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**On-line strategic crisis communication:
In search of a descriptive model approach**

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Abstract

This study presents a descriptive model approach (“*additional one-way channel*, ” “*platform and hub*, ” “*palpus*, ” “*networks*, ” “*action-nets*”) for the understanding and practice of strategic, on-line crisis communication. The proposed models rely on various theoretical approaches such as Gilpin and Murphy’s (2006, 2008 and 2010) and Czarniawska’s (2009) theories of “classical” and “new” paradigms for the understanding and practice of crisis management and crisis communication in general. This study’s empirical material, on which the models are based and by which they are illustrated, comprises a series of in-depth interviews conducted between 2005 and 2011 with 24 Swedish strategic communication practitioners who are experienced in the field of on-line crisis communication. Based on the study’s results and the identified models, it is apparent that strategic on-line crisis communication is about more than just building relationships with external audiences and practicing issue management in times of crises. Therefore, this study highlights today’s and tomorrow’s interweaving of different logics and practices of strategic on-line crisis communication.

Keywords: Social media, Internet, Crisis communication, Crisis management.

On-line Strategic Crisis Communication:
In Search of a Descriptive Model Approach

Introduction

In professions such as public relations, marketing, and crisis management, which work with strategic communication, one of the most widely debated issues today is how, in times of crisis, organizations and their crisis communication practitioners should manage and use the Internet, the Web, and social media. Consultants and practitioners in the field are working frantically to identify the advantages and disadvantages of employing “new” media in strategic crisis communication. As an example, organizations such as the International Public Relations Association and the International Association of Business Communicators are trying to resolve how best to implement crisis planning in the digital age (e.g. Atherton, 2009; Baron, 2011; Hicks, 2010; Sherman, 2010). This issue is a central part of many training courses and roundtables around the world. An expert roundtable with participants from the American Public Health Association, the International Association of Emergency Managers, and the National Association of Government Communicators met in Washington, D.C. in 2009 to discuss how better to harness the power of the Internet, the Web, and social media tools (Booz Allen Hamilton, 2009).

The growing interest in the issue is not, however, limited to practitioners in the field. During the first decade of the 2000s, interest in the field has escalated among researchers in public relations (e.g. Broke & Kim, 2011; Downing, 2004; Greer & Moreland, 2007; Taylor & Perry, 2005), marketing (e.g. Conway et al., 2007; Cova & White, 2010), and crisis management (e.g. Hallahan, 2009; Hughes & Palen, 2009; Veil, Buehner & Palenchar, 2011). So far, the most extensive research into the phenomenon has perhaps been done within in the field of public

relations. However, the knowledge generated in that area focuses primarily on the potential of the Internet and the social web to build relationships between a crisis-managing organization and its external audience in times of crisis (e.g. Stephens & Malone, 2010a, 2010b; Taylor & Kent, 2007). Another main topic is the use of the Internet for proactive crisis work and issues management (e.g. González-Herrero & Smith, 2008). Today, the front line of this research has shifted its focus from the use of web pages, on-line press rooms, and “dark sites” (web 1.0) in crisis management to the role of social media (web 2.0) in crisis management and crisis communication (e.g. Jin & Liu, 2010; Schulz, Utz & Göritz, 2011; Smith, 2010). Skills are developing quickly, but theoretical knowledge is still lacking of how and why organizations practice their overall on-line crisis communication as they do. Nor has the use of the Internet in either internal or external on-line crisis communication (as *strategic communication*, see Hallahan, Holtzhausen, van Ruler, Verčič & Sriramesh’s [2007] definition of strategic communication) been discussed and analyzed. Strategic crisis communication is about more than just relationships. For example, it is also about coordinating administrative functions in times of crisis. Another outstanding question concerns how organizations’ and crisis managers’ overall conceptions of crisis management and crisis communication seem to affect the practice of on-line crisis communication. On the one hand, the practice of crisis management is highly influenced by “classical” ideas about the need for control and clear borders between the internal and external organizational environments in times of crisis (e.g. Gilpin & Murphy, 2008, 2010). On the other hand, Gonzalez-Herrero and Smith (2010), for example, argue that on-line crisis communication requires a “new” organizational culture and tone to be effective. The need for a “new” overall approach to crisis management and crisis communications is relatively widely recognized (see, e.g. Falkheimer & Heide, 2010; Robert & Lajtha, 2002). Gilpin and Murphy

(2006) argue, for example, that too much planning and detailed guidance in crisis management “narrows the vision /.../ rather than expands it” (p.376). Another example of such “new” thinking about crisis management is the idea of action-nets, developed from neo-institutional theory. According to Czarniawska (2009), such thinking helps us to move away from asking the classical question (in crisis management) of who is responsible during the crisis, to asking what needs to be done and how can it be achieved in relation to the nature of the crisis. Can such a “new” approach help us to illustrate and analytically discuss how and why organizations practice their on-line strategic crisis communication practices?

Therefore, the primary aim of this article is to analyze and examine the use of the Internet as a vehicle in strategic crisis communication in the light of “classical” and “new” paradigms, so as to better understand crisis management and crisis communication. The study also aims to present the results in terms of a model approach for the future understanding and discussion of the practice of on-line strategic crisis communication. There is a need for research leading to a more comprehensive model approach; one which describes and explains how organizations practice on-line crisis communication and why they do it as they do (see also Jin & Liu, 2010). The analytical work in the study uses abductive research logic (see, e.g. Dubois & Gadde, 2002) in which the prevailing concepts for understanding crisis management help us to begin asking questions and making comparisons concerning the current phenomenon of crisis communication using the Internet. The empirical material consists of semi-structured qualitative interviews with 24 Swedish public relations and crisis management staff, practitioners with experience of working with various on-line crisis communication cases in Sweden during 2004–2011.

On-line Strategic Crisis Communication: A Brief Research Overview

In 2002, Sellnow et al. called for more research into the role of communication technologies in crisis communication. Shortly after, studies of the phenomenon began to be published in book form and as articles in journals of crisis management, public relations, and strategic communication. One of these early studies was Greer and Moreland's (2003) case study on how United Airlines and American Airlines used on-line crisis communication during the terrorist attacks of September 11, 2001. Greer and Moreland concluded that the web provided the companies with a new possibility to respond to the crisis immediately, both internally and externally. On their web sites, the companies offered frequent updates about flights, and they communicated their crisis process simultaneously to various audiences. Perry, Taylor and Doerfel (2003) searched for more general knowledge about the use of the Internet in strategic crisis communication. Their survey study showed that a majority of the organizations (54%) had turned to the Internet and their own web sites to communicate during later crises. But they also showed that most organizations still tended to prefer traditional one-way media tactics as their "best practice" of crisis communication, despite the new opportunities offered by the Internet for interactive and dialogical crisis communication.

Other early research on the subject was performed by Taylor and Kent (2007) and González-Herrero and Smith (2008). They searched for "best practice" in crisis communication that includes the Internet. Based on a seven-year longitudinal study of 175 crises and 100 organizations, Taylor and Kent (2007) argued that successful practitioners should transfer traditional tactics to web sites, incorporate innovative tactics such as two-way interactive communication, and use the Web to communicate the organization's view of the crisis. González-Herrero and Smith (2008) analyzed how Internet-based technologies could help

companies to prepare for and act during circumstances of crisis. For example, in the planning-prevention phase, they argue, companies should consider publishing their crisis manual on-line, draft guidelines for responding quickly to web-based rumors, and provide guidelines for any internal web-based communication. They also recommended that companies should update their media monitoring strategies and use the Internet for issues management so as to detect and avoid crises before they happen.

Another common research question is how organizations exploit the Internet's capabilities for interactivity and dialog in crisis communication (or two-way symmetrical communication, according to Grunig's Excellence-theory). For example, Fjeld and Molesworth's (2006) study analyzed how senior public relations practitioners viewed the Internet as a vehicle for strategic crisis communication based on Grunig's concept of two-way (idealistic) symmetrical communication. They concluded that PR-practitioners seemed to realize the Internet's potential to support an (idealistic) two-way symmetrical crises communication even if they in "real life" crises preferred to use their organizations' web sites as one-way communication tools. In practice, the public relations practitioners used the web with the aim of quickly disseminating information and trying to take control of the crisis content. Conway et al. (2007) also identified a gap between the general attitudes and opinions of corporations regarding the use and potential of the Internet and their own use of web sites in crisis management (both as a tool for two-way communication during crises and as a tool for signal detection and monitoring of the environment to prevent crises) and the current situation in business practice. They concluded that practitioners did not utilize the entire estimated potential of the medium.

There is also research in this area that to a higher degree is devoted to the web 2.0 logic of blogs (e.g. Liu 2010; Sweester & Metzgar 2007) and social media in general (e.g.

Muralidharan, Dillistone & Shin, 201; Shultz, Utz & Göritz, 2011; Veil, Buehner & Palenchar, 2011) in strategic crisis communication. In particular, these studies have focused on the impact of social media users' perceptions of crises that have occurred. Sweester & Metzgar (2007), for example, analyzed the impact of blogs on relationships during a crisis. Their primary findings were that those who read blogs, both personal and organizational, perceive a lower level of crisis for an organization than those not exposed to blogs. In an experimental study, Shultz, Utz and Göritz (2011) examined the effects of crisis communication strategies via media such as Twitter, blogs, and traditional media. Their results are in line with McLuhan's motto "the medium is the message" when they argue that the medium seems to matter more than the message in crisis communication. They assert that the presentation of crisis messages via Twitter "led to less negative crisis reactions than blogs and newspaper articles" (Shultz, Utz & Göritz, 2011, p. 25).

Another growing subject in crisis communication and social media is the question of what is happening to classical ideals and norms of crisis management and crisis communication, as crisis managers face digital-age expectations concerning instant communities, cross-border timeless networks, and relentless connectivity (e.g. Eriksson, in press; González-Herrero & Smith, 2010; Palenchar & Veil, 2011). For example, Eriksson (in press) argues for a need to redefine the conceptual strategy in on-line crisis management and crisis communication, because in today's social-media crisis-communication landscape, effective strategy is more about *crafting strategy* than implementing it. Inspired by Mintzberg's (1987) well-known view of the concept of strategy, Eriksson asserts that effective crisis communication in the on-line environment "seems not to be about senior crisis and/or emergency managers sitting in the office dictating successful courses." (in press) Instead, it is more about "experienced and involved crisis communicators who improvise in close relation with the material at hand" (Eriksson, in press).

The Theoretical Framework: “Classical” and “New” Crisis Management and Crisis Communication

The roots of crisis management and strategic crisis communication reside in emergency and disaster management, traditions that rely greatly on a bureaucratic and military ideal of organizing during extraordinary events (e.g. Coombs, 2010). Therefore, according to Gilpin and Murphy (2006, 2008, 2010), the classical approach to crisis management and crisis communication is, in brief, based on specific categories of propositions about the organization of, and assumptions about, crisis management. First, this classical approach relies on a comparison of the organization with a mechanical system. Such an organization has clear, well-defined borders between itself and its external environment. It is also typically centralized and has vertical hierarchies of command, authority, and control. Secondly, this classical approach relies on a definition of crisis management as a function of command. From this point of view, the aim of crisis management, briefly stated, is to “avoid or limit the loss of organizational assets” (Gilpin and Murphy 2008, p. 109). According to Falkheimer & Heide (2010), the classical approach is symptomatic of a centralized organization (with a tightly coupled system) that has an operational, acute, and technical focus, and seeks control through planning, regulations, and instructions. It is also obvious that this classical point of view, according to Falkheimer and Heide, relies on a transmission view of communication, with the organization’s aim in crisis communication being to disseminate information to passive recipients. From the viewpoint of the Excellence project, this classical approach to crisis management and crisis communication can be likened to organizational conditions such as the two-way asymmetrical

public relations model (see, e.g. Deatherage & Hazleton, 1998; Grunig 1989); conditions derived from general systems theory, cybernetics, and scientific management (Gilpin & Murphy, 2008).

A newer approach to understanding and practicing crisis management and crisis communication can be found in social constructivism (see, e.g. Weick, 1988), chaos theory (Gilpin & Murphy, 2006, 2008, 2010), and neo-institutional theory (Coombs, 1995; Czarniawska, 2009). For a more comprehensive overview of this broader “new” approach, see e.g. Falkheimer and Heide (2010) and/or Robert and Latja (2002). Neo-institutional theory, as an example of this “new” theoretical approach to understanding crisis management and crisis communication, argues that crisis managers and their organizations always attempt to incorporate norms from their institutional environments to gain legitimacy and stability in times of crisis. According to neo-institutional theory, it is possible to find a specific organizational isomorphism in every place and movement, which is caused by institutional pressures and expectations. To survive, organizations must adapt to these institutional expectations because the isomorphism determines what actions and structures that are legitimate and necessary in various situations. Based on the idea of action-nets developed from neo-institutional theory, it is possible, according to Czarniawska (2009), to move away from asking the classical question (in crisis management) of who is responsible during the crisis, and instead ask what must be done and how can it be achieved in the unique context of the crisis. Czarniawska (2009) argues that crisis management is a question of ongoing organizational activity in which new – but fragile – action-nets, comprising both internal and external stakeholders, are continuously being formed. Classical network theory assumes that it is the actors who are communicating that create relationships, see, e.g. Scott (1991). The idea of action-nets is the reverse; relationships and different communicative activities are what create the involved actors and the organizational

expectations. Instead of focusing on the actors who should formally handle the crisis, the theory of action-nets focuses on activities that lead to the institutionalization of fixed action patterns which shape “new” (but fragile) actors in the crisis management work.

Czarniawska (2009) argue that organizations often prepare for crises by drafting plans and outlining strategies for action. But once the crisis occurs, according to Czarniawska, crisis management is more about improvising and building relations through situation-specific action-nets. This idea demonstrates the urgency of avoiding organizational tardiness in crisis management and crisis communication practice. The idea also reveals the importance of focusing on the unique needs of the crisis rather than organizational structures and pre-planned areas of responsibility in the crisis management work. Czarniawska et al. (2009) are not, however, the first researchers to emphasize the important role of improvisation in an organization’s crisis management. Weick (1988), for example, has proposed similar theses for a number of years, based on his social constructionist perspective.

Falkheimer and Heide (2010) and other researchers in the field of public relations and strategic communication have tried to transform such “new” theoretical views of crisis management into core practice. They argue that too well-rehearsed plans and measures pose potential problems for crisis management, even if the handling of crises must be based on a specific, fixed, but slightly more flexible, framework. Therefore, this “new” practice looks to improvisational theater to find an ideal practice of crisis management (see, e.g. Finch and Welker, 2004). In improvisational theater, the ensemble exits the stage having achieved good results without direction. “Improvisation expands participants’ abilities to perceive and reduces the need for intense and specific scripted preparation” (Finch and Welker, 2004, p. 192). Therefore, the “new” practice often revolves around several crisis communicators working in a

network instead of a single spokesperson. Another feature of this “new” practice is that achieving total control and a completely unified message in strategic crisis communication is seen as a utopia. It is also typical that the organization’s crisis management training is not conducted for the purpose of testing predetermined crisis management plans. Instead, the aim of the training is to get used to chaos and unpredictable patterns of events. There is a growing need to abandon fixed plans and instead develop the crisis management process in symbiosis with the unique crisis at hand (see also Falkheimer & Heide, 2010; Gilpin & Murphy, 2006, 2008).

Methods and Materials

As a preliminary analysis of how and why organizations practice on-line crisis communication, this study is designed to develop some tentative concepts and/or *models* using qualitative abductive research logic (for an explanation of abductive research, see, e.g. Dubois & Gadde, 2002). A necessary part of developing these models was for there to be interaction between the empirical observations (the qualitative interviews) and the prevailing concepts in crisis management and crisis communication (Layder, 1993). Such prevailing concepts, for example, from Gilpin and Murphy’s (2006, 2008, 2010) and Czarniawska’s (2009) theories of “classical” and “new” paradigms for the understanding and practice of crisis management and communication in general, are therefore essential to this study. These concepts are of assistance when making comparisons and beginning to ask questions, and serve as a “guideline when entering the empirical world” (Dubois & Gadde, 2002, p. 558). The ambition is to develop tentative concepts/models by utilizing in-depth insights into empirical phenomena and their contexts in relation to the prevailing ideas and previous research on the subject.

To fulfill the study's aim, the qualitative analysis revolves around two main research questions. First, what characterizes the aims and objectives of crisis communication practitioners in the implementation of their on-line crisis communication activities? And second, how can we understand, describe, and explain this strategic on-line crisis communication in light of the field's prevailing ideas about crisis management?

Interview Respondents, Interview Question Categories, Data Analysis, and Presentation

All respondents selected in the study had experience of on-line crisis communication from various cases of crisis in Sweden during the years 2004–2011. The study deals in particular with (1) the case of a *double murder* in the municipality of Linköping in 2004; (2) the case of a *chemical accident at Kemira* in the municipality of Helsingborg in 2005; (3) the case of *Hurricane Gudrun*, in Kronoberg County and the municipality of Uppvidinge in 2005; (4) the case of flight disruptions at Scandinavian Airlines (SAS) during the *ash cloud crisis* in 2010; and finally (5) the case of railway breakdowns and disruptions of service during the *winter snowstorms* of 2010 (for a deeper presentation of the cases, see Eriksson, 2006; 2012; and/or the Appendix). All of these cases brought into play strategic on-line crisis communication by public authorities and businesses, and both larger and smaller organizations. In total, 24 interviews were conducted between 2005 and 2011. Persons interviewed were heads of emergency response planning, heads of web and on-line communication, public relations officers, business communicators, and other staff working with customer and public relations and other strategic communication issues in the organizations involved in the crisis management activities (for a detailed presentation of the respondents, see the Appendix). All interview questions (excluding

introductory questions) focused on the practitioners' experiences of on-line crisis communication in a specific context. The question categories concerned their level of preparation for, implementation of, and experiences of on-line crisis communication. The categories included the practitioners' aims and objectives in using on-line crisis communication.

After the interviews were transcribed and compiled, themes were extracted from the material using a bricolage methodology (see, e.g. Kvale & Brinkmann, 2009; Miles & Huberman, 1994). The analysis of the interviews started with listing similarities and differences between the various respondents' experiences of on-line crisis communication, with the aim of finding new categories and concepts concerning the subject which could possibly be presented as models. In the presentation of the results, meaning is condensed (see, e.g. Kvale & Brinkmann, 2009). The empirical material is primarily used to provide brief illustrations of the extracted models.

Models for the Understanding and Practice of On-line Strategic Crisis Communication

Using abductive research logic, and based on the interplay between the study's prevailing concept, the empirical material, and earlier research on the subject, five tentative descriptive models have been developed for the practice and understanding of organizations' strategic on-line crisis communication.

On-line Crisis Communication as an Additional One-way Channel

The first model for on-line crisis communication identified in the study is based on a one-way view of communication involving the dissemination of information via prepared web pages, blogs, and/or on-line pressrooms (see also Taylor & Perry, 2005). According to the model, the

work also involves the use of Twitter feeds as a complementary one-way channel in an organization's strategic crisis communications (see also Palenchar & Veil, 2011). Specific features of the model are that its adherents believe that: (1) the Internet has created an additional crisis communication channel through which the organization can quickly publish its own emergency and crisis information without going through the media "gatekeepers"; (2) the Internet offers the organization new opportunities to quickly update and adjust emergency information and give the information new form and reach; (3) crisis information on the Internet can be published and received regardless of geographic location and time; (4) Internet communication reduce the burden on other crisis communication functions in the organization such as press officers, telephone services, etc. (see also Perry, Taylor & Doerfel, 2003).

Several of the respondents in this study have applied this approach. One of the respondents, an information officer at a local municipality, explains how they used the organization's web page during a major winter storm which was causing severe societal disruptions in 2005, *"The web took on a static character. It's a place where we published information – just like we advertised in the local papers afterwards"* (information officer, Uppvidinge County). A similar logic also characterizes the use of Twitter for rapid and unidirectional publishing of messages from organizations, especially in an emergency. A respondent (responsible for the editorial board of social media at the state railway company) argued that once the formal crisis and emergency management organization is activated at a company, for example in the case of a very serious train accident, it takes responsibility for all output communication channels, including Twitter, *"Communication then becomes more unidirectional than dialog- and relationship-based in character. Twitter editorial staff stop*

answering incoming questions about the specific crisis and refer them to the central corporate information” (head of on-line communication, state railway company).

The on-line work, according to the model, is often organized by a crisis management team which includes senior communication managers/communicators. The central team designs a unified crisis message to be distributed through various channels, one of which is web communication. The model does not consider it appropriate to use the Internet and the Web to interact with target groups and audiences. There are at least two reasons why practitioners are skeptical of two-way communication. First, they believe that if they allow for discussion and interaction it will not be possible to respond to all questions. And second, two-way communication goes against the prevailing classical notion of crisis management, which has a kind of commander-in-chief function (see, e.g. Eriksson, 2012). With such strategic on-line crisis communication, the organization wants to help restore control over the crisis situation and the external information flows concerning it. Hence, according to the model, the work of on-line crisis communication is characterized by a classical view of crisis management.

On-line crisis communication as an interactive platform and hub

This approach to practice highlights the Internet's function as an important archiving tool in strategic on-line crisis communication. Web pages with crisis information can here be seen as the organization's memory of the crisis – regardless of time and geographical distance. This is similar to a function of knowledge management, which Wang and Belardo (2009) argue generally plays an important role in effective crisis management. The possibility for the organization's own employees as well as external stakeholders to access the published crisis information that they need, when they need it, contributes to this role.

This approach can be found in several of the cases that the respondents have worked with. One example is a major chemical accident, during which the emergency services had to declare a curfew for more than a day in one of the larger towns in Sweden. In this case, a small editorial board of communication officers worked together on the municipality's web page. The page became an important part of the crisis management activities, serving as an interactive hub where a great deal of emergency information was published and stored. There were several reasons for this, including: (1) the messages on the web page concerning the crisis were linked to and republished by several on-line newsrooms and public authorities; (2) the municipality's own staff who answered citizens' questions by telephone used the page as their source of information. Even the staff at the municipality's telephone exchange and many of the municipality's own officials used the page as their primary source of information during the crisis (see also, Ingrid Friberg, Samhällsinformation AB, 2005).

This model is based on "classic" crisis management logic according to which a unified and central message delivered by the crisis management team is optimal. Here, the archiving function is expected to help the crisis-managing organization to take control of the crisis's internal and external information flows and to contribute to an overall picture of the crisis.

On-line crisis communication as a palpus

On-line crisis communication as a palpus is about using the Internet as a tool for signal detection and monitoring of the environment before a crisis occurs. Heath (1997, 1998) showed how on-line databases, web pages, and other on-line sources can be used in such work, work that Heath called "Issues Management." A similar example can be found in the interdisciplinary field of infodemiology, where Eysenbach (2009) argues for a new framework that analyzes "what is

being published on the Internet, e.g. on web sites, newsgroups, blogs, micro blogs and social media from demand-based methods (search and navigation behavior), and further distinguishes passive from active infoveillance methods” in crisis and risk management (Eysenbach, 2009, p. 1). The organization identifies potential issues with the help of what is written and communicated on the Web and in social media, and then revises its communication management and crisis management in accordance with this new standpoint. This study’s empirical material includes stories about how crisis communicators and crisis managers used such scanning of web pages and social media to understand the development of emerging crises and to decide what countermeasures the organization should implement. As an example, such environmental scanning activities were used in the case of the major chemical accident: *“The media monitor suddenly said that ‘Sydsvenskan’s website (Swedish newspaper; by author) is now saying that the other tank has burst.’ Our immediate reaction was ‘Really? Why hasn’t anyone told us? Is that true?’ After a while, it became apparent that it wasn’t true. That’s when we had to get out there quickly and refute it using the web and other means”* (Director of Communication, Helsingborg).

Overall, on-line crisis management is constructed as a palpus and/or as a tool for issues management in a “classical” crisis management perspective. Briefly put, the logic of issues management and infodemiology is based on cybernetics, with searches on the Internet helping the organization to adapt to, and avoid, the explosive development of risks and crisis issues. Gilpin & Murphy (2008) argue that the work that distinguishes such methods is systematized and the main goal is to reduce uncertainty and inconsistency and to enhance predictability and control.

On-line crisis communication as networks

In this model, one use of the Internet is to support inter-organizational, time- and location-independent crisis communication between predetermined actors, for example, to resolve a crisis requiring action from geographically dispersed social agencies, company divisions, and/or units. According to this model, different types of web-based crisis response systems are often involved in the internal and/or intra-organizational crisis management work, systems which are “orchestrating the communication between all parties involved in handling the crisis, by allocating and managing resources, and by providing access to relevant crisis-related information” (Kienzle, Guelfi & Mustafiz, 2009, p. 1).

Several of the respondents in the study give examples of how the Internet and other web-based systems have been used as tools for such networks. For example, a crisis communications officer at the regional level, who worked during a major winter storm in 2005, tells how the emergency management system, KRISAM, was activated in order to provide “fast, coordinated and accurate information” to all involved actors. Through the system, representatives of various affected municipalities in the county, including the police, county administration, and county emergency center, could exchange progress reports to support each other in their crisis management and assist with the provision of external emergency information to the public.

According to this model, this type of on-line crisis communication takes place between predetermined actors who have been formally designated as part of or responsible for the crisis management of the type of crisis which has occurred. They are usually well prepared for their task and the system is specifically designed for these actors. Therefore, the network-oriented logic is not very flexible, apart from its using the Internet’s time-and-space-dissolving capabilities for faster, archived communication between predetermined parties. In this way,

according to the model, the business logic is rooted in the classical approach to crisis management. This is evident, for example, in the name of one of the prime commercial management systems, used by several interview respondents. The system is called “Crisis Commander,” and is basically designed and marketed as a tool to help the person or organization using it to become the commander of the crisis.

On-line crisis communication as action-nets

This model is also based on a type of network logic, but its starting point is that successful crisis management and crisis communication occur with a large degree of improvisation that is not solely linked to the pre-determined, formal crisis managers (actors) foreseen by planners. In this model, the primary and situational actors in the crisis are created and re-created through action-net-creating communication via Information and Communications Technology (ICT).

An example is the crisis management work performed at Scandinavian Airlines (SAS) in connection with the ash cloud crisis in spring 2010. During the crisis, the head of on-line communications began to organize on-line crisis communication after her attention was drawn to the expanding discussion of the issue on Facebook. The customers’ needs set the pace and agenda of the crisis management: “*...if we hadn’t had a page, we might not have chosen to start one. But now we saw that there was a need. So we started one entirely based on the customers. We realized that we couldn’t just shut down the channel simply because we weren’t ready yet*” (Project manager, customer relations, SAS). Another example of action-net-creating activity was when the staff who spontaneously gathered to manage the company’s Facebook crisis communication took the initiative to use social media (such as Skype) to situationally create and

organize the internal crisis management work at times when they were not at their place of work (during evenings, nights, and weekends).

This model's practice is basically to adapt to and try to use the new structures that often emerge through access to the Internet in times of crisis. For example, after a study of channel use during hurricane Katrina, Procopio and Procopio (2007) concluded that, "If normal communication channels are disrupted, people will resort to other technologies" (p. 71). Kivikuru (2006), who studied Finnish media use after the tsunami in Southeast Asia, argues the same point: "Uncertainty pushed people to seek new routes and channels" (p. 505). During the tsunami, a number of Finnish citizens used a Finnish surf club's web pages for their primary information and communication requirements. The Finnish surf club's web site became an actor of central importance in Finnish crisis management and crisis communication, an actor created by the ability of ICT to support the creation of situational action-nets and new and important actors in crisis management. A more recent example of how new "actors" are shaped by communication on the Internet is Google's crisis center, which helps people to organize situationally in times of crisis, as with the tsunami in Japan, 2011.

The model's practitioners use ICT to depart from the classical issue of crisis management, *who* is responsible for what, and instead apply themselves more to *what* must be done and *how* can it be accomplished in the unique context of the crisis and the opportunities that social media in particular make possible to create new situational actors in crisis management. The model's practice is in line with the idea put forward by Czarniawska (2009) that successful crisis management is about a constantly ongoing process of organization in which new – but fragile – action-nets of stakeholders are created. This process tends to be both faster and more difficult to control because of the availability of social media. Formal structures and information

management do not determine who can communicate in the social media and become crisis management actors. Instead, the work develops based on the unique requirements of the situation and the users. The crisis manager who embraces the model is partly trying to break away from the classical idea of crisis management by allotting less importance to predetermined crisis management plans and preferring loosely coupled systems and improvisation through social media.

According to the model, crisis communication is about trying to support and exploit the potential of ICT to build instant communities adapted to the customer's/citizen's and one's own organization's often situational communication and information requirements in a crisis. The rationale stems from the fact that in the digital landscape new, important, but uncontrollable "actors" are often created during crisis management, because social media enable people with similar interests, opinions, and needs to unite and organize quickly and independent of location (see, e.g. Wigley & Fontenot, 2010). Thus, the crisis communicator who works according to the action-net model partly breaks with classical management logic, in favor of the "new" way of conducting crisis management and crisis communication.

Concluding discussion

The five models developed in this study illustrate the diverse practical and theoretical aims and objectives of crisis communication practitioners when implementing on-line crisis communication as part of their crisis management work. The five models suggest how we can understand, describe, and categorize this strategic on-line crisis communication in light of the field's main ideas and the prevailing logic of crisis management. Based on this, it is apparent that strategic on-line crisis communication involves more than just building relationships with

external audiences and practicing issues management in times of crisis. It also involves such things as one-way communication, the use of the Internet and the Web as an interactive hub, the development of both networks and action-nets, and improvisation. Nevertheless, the empirical material indicates that the practice is still largely influenced by a “classical” hierarchical logic of crisis management which includes ideas such as the possibility to control events and the perception of events (even in the digital world) with the right kind of preparation, communication, and actions. Four of the five extracted models rely on this “classical” view (see, Table 1).

Model	<i>ADDITIONAL ONE-WAY CHANNEL</i>	<i>INTERACTIVE PLATFORM AND HUB</i>	<i>PALPUS</i>	<i>NETWORK</i>	<i>ACTION-NET</i>
Aim and objectives	Quick dissemination of the organization’s crisis messages.	Archiving crisis information and providing crisis information to take control of the crisis’s internal and external information flows.	Signal detection and monitoring of the crisis environment.	Support for inter-organizational, time- and location-independent crisis communication between predetermined actors.	Taking advantage of the new structures and actors that often emerge through access to the Internet in times of crisis.
Theoretical framework/ basic assumptions	<i>A “classical” crisis management view: restoring control over the crisis situation.</i>	<i>A “classical” crisis management view: preference for a unified and central message delivered by the crisis management team.</i>	<i>A “classical” crisis management view: reducing uncertainty and inconsistency and enhancing predictability and control.</i>	<i>A “classical” crisis management view: assisting the organization to become the commander of the crisis.</i>	<i>A “new” crisis management view: allotting less importance to predetermined crisis management plans; preferring loosely coupled systems and improvisation.</i>

Table 1: Summary: the five tentative models for on-line strategic crisis communication

As mentioned above, this study's empirical material comes from 2004–2011. With today's ongoing developments, the Internet, mobile technology, and various social media platforms are becoming increasingly interlinked. The activity on blogs or web sites owned by private individuals or organizations can now instantly be traced in various social media. News published on the web is often distributed immediately, including via Twitter, to those who have chosen to subscribe to the service. The phenomenon of device convergence means that the web and social media are no longer exclusively tied to computers; services are accessed from mobile phones at any time and any place. In light of these developments, recent studies show how public relations practitioners and strategic communicators are using such things as the Web, on-line press rooms, social media, and mobile applications in an increasingly sophisticated and interwoven fashion (see, e.g. Avery, Lariscy & Sweetser, 2010; Waters, Tindall & Morton, 2010). Based on this trend, and these discernible models, it is apparent that the major challenge facing crisis communication practitioners in an increasingly sophisticated and interconnected on-line environment is to understand the underlying management logic related to the entire range or mix of ICT-based instruments at their disposal when communicating in a crisis. This is especially important in order for the various components of the ICT palette to interact in the best and most effective manner in crisis management practice.

There are many indications that the strategic crisis communication practitioner who is engaged in the complex on-line crisis work of today and tomorrow, including internal and external communication (from a strategic communication viewpoint), is exposed to a mental struggle between the “classical” logic and the “new” logic for understanding and practicing crisis management and crisis communication (see also Eriksson, 2013). This struggle becomes even

more visible, for example, when on-line crisis communicators, in one and the same crisis situation, use a combination of an organization's "every-day" web pages, web-based crisis management systems, and social media. On the one hand, these practitioners seem to improvise and interact with their surroundings to a greater extent than before (especially through the use of social media). On the other hand, they are still influenced by ideals that advocate centralized decision-making, control of information flows, and detailed crisis management plans using the Internet as a "push tool" by the ordinary web and different crisis management system. As an illustration of the conceptual struggle between the classical and new perspectives on crisis communication, Wigley and Fontenot (2011) argue that "crisis managers must learn to deal with reporters' use of citizen generated content while also *leveraging social media to control* their organization's message during a crisis" (p. 377, italics by this study's author).

A further conclusion of this study, which is important to emphasize, is that there is a tendency to "loop" the application of the various approaches and practices discernible in the study, with the organization applying different models over time during one and the same crisis. When a crisis is considered to be of sufficiently serious character and intensity, there is a tendency for the organization's on-line crisis communication to return to a practice characterized by a more control-focused and centralized classical logic of crisis management, a finding consistent with earlier studies of crisis communication and the web (see, e.g. Conway, 2007; Fjeld & Molesworth, 2006; Palenchar & Veil, 2011). One possible explanation is that the more serious the crisis is considered to be, the more responsibility is placed on functions with particular crisis management responsibilities, functions which usually have strong roots in the classical view of how to handle a crisis. Classical management logic will likely continue to strongly influence the practice of strategic on-line crisis communication, even though social

media and the “new” integrated character of the social communications landscape appeal more to the “new” perspective on crisis management in which control and centralization give way to an increasing interest in improvisation, flexibility, and support for the creation of situational action-nets.

Finally, it is important to point out that none of the models presented are normative in nature; all are descriptive. As shown, each model is linked in varying degrees to the interactive and communicative characteristics of Internet media; but the degree of interactivity, two-way communication, or action-net creation in the model – as a measure of efficiency – is not considered, something that seems to have been done in many studies in the field. Based on this study, the advice for the practitioner or business seeking the most efficient model for on-line crisis communication is that each discernible model probably has its own advantages and disadvantages. This depends, of course, on the situation and on which perspective one chooses to start from with respect to various normative proposals on how crisis communication should be conducted in the best and most efficient way, both from an organizational as well as a societal perspective. However, in order to gain a complete understanding of on-line strategic crisis communication, it is necessary to conduct research that examines additional aspects of the phenomenon. This includes, but is not limited to, quantitative studies that can help us acquire more general knowledge and better ascertain whether there is any correlation between different kinds of crisis situations (or types of organizations) and the kind of strategic on-line crisis communication practiced. There is also a need for continuing development of new theoretical frameworks for understanding today’s interwoven online strategic crisis communication. The fifth model (“action-nets”), which relies on Czarniawska’s theoretical perspectives, is just one possible way of understanding why and how organizations use e.g. social media in online crisis

communication in an increasingly decentralized, time-and space-independent, and user-controlled digital environment. In conclusion, it is also important to point out that the tentative models presented in this study are simplified representations of reality. The study's viewpoint is in line with Grunig and Grunig (1992) who argue that "all models are 'false' in the sense that no representation can capture reality perfectly" (p. 286). Nevertheless, the author considers descriptive exploratory models such as these to sometimes be necessary for the future understanding and discussion of new and developing phenomena such as strategic on-line crisis communication.

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Appendix

Interview respondents

Web content editor, Linköping County, Sweden

Web content editor, Linköping County, Sweden

Press officer, Linköping County, Sweden

Head of public relations, Linköping County, Sweden

Head of communication, regional police, Östergötland, Sweden

Director of communication, Helsingborg, Sweden

Web manager, Helsingborg, Sweden

Web content editor, Skåne, Sweden

Communications officer, Helsingborg, Sweden

Communications officer, Helsingborg, Sweden

Head of communication, general hospital, Helsingborg, Sweden

Emergency manager and coordinator, Fire department, Helsingborg, Sweden

Communications officer, Uppvidinge County, Sweden

Emergency manager and coordinator, Uppvidinge County, Sweden

Project manager, Kronoberg, Sweden

Head of communication, Kronoberg, Sweden,

Communications officer, Kronoberg, Sweden

Communications officer, Kronoberg, Sweden

Project manager, customer relations, Scandinavian Airlines, Sweden

Head of internal on-line communication, Scandinavian Airlines, Sweden

Head of on-line strategy and communication, Scandinavian Airlines, Sweden

Head of corporate emergency response planning, Scandinavian Airlines, Sweden

Business communication officer, Scandinavian Airlines, Sweden

Head of on-line communication, SJ, state railway company, Sweden

Brief presentation of the cases

Double murder in the municipality of Linköping, 2004. In autumn 2004, while walking to school in Linköping, Sweden, an eight-year-old boy was stabbed to death by an unknown assailant. A 56-year-old woman was also stabbed, and later died on the operating table. No suspect was ever arrested. The town of Linköping formed a crisis center at the boy's school with the aim of supporting school management, faculty, and students. At the crisis center, a crisis team composed of representatives of the city administration, social services, public relations department, etc. was formed. Several press conferences were organized over the course of the following days. The municipality's website became an important tool in the crisis management work.

Chemical accident at Kemira in the municipality of Helsingborg, 2005. Early one morning in the winter of 2005, a tank containing 20 000 tons of sulfuric acid began to leak at Kemira Chemicals AB in Helsingborg. At the time, it was the largest chemical accident ever in Sweden. The residents of Helsingborg were informed by radio to go indoors, close all windows and, if possible, turn off the ventilation. The rescue and emergency services in Helsingborg played an important role in the crisis management work that followed. They initiated the evacuation and

clean-up efforts and also managed the first few hours of information and communication work.

The web pages of the municipality, and the city's information officers, were also very important.

Hurricane Gudrun, 2005. A severe storm – at times reaching hurricane force – struck Götaland and Svealand in Sweden in January 2005. This storm, named Gudrun, led to major disruptions in the electricity, telecommunications, and transport systems. Kronoberg County was one of the worst hit counties in Sweden. Uppvidinge municipality, one of the communities in the county, is sparsely populated and located in the most heavily forested part of the county. About one in ten of the residents of Uppvidinge was left without electricity after the storm. Many roads were rendered impassable and many telephone lines were down. The Internet became an important component of the crisis communications work in Uppvidinge in at least two ways: first, because the municipalities' web pages were used to distribute and archive crisis information; and second, because the municipalities used a county-wide Internet-based crisis communication and information system (KrisSam).

Flight disruptions during the ash cloud crisis of 2010. During the eruptions of the Icelandic volcano, Eyjafjallajökull, in spring 2010, a large number of flights were canceled in Europe over a five-day period. During this period, Scandinavian Airlines started using social media (especially Facebook) as an important tool in their crisis communication with customers, the mass media, etc. They also provided information about the cancellations via their regular web site, press conferences, and telephone-based customer service. The use of social media was not prepared or planned, but arose spontaneously as the number of visitors to the company's Facebook page spiked during the period.

Railway breakdowns and disruptions of service during the winter storms of 2010. During the cold and stormy winter of 2010, many trains in Sweden were delayed, and several were stopped on the tracks causing traffic jams. During this period, the state rail company, SJ, was severely criticized, and it used Twitter to communicate with affected customers, etc. When the company's regular web site crashed, and telephone queues to customer service were long, the number of incoming questions on Twitter exploded. The company had a small, but well-prepared editorial staff to handle crisis communication on Twitter.