetoric, defensive denials and blaming. The more time spent on such spin rhetoric, the less time is spent on learning concrete and affordable lessons. This, in turn, requires low levels of conflict and meticulous adaptation of procedures and regulations on the one hand, and technological innovation on the other (Boin and 't Hart, 2003: 559).

## **Method**

We use three inductive case studies of organizational crisis management analyzed through process tracing and reconstructive methods (George and Bennett, 2004). In line with Sundelius, Stern and Bynander (1997), Stern (1999) and Stern and Sundelius (2002), we use an adapted version of the process tracing approach based on case reconstruction and decision making occasion analysis. This approach was developed in an effort to study complex and dynamic crisis decision making dilemmas from a process perspective.

Commentators tend to describe a crisis as a single- and closely connected event, while decision makers involved in crisis management understand crises as comprised of a series of events and problems occurring before, during and after the actual trigger event (Stern, 1999). 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. Case study reconstruction was conducted by pinpointing and analyzing key decision making occasions (Stern, 1999; Stern and Sundelius, 2002).

The case study method is beneficial when contemporary phenomena (Yin, 2003; Flyvberg, 2006) and emerging problems or phenomena that can only be understood in their context are to be elucidated (Eisenhardt, 1989). The following three cases are included in the study: 1) The bombing in Myyrmanni shopping mall in Vantaa, Finland 2002; 2) The July 7 2005 terrorist attacks against the public transport system in London, UK; and 3) The electricity cable fire and blackout in Stockholm, Sweden 2001. All case studies are examples of societal crises and they were carried out according to the same research strategy and methodology. From these cases illustrative episodes where lessons learned from a prior crisis led to a deficient crisis response were selected. The case selection strategy warrants some further explanation. The sampling relies on theoretical, not statistical or random, sampling. This means that the cases are chosen for theoretical reasons. The cases are chosen to fill theoretical categories and provide elucidating examples. Theoretical sampling is carried out in an effort to select cases which are likely to replicate or extend the emergent theory (Eisenhardt, 1989). Rather than producing generalized knowledge by generalizing a correctly selected sample to a larger universe through statistical generalization (Yin, 2003), the selected cases promote inductive identification of new hypotheses for further research to test (George and Bennett 2004).

## **Empirical Examples of Crisis-Induced Learning Leading to Deficient Crisis Response**

In the following sections three crisis cases are presented. We focus on how the responding unit applied lessons from previous events to the crisis at hand. Each case is

chosen to illustrate that crisis-induced lessons learned can foster rigid behavior when applied to a new and ambiguous crisis event.

### *Crisis Episode 1: The Myyrmanni Mall Bombing 2002*

At 7:35 pm on 11 October 2002, a bomb went off inside the Myyrmanni shopping mall in the city of Vantaa outside of the Finnish capital Helsinki.<sup>1</sup> Seven people were killed and 160 were wounded in the blast. Many were injured by shrapnel and steel shots that were spread over a 400 square foot area. Within two minutes the first ambulance reached the scene. Six minutes later the fire brigade arrived. Vantaa Rescue Services Agency's deputy fire chief held the on-site command. Rescue service was carried out efficiently. At 8:35 pm the last patient was transported to hospital. At 11:10 pm the Rescue Commander formally completed the operation and handed responsibility over to the police.<sup>2</sup> When the operational rescue operation was completed, the fire chief commissioned the municipal Crisis Centre to alleviate psychological suffering among those affected by the incident. The Crisis Center's emergency workers established a temporary crisis counseling center in a public school house adjacent to the mall. There they offered psychosocial support until Sunday evening.

On Monday 14 October, Vantaa City Board met with the police and the Ministry of the Interior to discuss lessons learned from the incident management and what to do next. The City Board decided to set up a support fund for the victims of the explosion. The purpose of the fund was to facilitate the situation for the survivors. The general idea was similar to what was done after the Lappo disaster in 1976, when a gunpowder storage at the ammunition factory in the Finnish city of Lappo exploded. Forty of 45 workers died instantly in the explosion. Several support funds were founded in 1976 in favor of the victims. A total of 16 million Finnish marks were paid in compensation, support and contributions to families of the victims. Since the incident the system of establishing support funds to disaster victims has been institutionalized in Finnish crisis management practice. When the Myyrmanni bombings occurred in 2002 the state was required by law to help cover losses for people affected by disasters.

The day after the meeting, news about the City of Vantaa's fund, "Victims of the explosion accident at Myyrmanni", was published in several newspapers. The fund soon received financial backing. The government decided that each ministry should support the newly established Fund. On Monday, 21 October, Vantaa City Board decided they would invest 150,000 Euros to start up the fund. Meanwhile the City Board in Helsinki decided they would invest 50,000 Euros.

However, a seemingly appropriate political decision based on best practice ended up causing massive critique. The City Crisis Centre was commissioned by the City Board to administer the fund, despite the fact that the Crisis Centre opposed to the idea that the city and its agencies should manage the fund. The fire chief also objected to the fund's set-up and implementation. In an interview he stated: "I think that the purpose of the fund was unclear. It was mainly established for political reasons. The difficulty lay in: how do we distribute money?"

Both the fund and the work that the Crisis Centre conducted in this regard were further critiqued by the Red Cross in media reports (even though the Crisis Centre engaged a person from the Red Cross to manage the fund). Moreover, some of the victims were annoyed over the size and pace of the fund's payments. These issues were hard for the Crisis

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<sup>1</sup> This section is based on Deverell, Almgren and Örténwall, 2003.

<sup>2</sup> As it was soon clear that it was a deliberate bombing, the National Police took over the case. Surveillance tapes directed suspicion towards one of the victims. The question was whether the 19 year old boy had acted alone or as part of a group.

Centre to influence as they were defined in the regulations of the fund. In this regard, the fire chief has said: "In Finland, we have strict rules and regulations, so we need funds with looser regulations".

In sum, while politicians earned goodwill by showing force and quickly establishing the fund, public administrators instead received "bad will" when the fund did not function as it was intended, and when they could not distribute subsidies fast enough. According to the head of the Crisis Centre, the episode affected the City's administration and the organization in a negative way. He would have preferred that the Red Cross, rather than the City of Vantaa had managed the fund as the former had more experience in these matters. This crisis-induced learning episode demonstrates how learned behavior from a prior crisis led to new practice. These procedures were implemented without further consideration into how they should be adapted in order to fit a future crisis. How the fund for the victims should be established and managed was not deliberated upon enough by the city government. The Vantaa City Council's decision to establish a support fund administered by the Crisis Centre gave the involved actors a scale of new challenges. Some of the victims required support promptly, but starting up a support fund was a time consuming task due to rigid regulations. Thus new problems rose as the payments lagged and the Crisis Center's credibility and reputation dropped.

The following hypotheses can be drawn from this incident:

Hypothesis 1: If crisis-induced learning is based on experience dating far back, application of the lessons to a new crisis will present a lack of fit.

Hypothesis 2: If crisis-induced learning is based on experiences drawn far away from (rather than close to) the geographical location of the new crisis, application of the lessons to a new crisis will present a lack of fit.

### *Crisis Episode II: The 7/7 2005 London Bombings*

The first terrorist suicide bombing in Western Europe in modern time occurred in London on July 7, 2005.<sup>3</sup> At 8:50 am three simultaneous blasts occurred on subway trains at the stations Aldgate, Edgware Road and between Russell Square and King's Cross. About an hour later another bomb detonated on a bus at Tavistock Square. Altogether 56 people were killed in the attacks and 755 people were injured. The first units from the London Fire Brigade arrived at Aldgate at 9:00. The events were characterized as a major incident by the fire brigade at 9:05. Ten minutes later Transport for London decided to evacuate the entire subway system. The first ambulance arrived at Edgware Road at 9:18. When the fourth bomb went off on the top floor of bus 30 at Tavistock Square at 9:47, emergency officials on site between King's Cross and Russell Square heard the blast. By this time they understood that they were dealing with acts of terrorism. Due to uncertainties in the reporting of the incidents to the control units, authorities believed that seven attacks had occurred (instead of four). The severity of the events called for a meeting at 10:00 with the London Gold Co-ordinating Group at the Strategic Co-ordination Centre in Hendon. The medical part of the rescue operations at Aldgate and at Edgware Road was completed in one hour and 22 minutes. The accident site at Kings Cross was more complicated. It was completed after 2 hours and 56 minutes. At the incident scene at Tavistock Square investigators found a head without a body. The head could be tied to identity documents at the scene. Thus early on the Metropolitan

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<sup>3</sup> This section is based on Deverell, Fors, Hjelm and Sjölund, 2006.

Police suspected they were dealing with suicide bombers. The following morning subway traffic was resumed.

Crisis management during the 7/7 bombings demonstrated a few examples where learning from crisis caused problems rather than solving them. One such example concerned communication between hospitals and the London Ambulance Service (LAS) alarm and control centers. Six years earlier London was subjected to the so-called London Nail Bomber's 13-day bombing campaign against gays and immigrants in the city. One of the main lessons learned from these emergencies was to have one single designated person responsible for communicating with the hospitals. After the incidents LAS created a specific role in the emergency center in charge of communicating with hospitals. From here on, the Primary Telecom Officer (PTO) was the only one person at the alarm/control center tasked to communicate with the hospitals.

On July 7 this turned out to be a barrier to effective crisis management. The lack of redundancy was problematic during the first critical hours on 7 July. The PTO mission became impossible. The function had to communicate with 30 hospitals and deliver new information every 15 minutes, even if there was no actual new information to deliver. The LAS control room, including the PTO function, was overloaded by incoming calls. As a result communication with the hospitals suffered as distribution of the number of injuries that were sent to different hospitals became skewed with too many victims sent to some hospitals while others only received a few. Overload of technical communication systems and skewed patient distribution are common feature in any disaster causing mass casualty. Nevertheless, problems were made worse as the PTO system and procedure based on lessons learned from previous crises was not flexible enough to deal with a crisis such as the 7/7 bombings as it differed significantly from routine emergencies. The episode shows that it is important to assess lessons learned from various crises carefully and to establish flexible functions and structures that may be turned into crisis mode when required.

The following hypotheses can be drawn from this incident:

Hypothesis 3: If crisis-induced learning is based on a serious albeit routine emergency, application of the lesson to a new crisis will present a lack of fit.

Hypothesis 4: If crisis-induced learning is implemented in specific (rather than universal) lessons, application of the lesson to a new crisis will present a lack of fit.

### *Crisis Episode III: The 2001 Stockholm Blackout*

Early in the morning of March 11, 2001, power cables caught fire in a tunnel adjacent to a power station in a northwest suburb of the Swedish capital of Stockholm.<sup>4</sup> This was the third time in only a few years that a fire broke out in the network. Prior fires, however, had not been interpreted as warnings indicating a broader problem of an accident prone system. Rather these events were seen as indicators emphasizing that fires in the system were small scale problems or normal incidents that would not put the entire system at risk.

Unlike previous incidents, the March 11 2001 fire caused a power outage affecting eight city districts, leaving them partially or totally without power from 7:00 am to 8:35 pm the following evening. The blackout was one of the most comprehensive power outages ever to strike Sweden and one of largest power disturbances ever witnessed in the history of electricity distribution in the city. Both the duration of the blackout and its scope were

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<sup>4</sup> This section is based on Deverell, 2003.

without modern precedent. Consequences were dramatic for the residents, the accountable power company and leading city actors. The adjacent district of Kista with its growing IT industry was the hardest hit. The Stockholm Fire Department was assigned to put out the fire 330 meters inside the cable tunnel. The blackout seriously affected businesses and public administration as well as the daily lives of residents as 19,000 clients of the power company lost power (including some 50,000 people and 700 businesses employing around 30,000 people). Heating, ventilation, fresh water pumps, sewage pumps and telephones were out of order during the blackout, as were cellular phone networks at various points. Conditions were especially harsh for the elderly, as electronic aid devices failed. Moreover, subways were unable to run and traffic lights were out of order. The four national Swedish daily newspapers, whose printers were located in the blackout area, were affected.

The tunnel in question was the energy company's only facility that had been threatened by three consecutive fires. Unlike the blaze in March 2001, prior fires did not damage the main 110 kV cables. Thus incidents in the past did not have the same repercussions as this one. With a functioning fire alarm and a more alert and critical posture on the reliability of the system from the company, the fire might have been stopped at an earlier stage. Instead, operational actors were optimistic in their interpretation of the events when the first failure indications appeared. When the 04.21 am alarm went off at the power company's control room, the problem was interpreted as a technical error rather than a fire that could put the whole system at risk (cf. Perrow, 1999)<sup>5</sup>.

This framing – partly due to the fact that the fire alarm was out of order and that prior fires had not led to such damage to the network – also depended on the high level of trust in the network system among the power company employees. The night watcher checked the system on two prior occasions the night of the fire without noticing that there was an emergency in the making. When he returned for the third time and saw smoke coming out of the tunnel, the initial problem framing definitely changed from a technical error to a potential high risk problem.

Now the perceptions of the problem were focused on the fire. The first priority was to put it out and the full scope of the blackout was not realized at this stage. A similar pattern appeared when the power company was making their first public assessment of when power would be restored. Despite the knowledge that there were no ways of knowing for sure what the damages were, once power had been deliberately cut, a dyad of engineers released a much too rosy estimation of the probable duration of the blackout.

The underlying philosophy of the response indicated that the public utility staffed mostly by technicians and engineers was permeated by a technical culture. This led managers and operators to apply narrowed attention fields that focused on the technical core aspects while failing to notice the complexity of the situation. If there was a lesson learned from prior events it was business as usual rather than to embark on a road to reform or change implementation. Instead of teaching vigilance, learning from prior events taught the power company narrowed outlooks leading to a rigid response when a new fire broke out in the network. The following hypotheses can be drawn from these incidents:

Hypothesis 5: If lessons from previous critical incidents are analyzed neglectfully (rather than attentively), application of the lessons to a new crisis will present a lack of fit.

Hypothesis 6: If lessons from previous critical incidents are dominated by a “business as usual” approach, application of the lessons to a new crisis will present a lack of fit.

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<sup>5</sup> The case is a textbook example of what Perrow calls the “interactive complexity” of technical and high risk systems, where failures “interact in some unexpected way”, leaving operators flabbergasted and unable to link failures and their interactions (Perrow, 1999:7).

## Discussion

The case descriptions above are examples of how critical incidents and crises can be unhelpful teachers. They all signify a clear mismatch between prior events and current crisis situations, either in time, space, scope or frame. Further, they all emphasize the difficulty of managing the complexity of future crises. The uncertain, unexpected and unknown make crises complicated, and while lessons learned may assist at times, they may also hamper upcoming crisis management.

The first case emphasized the role of time and space. The hypotheses indicated that it will be difficult to fit old lessons to new events. First, there was a significant geographical distance between the events as well as between the different actors involved in the management of the crises in question. This may have had an effect on the lack of fit of the crisis-induced learning in the Myyrmanni case. Second, the temporal factor worked against a decent fit. The lesson learned was based on experience dating far back. This means that the actors involved had very little knowledge of what actually happened in the aftermath of the 1976 Lappo disaster. The crisis-induced lesson had developed into a best practice that was institutionalized and that became implemented without further or attentive analysis. In the Myyrmanni case, the application of the lessons presented a lack of fit. What worked in the mid 1970's did not work almost 30 years later. Societal changes and demands on timely actions required more from public disaster funds. In this case there was a need for flexibility in the structures to enable financial support when it was needed the most.

The second case put the microscope on the scope of previous events and the lack of fit between crises of different scales. The case shows the lack of fit between lessons from serious but also relatively 'normal' emergencies and lessons from major incidents and bona fide crises. In the case of the London bombings, the divergence in terms of scope between the two emergencies led to a lack of fit between the lesson learned and its future implementation. As in the former case, this episode shows the need for flexibility in crisis organization and response. While a number of routine structures are essential also in response to major incidents and crises, some do not make the transfer to crisis mode easily. The specific rather than universal lesson of establishing the PTO system is one such example which required more inbuilt flexibility to work accordingly in a crisis situation.

The fact that the incidents reported in the third case were all close in both time and space could suggest a smooth fit to the next crisis. However, the neglectful analyses of the incidents prior to the 2001 cable fire and blackout, led managers to avoid framing the events as crises or out of the ordinary problems. The third case thus highlighted the lack of fit between frames of routine affairs and frames of crisis. The lessons that were drawn from previous critical incidents were dominated by a routine and "business as usual" frame. The divergence of that frame and the crisis frame that was established when the third cable fire led to a serious incident, meant that the application of the lessons to the future crisis presented a lack of fit.

Taken together the cases suggest four critical factors that seem to affect how well the lessons learned from one crisis makes the fit to the next crisis. These factors are time (from short to long), space (from near to far away), context (from specific to universal) and analysis (from neglectful to attentive). The cases, moreover, show how it is unlikely that learning from previous experience will be sufficient when new and dynamic crisis events occur. Other factors or conditions need to accompany lessons learned from crises in order for individuals and collectives to respond vigilant to future crises. The question then is what needs to accompany learning from crises in order for lessons learned to fit demands of future crises.

Interestingly, the hypotheses relate to the issue of flexibility. It is plausible that lessons learned from the previous incidents had been better applied to the new crises if flexibility had been embedded in the organizational structures and lesson learned mechanisms. If flexibility accompanies the implementation of crisis-induced learning processes in organizations, rigidity in future crisis response may be avoided (cf. Ford and Gioia, 2000).

### **Conclusion: Learning to Become Better Crisis Managers**

This study has examined learning from critical incidents and crises. We have recognized crisis-induced learning as an activity that *should* be able to improve future preparedness and crisis management capacities. Traditionally, it has been fruitful from a robust research design perspective to avoid normative perspectives indicating that learning *per se* should be interpreted as synonymous to an improved outcome (see e.g. Rist, 1994).

A normative and prescriptive approach to learning is a pragmatic and useful approach in consultancy and change management, but for theory development it is unlikely to be accurate as it is rarely grounded in empirical cases. Clearly, as the empirical examples presented in this study demonstrate, all learning is not “good” learning. Some of the things we learn may be incorrect or inadequate, at least in a specific and different situation. Our learning then may be for better, or for worse (cf. Illeris, 2006). In this regard, however, it should be mentioned that a non-normative perspective is rarely useful for practice. Working with a normative stance on issues on crisis and learning will make the process increasingly challenging and unusual. If we adopt an approach to learning that makes us grasp learning as a process without paying attention to its outcome, we end up with scholarly findings “intentionally distant from practice, non-prescriptive, and value-neutral” (Argyris and Schön, 1996: 188). Such insights will not generate useful advice for practitioners. This means that this research will not influence future crisis management or resilience in organizations. A normative approach to learning, on the other hand, reveals an intrinsic contradiction in the idea of learning from crisis, a contradiction that is rarely made explicit (see e.g. Elliott and Macpherson, 2010; Brändström, Bynander and ‘t Hart, 2004). The foundation of the contradiction leads us to the philosophical basis of what constitutes a crisis. Crises are dynamic, evolving and unpredictable processes permeated by uncertainties and elements of surprise (Seeger, Sellnow and Ulmer, 1998). This means that learning from prior experience will not suffice for an effective crisis response. Put more succinctly, there is always a risk of “lack of fit between lessons from the past and the demands of future events” (Elliott and Macpherson, 2010: 574; Staw et al, 1981).

The empirical episodes reiterated above demonstrate the challenge of learning from crisis as future crises tend to diverge from prior events. That said, a word of caution is required. The cases in this study are selected to prove a specific and illustrative point. It is likely that there are counter cases where crisis managers learned lessons that were helpful also when the next crisis occurred (see e.g. Fahy and Proulx, 2002; Deverell, 2010). It is also feasible that more extensive case descriptions and analyses of the prior events related to *this* study – that is the 1976 Lappo blast, the 1999 Soho nail bomber and the two previous fires in the local electricity network in northwestern Stockholm – would highlight additional lessons learned that may be instrumental in the handling of coming incidents and crises. It may even be that the crisis managers learned lessons emphasizing the value of flexibility in crisis response.

Another question that this study is not able to answer is what would have happened in the later crisis events if the involved crisis managers had lacked any prior experience to lean on whatsoever. In a scenario with no previous crisis experience, would organizational

structures and managerial and operational mental frames have been more or less rigid? These caveats underline the fact that the results presented in this article by no means should be taken as a basis to discard the value of learning from crisis. Rather they emphasize that learning from crises and critical incidents is both desirable and challenging. However, learning from crisis episodes is not enough to establish functional or appropriate crisis management capacities in organizations. Crisis-induced learning needs to be accompanied by flexibility in organizational structures and managerial strategies in order for lessons to become tools for future vigilance when crises occur.

This study can be seen as an initial step for further research on under what circumstances crisis learning may lead to lessons implementation with enough intrinsic flexibility embedded in the structures to make the fit to future events. In addition, it is a call for more research on how organizations can foster flexible structures and strategies vital for crisis response.

One such avenue for further knowledge enhancement concerns how to develop crisis management exercises designed for flexibility. To date most exercise scenarios are exclusively designed according to well-known and previously experienced events (Boin et al, 2004). The question that this study has posed is if sufficient knowledge enhancement and capacity building can be developed from the generic problems (and potential solutions to such problems) that these previously experienced frames deliver. The most challenging aspect of future crises, is the threat, uncertainty and potential value conflict of the unexpected, unpredictable or unthinkable. This means that exercise and game planners and future crisis managers are challenged by at least two flexibility calls. First, exercise planners should learn to design exercises grounded in novel and “outside of the box” scenarios, rather than replicating events of the past. Second, future crisis managers should use these opportunities to generate and increase their capacity for “outside of the box” decision making and flexible crisis management.

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