Review Article

Crisis management revisited: A new agenda for research, training and capacity building within Europe

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Abstract

Fifteen years ago we presented an agenda for crisis management research and training in Europe, here that article is revisited through a comprehensive review of social science scholarship in the field. Both the discourses on risk and crisis 'management' and on crisis 'politics' are surveyed in an effort to show the connect between knowledge and policy agendas for capacity building. Priority areas for European research are identified and discussed. The vital roles of research-based education and experience-based training to foster enhanced crisis management practices are noted. Independent yet policy-focused centres of crisis management scholarship are encouraged and needed. These should be linked through a transnational network to support a common 'rapid reflection' force in service of European leadership, when it matters the most.

Keywords

Crisis management, disaster studies, emergency management, leadership in crises, societal security

Societal security in a global risk society

The demise of the Soviet Union in 1991 heralded the breakdown of the Cold War global order. The enthusiasm this generated for the idea of a more secure new world order evaporated after a decade. Terror attacks in the heart of the Euro-Atlantic area between 2001 and 2005 made it abundantly clear that the emergent 'world order' was very different but no more secure than a bipolar world driven by superpower rivalry. More than a decade into the 'war on terrorism' triggered by the 9/11 shock, it has become increasingly clear that the 'end of history' has not arrived. Europeans live now not in a unipolar world dominated by their benevolent, democratic ally across the Atlantic, but in a complex multifaceted world of several major economic powers and

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an array of non-state activists adept at playing the game of asymmetrical conflict by exploiting the soft underbellies of open, advanced, urbanized, technology-dependent post-industrial societies (Kagan, 2009).

The strategic use of fear has become part and parcel of our world (Klein, 2007), as has the institutional expansion of state and international apparatuses devoted to 'managing' known and potential security risks. The Department of Homeland Security (DHS) was created by President Bush in the most significant reform of the US national security apparatus since 1947. This new societal security provider has grown into the third largest US government body after the Departments of Defence and of Veteran Affairs. Similar but less massive institution buildings have been seen also in many European nations and a designated DG Home has been created within the EU Commission (Leonard, 2012). The EU, like the DHS, devotes considerable funding to security research for the purposes of contributing to the protection of citizens and to stimulate industrial competitiveness in the societal security field.

In the parallel universe of industrial safety and emergency preparedness, the Fukushima nuclear disaster in 2011 highlighted the fact that, more than 30 years after receiving its 'wake-up call' at Three Mile Island and 25 years after the unmitigated catastrophe that was Chernobyl, the knowledge of operators and regulators of nuclear power generators has proved insufficient to enable them to fully contain the risk of a loss of control over this vital but high-risk technology (Perrow, 1999; 't Hart, in press). The same could be said for other high-risk industries such as oil and gas exploration and mass transport systems. Indeed, the two recent tsunamis, along with many other major disasters of the last decade, provided a powerful reminder of the potential of extreme seismic and weather events to wreak major havoc even in advanced societies, precisely because they wipe out or disrupt some of the pivotal infrastructures and information flows upon which post-industrial societies are built (Perrow, 2011).

Europe's post-industrial societies and all their stakeholders – individuals, corporations, governments and non-governmental organizations – are challenged by these evolving security and safety contexts. Their leaders know it. They worry about it, debate it and invest in addressing it; according to some sociologists, even excessively so (Beck, 1992, 1998; Furedi, 2005, 2007). Some critical observers in fact challenge us to consider the possibility that all this attention and these investments are part of a deliberate, manipulative political strategy (Beck, 1998, 2009; Goodin, 2006; Klein, 2007).

It is against this compelling but contested background that the concept of societal security has become a pillar of the European approach to the protection of its inhabitants (Boin and Ekengren, 2009; Sundelius et al., 2005). It rests on the conviction that the threats and challenges in Europe of the twenty-first century are less about the integrity of territory than about safeguarding the critical functions of society, protecting people, and upholding fundamental values and structures of democratic governance.

The EU considers itself obliged to prepare its institutions, but particularly to help prepare its Member States for dealing with a broad range of major disruptive contingencies. The hardest obstacles to overcome for a whole-of-society approach to societal security are not so much economical or ideological, but rather institutional. They lie in the deeply rooted mental gaps, structures and practices that tend to separate distinct

Table 1. Strands of crisis research.

	Technical–managerial: the study of risk and crisis 'management'	Strategic–political: the study of risk and crisis 'politics'
Pre-crisis phase	Mitigation, preparedness, early warning as professional activity clusters and determinants of systemic resilience	Strategic interests and controversies about risk perception, risk acceptability and risk regulation
Crisis phase	Dynamics of individual, group and network information processing decision-making, coordination, communication under conditions of threat, uncertainty and urgency	Role of political, economic and bureaucratic self-interests and power relations in shaping crisis response operations
Post-crisis phase	Organization and delivery of long-term support and recovery programmes, lesson-drawing	Contested legitimacy of status quo through media and official investigations and debates, resulting in opportunities for advocates of change, reform and renewal

professions and jurisdictions (Ekengren and Simons, 2011; Lindberg and Sundelius, 2012). Such gaps complicate intersectorial and intergovernmental communication, coordination and collaboration. These in turn have been found to drastically reduce the operational effectiveness of risk management and crisis response networks (Boin and 't Hart, 2012; Moynihan, 2009). When it comes to large-scale, trans-boundary crises, there are, in addition, diverging national incentive structures as well as major cross-national discrepancies in funding and institutional capacities even within the EU (Boin et al., 2013; Rhinard, 2009).

This article proposes an EU-based programme of research and training that should serve as an integrating focus for several seemingly disparate areas of national planning and preparedness efforts. It outlines a number of key challenges and opportunities for European crisis management capacity-building. This agenda was introduced in this journal 15 years ago ('t Hart et al., 1998), and it is now revisited for the purpose of giving an inventory of progress and remaining gaps in the field. The findings presented are the result of a synthesis of contemporary research and practices in the field. The analytical issues raised and the research and training steps suggested are pertinent to most European nations and to the EU.

Connecting knowledge and policy agendas

In this agenda-setting overview, two strands of research on crises and crisis management not often connected into a coherent analytical whole are drawn upon. Table 1 provides an intellectual map of both research traditions. Each strand, moreover, has two faces: the 'security-orientated face', i.e. in scholarship on international relations, security policy, conflict studies, policing, terrorism and social conflict; and the 'safety-orientated face', dominated by scholarship on natural disasters, industrial and other man-made accidents, collective behaviour and emergency management. Each harbours important insights rel-

evant for policy and institutional design as well as training of crisis management professionals. Their respective contributions are briefly surveyed below.

Technical–managerial perspectives

A considerable body of study has been built over many years focusing on how societies and their governments perceive, prepare for, respond to and recover from threats and disturbances originating from hostile actors, such as other states or terrorist groups (e.g. Findley and Young, 2011; Hatemi and McDermott, 2012; Mintz and DeRouen, 2010). The microfoundational aspects of high-stakes decision-making have been examined in the well-established academic literature on foreign policy analysis (Schafer and Crichlow, 2010; Stern and Sundelius, 1997). In the fields of military science, command and control, strategic studies, counter/terrorism and police science many aspects of effective operational crisis management have been examined. 'Incident command' and 'consequence management' are key terms in this discourse, putting the spotlight on the possibilities for and limits to effective command and control of complex operations in conflictual interactions with an adversary (Deal et al., 2010; Moynihan, 2009). Research in this vein is pursued and taught within defence colleges, police academies, and departments of strategic and security studies. Often this scholarship is closely linked to professional training programmes, in which the findings form the intellectual foundation for recommendations on how to perform effectively in situations of high-stakes decision-making under time pressure and facing an adversary.

Likewise, in the area of civil emergencies, much research is devoted to disaster preparedness and response and recovery policies and practices. Often focused on local and regional control and command issues, these studies examine the dynamics of dealing with man-made or natural disasters. Coordinating government agencies, such as EMERCOM in Russia, FEMA (Federal Emergency Management Agency) in the USA, Emergency Management Australia and Sweden's MSB are active sponsors and users of this research. Training programmes grounded in the findings of this scholarship flourish in this field in many countries.

Going back to the early 1960s there has been a small but growing strand of interdisciplinary scholarship attempting to juxtapose and integrate findings from the 'security' and 'safety' domains, using the concept of crisis as a synthesizing device (Rosenthal et al., 1989; Smart and Vertinsky, 1977). For a long time, this has remained a niche interdisciplinary academic enterprise, the work of which was largely ignored by the monodisciplinary mainstreams in international relations, security studies and disaster sociology. In the wake of the 9/11 attacks and the massive investment in security policy that it heralded, convergence between the two strands of research has become commonplace. Integrated approaches to studying 'risk, crisis and emergency management' have become the norm, consolidated in a range of increasingly holistic handbooks and textbooks (Bennett, 2012; Borodzicz, 2005; Drennan and McConnell, 2007; Farmbry, 2012; Heath and O'Hair, 2010), as well as dozens of 'how-to' manuals on organizational crisis communication, corporate crisis management and homeland security (e.g. Bullock et al., 2012; Crandall et al., 2009).

The focus among both security and safety specialists has shifted towards generic vulnerabilities in modern societies, regardless of the source of the threat (e.g. critical infrastructures). A central question now is what regulatory policies and institutional architectures enhance organizational, governmental and societal resilience in the face of an ever-expanding risk catalogue containing many 'unknown-unknowns' and 'mega crises' (major disturbances originating in places and sectors far removed from one's own) (Comfort et al., 2010; Eriksson et al., 2010; Helsloot et al., 2012; Mitroff and Alpaslan, 2011; Radvanovsky and McDougall, 2009; Roe and Schulman, 2008)?

Likewise, policy practices around the world have shifted towards 'all-hazards' contingency planning and the design of comprehensive institutional structures for 'homeland security', 'domestic vulnerability management', risk management or 'civil protection' (International Risk Governance Council (IRGC), 2011; Kamien, 2012; Missiroli, 2005; OECD, 2011; Olsson, 2009; World Economic Forum, 2012).

Strategic–political perspectives

Other scholars try to grasp the dynamics and immediate as well as secondary impacts that crises have on states, public leaders and society by focusing on their embeddedness inside wider social, political and cultural structures. In this perspective, the subjective rather than the objective dimensions of risk, risk assessment, risk regulation and contingency planning are stressed. Scholars working in the strategic–political tradition highlight the fact that underlying cultural beliefs and economic and political interests shape not only what actors are prepared to do to prevent or contain risks, but also their very perceptions of risks and threats (Risse, 2012). Likewise, they see crises not as more or less self-contained 'events' that require extraordinary feats of collective problem-solving, but as 'critical junctures' within and of larger systemic orders, for example emergencies *in* the EU which reveal themselves to be strategic crises *for* the EU, as the current and ongoing financial crisis has painfully demonstrated.

Within the field of critical security studies, several fundamental premises of conventional strategic studies have been problematized by European scholars. In particular, the work by the so-called Copenhagen School has been influential. What is meant by security beyond physical survival? Whose security is to be safeguarded and at whose expense and at what cost? Are security actors driven by fears of an adversary, by fears of armed conflict or by proactive entrepreneurs in the threat politics game over images (Buzan et al., 1998; Eriksson, 2001) A crisis situation can be framed as a threat to national security or it can be presented as an opportunity to advance some objective (Balzacq, 2005; Williams, 2003). Are, for example, information operations strategic elements of national security or are these instruments of influence more appropriately viewed as an aspect of commercial interactions in a competitive economy and a technologically advanced network society?

Public policy analysis offers another rich background for studies of the political–symbolic aspects of crisis management in situations in which leaders confront a clear and present danger, but without a clear and present adversary. Depending partly on where, how and when they hit and partly on how they become experienced and understood by the public, particular risks and crises present political problems for some government

leaders, political parties and public agencies (Boin et al., 2005, 2009). Some crises allow stakeholders a chance to present themselves as part of the solution, to demonstrate their value as protectors of public safety and security and the core values underpinning them. Other crises may embarrass them, as they reveal lapses of imagination, regulatory loopholes, lacklustre enforcement, bad planning, human error, cultural complacency and institutional in-fighting instead of productive collaboration.

Problem framing plays a vital part in these processes, and media and communications scholarship offers important insights into the crisis management (Ulmer et al., 2010). The perceived success or failure of crisis preparedness and response and recovery policies and practices is in no small part shaped by the anchoring effects of media coverage, as well as the strategic use of the public stage by crisis stakeholders both inside and outside of government. Crises, in other words, give rise to 'framing contests', the dynamics of which largely determine what meaning is attributed to the events, how credit and blame are dispensed within the community and the political system, and what 'lessons' are drawn moving forward (Brändström et al., 2004; Boin et al., 2009; Hood, 2011).

It is only when one includes this wider stakeholder-based perspective of crisis management that one can explain why some emergencies upgrade into political controversies, which in turn escalate into national traumas. The cascading consequences of crises extend beyond what is the main operational focus in the parallel field of consequence management. Certain crises turn into traumas and never come to closure. Their aftershocks linger across generations. It is important to know why this happens and what factors can prevent such a degenerate process occurring.

Adapting to a more complex risk catalogue

Scholars from both traditions face the challenge of interpreting not just present crises but emerging new vulnerabilities that require a fundamental reshaping of crisis governance strategies and infrastructures. If the historical experience of absorbing changing risk catalogues is anything to go by, the challenge for scholars and practitioners alike is threefold. First, there is the *problem of complacence*: narrowing the range of contingencies that are taken into consideration in risk analyses and emergency planning. One condemns as 'academic' and 'far-fetched' the very kind of unconventional 'what-if' probing that is essential to get a handle on newly emerging risks and determine how critical incidents can escalate into emergencies and full-scale institutional breakdowns. In advanced societies and high-tech organizations the crises that do happen tend to be those everybody assumed were 'impossible' and therefore did not adequately prepare for. 'Black swan events', such as the 22/7 attacks in Norway, puncture that complacence.

Second, there is *the vulnerability paradox*: the more invulnerable a community has been in the past, the more severe the social and political impact of any single disruption it does experience. Partly, this is a cultural phenomenon: the population is unprepared for hardship, and more likely to be traumatized and uninformed about ways to survive and recover. Politically, in an EU used to peace, wealth and safety, a major disruption to any of these is likely to generate intense pressure to blame individuals and organizations for

what happened. In the contemporary media climate, such blame is bound to focus on the leaders of government. Within the EU 'natural disasters' no longer exist in a political sense – all extreme weather or geological events are inevitably becoming redefined as regulatory and/or preparedness failures (see Hutter, 2011). Government officials in particular take the heat in the media and post-emergency inquiries: for neglecting to take proper preventative measures, for not warning residents and businesses on time, for being unprepared to handle mass evacuations, or for wittingly or unwittingly compromising public safety in the pursuit of other ends.

Third, there is the *balance between prevention and resilience*. Many of the emerging threats are difficult or impossible to prevent: they come from abroad, they are inherent in the socio-economic climate, they are generated by new complex technologies. They stem from the very mechanisms that make modern society function. This means that successful crisis management policies need to strike a proper balance between investments in prevention and building up capacities to respond and recover effectively in case the unthinkable happens, nevertheless (Weick and Sutcliffe, 2007).

Robustness in response capacity and in physical and political recovery ability is as important as the more traditional focus on prevention. The challenge is not to become a victim of one's own past successes. The EU should acknowledge new threats and risks and invest equitably in prevention and in crisis preparedness in the face of multiple contingencies (planning, response infrastructures, personnel training, interorganizational exercises). In the area of crisis response, such capacity-building should proceed with a view to constructing not just smart structures and resource reservoirs but robust professional communities of practice that are capable of performing the critical functions of effective and legitimate crisis management:

1. *Sense-making*: diagnosing confusing, contested and often fast-moving situations correctly, a necessary condition for effectively meeting the other challenges.
2. *Steering and synthesizing*: making strategic policy judgments under conditions of time pressure, uncertainty and collective stress and forging effective communication and collaboration among pre-existing and ad-hoc networks of public, private and sometimes international actors.
3. *Meaning-making*: providing persuasive public accounts of what is happening, why it is happening, what can be done about it, how and by whom. In other words, 'teaching reality' aimed at managing both the general public's and key stakeholders' emotions, expectations and behavioural inclinations, as well as restoring their crisis-eroded trust in public institutions and office-holders.
4. *Adapting*: managing the process of post-crisis recovery as well as the expert, media, legislative and judicial inquiry and debate that tends to follow crises. Managerially, this has to be done in such a way that fair and sustainable levels of services are provided to those eligible even while the ad-hoc crisis response structures are wound down. Strategically, this involves a process of clarifying causes and responsibilities, destructive blame games are avoided and the actors and communities involved in the crisis engage in dedicated self-scrutiny and adaptive change.

Needless to say, the capacity-building task within Europe is multidimensional, taking in local, regional, national and European levels of governance (see also Boin et al., 2013).

Below eight priority areas are identified in which EU-based efforts towards that end could be undertaken in the coming decades. This revisited agenda calls for a mobilization of material and human resources in research-based programmes for developing an enhanced crisis management capacity in and for Europe. The ambition would be to strengthen societal security through enhanced resilience

Strengthening crisis management: European priority areas

1. Analysis: innovative risk assessment

The first challenge to be faced for any group, organization or society is to calibrate its level of concern about the risks it faces. This collective assessment provides the major impetus for its investment in safety and security. Yet that level of concern may be out of kilter with what knowledgeable and dispassionate observers would describe as the actual nature of the risks the collective really confronts. There are many potential discrepancies between the two, each of which leads to undesirable consequences. Continuous efforts are therefore needed to bridge the gap between 'objective' and 'subjective' modes of risk assessment. International, socio-political, technical and economic developments need to be monitored and analysed on their risk/crisis potential.

The aim of such studies should not be to develop a comprehensive, exhaustive list of possible emergencies, but rather to sensitize the relevant public and private actors to a wider range of foreseeable contingencies, and to think through their policy implications. Perceptions and social constructions of risk and threats are important additions to traditional methods of analysing these phenomena. Methods for constructing national or regional risk maps with clear indications of consequences, including economic and social costs, are being developed. Such assessments and scenarios should be actively used to provoke community responses and generate political debate about risk acceptability (Borodzicz, 2005; Drennan and McConnell, 2007).

2. Prevention: risk regulation and mitigation

In the field of accidents and disasters, outcomes of risk assessments regarding newly emerging technological and social vulnerabilities should facilitate the timely development of regulatory debates and strategies, as well as the design of structural and organizational safety devices (Bennett, 2012). As in traditional defence planning, care must be taken that excessive vulnerabilities are not built into national, regional or local infrastructures, organizations and professional outlooks. The rapid expansion of advanced information and telecommunication networks across society, and not least inside government itself, should be a major focus of this analysis and prevention effort. This concern presupposes complex strategic and tactical choices about the costs and benefits of various types of preventive efforts. Cross-national sectorial and cross-sectorial comparative

studies of the design and performance of national and regional/global risk regulation regimes and conflict prevention are essential inputs into better-calibrated policies and practices (Gross and Juncos, 2011; Hutter, 2011).

3. Preparedness: planning and networking

Prevention is necessary but never sufficient, that much is clear from several decades of crisis research. No matter how sophisticated the design and management of nuclear power plants, mass ferries, high-intensity air traffic, petrochemical plants, DNA research laboratories, counter-terrorist measures and international conflict-prevention regimes, they are sufficiently complex and uncontrollable to ensure that, from time to time, failures and accidents will occur (Perrow, 1999). Many of these may be effectively averted or mitigated ('near misses'), yet occasionally a major crisis will erupt. In advanced societies, such crises tend to be infrequent, yet devastating.

Emergency management professionals try to increase preparedness because they worry about the (major) impact of a single crisis event. However, most other people (including government and business leaders) focus on its (low) likelihood. The tension between these two calculi makes it exceedingly difficult to achieve satisfactory levels of preparedness. The major risk in planning for low-frequency events is that it degrades into a ritualistic, paper-pushing exercise because most of those involved do not take it seriously. Proper preparedness requires much more than making elaborate written plans. Paper plans are often too voluminous, not known by the people that are supposed to take their guidance from them, and grounded in overoptimistic, rationalistic and benign assumptions that promote a false sense of control (Clarke, 2001).

Instead, crisis preparedness efforts should entail ongoing plan-testing, plan-adjusting, plan-dissemination, dialogue and network-building. Plans can be tested and adjusted by conducting rigorous, repeated, non-routinized, interorganizational, realistic and hands-on exercises. Such 'stress-tests' should ensure that plans are internalized by the people who will need them when the time comes – specialist agencies (such as public health, rescue services, police) as well as crucial actors within the administration, including top-level officials. Moreover, preparedness should not be 'compartmentalized' within civil defence and emergency services; it is a whole-of-government and even a whole-of-society endeavour that should be driven from the centre of government in close collaboration with major peak bodies. Constant efforts should be made to inform the public and the business sector about major hazards, and how to act effectively when (not if) a crisis occurs. Emergency managers would do well to anticipate this by reaching out to key agents within government, the community and the mass media well before anything acute occurs, in order to exchange information, coordinate planning and build the kind of trust and partnership that are key to effective crisis management. The necessary networks of relevant personnel take time to build and they require continuous nurturing to be maintained at peak performance levels.

4. Sense-making: managing radical uncertainty

All crises, but in particular trans-boundary contingencies, such as the Icelandic volcanic ash cloud of 2010; compound disasters, such as the 2011 Japanese tsunami/nuclear

catastrophes; and complex emergencies, in which violent conflicts spill over into humanitarian tragedies and international refugee flows, are characterized by high levels of uncertainty and high complexity. Many types of intelligence are likely to be required by decision-makers: intelligence about the motives and likely behaviour of 'adversaries' (e.g. terrorists, bankers or viruses), intelligence about technical or national hazards being faced (e.g. levels of radioactive contamination or water levels upstream in a flood situation), intelligence about possible intervention options, and intelligence about social and topographical features of the affected areas. Decision-makers can easily become stressed by the lack of critical pieces of information or overwhelmed by the sheer quantity of information (much of it irrelevant) presented. Robust sense-making capacity, in other words systematic ways of sorting, accessing, prioritizing and communicating information, is imperative to prevent both operational-responders and strategic policy-makers becoming overwhelmed and making costly mistakes through misunderstandings and miscommunication (Boin et al., 2005).

Up to a point, advanced information management technologies may contribute in providing prompt, accurate intelligence to decision-makers and in improving shared situational awareness. Such systems may also facilitate the transfer of command upward, downward or laterally in ongoing crisis situations by helping to ensure that comprehensive information regarding measures taken and in progress is effectively communicated to the incoming management team. However, such systems inevitably depend upon the quality of the underlying data as well as on the willingness and ability of decision-makers to make use of them (Jervis, 2010).

In crises, experts often disagree among themselves regarding the relative merits of situational assessments and proposed courses of action. As a result, emergency managers should be organizationally and psychologically prepared for such disagreement (Rosenthal and 't Hart, 1991). To the extent feasible under prevailing time and resource constraints, multiple expert opinions should be sought out. This will help to identify the critical uncertainties and enable generalists to make more informed and independent decisions even on technically or otherwise complex matters. Intensive training for situations of radical 'not-knowing' is necessary to make crisis decision-makers more confident in managing complexity and uncertainty and to motivate them to insist on building redundant networks of expertise.

5. Steering and synthesizing: scaling and coordinating response operations

The societal security sphere can be characterized by the convergence of the domestic and international (security) arenas. The strategic setting is interdependent, as consequences in one country can have their origins far from its territorial border. The merging of the international and domestic settings into an operational sphere of 'inter-mestics' will require individual and institutional rethinking to break mental, legal and organizational silos. The institutional design of government is slow to adapt to the changing context for societal security (Boin et al., 2005; Houben, 2012). There is a historical legacy that separates agencies and departments operating in either the domestic or the international sphere. Failing to address jurisdictional, organizational and even mental

barriers to national and international organizational cooperation will be at our peril (Hamilton, 2010; Olsson, 2009). Those involved in organized crime and terrorism, for example, manoeuvre in the trans-border sphere, which challenges outdated organizational structures.

Furthermore, the scale, volatility and variability of future crises are likely to increase, defying the jurisdictional boundaries and institutional routines of government. Therefore, more flexible forms for organizing incident response are required (Lodge and Wegrich, 2012). More viable than overarching national or European planning schemes is a Lego-type approach to preparedness. This approach emphasizes developing local and sectorial capabilities and competence ('components') that can be seamlessly combined in a fashion tailored to the situational requirements of a given emergency. Different parts of the response organization are allocated particular tasks and develop corresponding skills, often drawing upon competences developed through sectorial responsibilities for normal (routine) conditions. Essential for this approach is the need to develop a capacity for institutional bricolage: smart ways of adding and (re)combining specialized competencies and capabilities within large and complex systems.

This approach requires not merely a clear delineation of authority and responsibility between different layers of government and different functional entities; it also implies properly devised and tested procedures for integrating and coordinating diverse organizational components and for 'upscaling' when acute crises transcend local, regional and national borders. The complexities of this are not to be underestimated: interorganizational and intergovernmental relations are often severely strained in the hectic, conflict-ridden context of crises. When coordination and upscaling procedures are not properly institutionalized, initiatives by central government authorities are easily interpreted as attempts to usurp authority and to question local authorities' competencies. The jurisdictional disputes and concerns over financial responsibilities and reimbursements that inevitably ensue will undermine the effectiveness of the response and recovery efforts.

6. Meaning-making: crisis communication in the (social) media age

Crises are media events par excellence. The speed, efficiency and increasing internationalization of the mass media make them a formidable source of information, rumours, images and judgements about events. For a long time, authorities and analysts have stressed the media's role in complicating acute operations: by their obtrusive and aggressive news-gathering practices, by their mass invasions of a site, by their critical scrutiny of the actions taken by public officials and agencies, by their reinforcement of the politics of blame. This is a one-sided view that does not respect the legitimate scrutiny function of the media and the newly emergent 'citizen journalism' in open societies.

Existing research shows that both traditional and social media can also be an important ally to responsible managers (Crowe, 2012; Pantti et al., 2012; White and White, 2011). They can distribute critical information about risks, plans and actions to the public far more effectively than government can do when acting on its own. Especially local and regional media are proximate, trusted and intensely used sources of information for many people; social media are rapidly acquiring similar status among some demographics.

Also, journalists are not uncompromisingly adversarial towards authorities; in many cases, they have proved to be cooperative and reliable partners in the crisis management effort. For this to happen, public authorities need to reconsider their all-too-often essentially defensive attitude towards mass media.

That said, research also shows that a credibility gap between media and the public, on the one hand, and the officials and agencies responsible for acute response efforts, on the other hand, can easily develop during crises. Once this credibility gap is created it is most difficult to overcome. To forestall tendencies in that direction, agencies need to build pre-emergency rapport with media representatives; gain and maintain a proactive social media presence that can be leveraged in times of crisis; invest in adequate mobile, on-site infrastructural facilities for journalists; and adjust the timing and content of their information provision to the predictable needs and rhythms of local as well as international reporting (Coombs and Holladay, 2010). The professionalization of public information and media liaison functions should be an important priority in the EU-based crisis management strategy. In addition to such capacity-building efforts, continued research is needed on the role of media organizations and social media channels as semi-autonomous 'meaning-makers' in times of crisis. Research on the rapidly evolving impact (and manipulation) of social media during all forms of crisis is particularly urgent.

7. Managing adaptation: enacting accountability, protecting learning

The political and legal dynamics of accountability processes play a significant role in determining which crisis actors emerge unscathed and which end up with damaged reputations and careers (Boin et al., 2008). The burden of proof in post-crisis inquiries and accountability debates lies with the responsible policy-makers. Such accountability debates are often little more than 'blame games' focused on identifying and punishing culprits rather than deliberating and reflecting seriously on crisis causes and consequences. A key challenge for leaders is coping with the politics of crisis accountability, without the use of unseemly and potentially self-defeating tactics of blame avoidance or 'finger pointing' that only serve to prolong the crisis and heighten political tensions.

The extent to which lessons are learned during and after crises (if they are learned at all) is one of the most under-researched aspects of crisis management (Birkland, 2006; Boin et al., 2008; Dekker and Hansen, 2004; Deverell, 2010). A crisis or disaster holds huge potential for lessons to be learned in terms of reforming contingency planning and training in order to enhance resilience in the event of similar episodes in the future. In an ideal world, we might expect all relevant players to carefully study these lessons and apply them in order to reform organizational practices, policies and laws. In reality, there are many barriers to lesson-drawing and to turning such lessons into enhanced practices.

Governments are not necessarily good learners, and certainly not in the aftermath of crises and disasters. One crucial barrier is that the often intensely contested post-crisis inquiry and accountability proceedings do not necessarily produce a coherent and authoritative explanation of the causes, nor create an atmosphere that is conducive

towards critical self-examination. Theoretically, a dominant political depiction of a crisis as the product of failures of prevention or lack of foresight in contingency planning can set the agenda for a rethinking of policies, processes and organizational rules. However, other players in the lesson-drawing game might attempt to use the political reform rhetoric to advocate very different types of changes. Again, the crisis 'politics' perspective adds explanatory value to the more commonly espoused crisis 'management' perspective.

Despite these challenging barriers to post-crisis learning, crises also present windows of opportunity for policy reform, institutional overhaul and even leadership revival. However, policy-makers need to be careful of 'knee jerk' reactions that create the impression of swift and decisive reform action but are not based on considered deliberation. Sweeping organizational reforms and the rapid replacement of key officials in response to a crisis or a critical inquiry report may signal that policy-makers are responsive to calls for accountability and improvements. However, the disruptive nature of such moves is such that they may in fact severely constrain institutional learning capacity, and create new vulnerabilities or reinforce old ones.

8. Training for enhanced skills

An important area of application of crisis management research is in training (Stern and Sundelius, 2002). As major crises are rare but highly consequential, training is a pivotal substitute for personal experience and collective memory. All branches and levels of the crisis management system need to be educated, probed and challenged on a regular and frequent basis. Training programmes should be tailor-made and address a range of areas, including risk assessment, risk management, principles of planning and preparedness, the organization of command, control and decision-making, interorganizational communication and coordination, public information, media relations, coping with stress and collective behaviour, trauma and recovery, litigation, and evaluation and learning. Such training programmes should involve a combination of conventional lectures, case study analyses, joint scenario development, role-playing simulations and full-scale exercises. These programmes would have to be planned and executed in close coordination with the expertise assembled in the relevant national and EU-based management centres.

The above eight agenda items will only be successfully implemented when issues of risk, security, safety and crisis management attain a firm commitment on the part of the heads of local, national and EU-level public authorities. Without top-level determination and support, crisis management preparedness is likely to remain a marginal activity in most societies, where other more pressing issues appear far more urgent. The required commitment should take three forms: appropriate levels of resource allocation; personal modelling of involvement (e.g. in participation in exercises); and insistence on rigorous quality assurance practices. The last of these is often overlooked, yet vital. It introduces accountability in a normally obscure and 'technical' area that only comes under scrutiny after disasters have occurred. Audits as well as lesson-drawing exercises based on comparative analysis of experiences in other jurisdictions force the crisis management fraternity to explain why the system looks the way it does, and to reflect on the strengths and

weaknesses of current arrangements. They generate new insights that can make the system more resilient.

Conclusions

In the 15 years since the original agenda was published, international social science research on risks and crises has proliferated. It has generated a wealth of observations, generalizations and lessons. In Sweden and the Netherlands, researchers work in partnership with public authorities to upgrade national and EU-level contingency planning and crisis preparedness. This involves a range of activities, including first-hand observations and in-depth evaluations of major crisis management operations, assistance in risk assessment and crisis planning, and extensive training and exercise programmes. Such forms of knowledge transfer are essential to facilitate organizational learning, and are an important complement to other, more hardware-orientated decision support systems.

Similar independent yet policy-orientated centres of crisis management expertise are necessary throughout the EU. They should be linked through a European expert network, possibly with support from the Commission (ESRIF, 2009). Such national centres and linked transnational cooperative networks could perform three critical tasks:

a. to integrate and make available the results of international experience and research on a wide range of emergencies and crisis management predicaments (natural and technological disasters, social and international conflict, public disorder, terrorism etc.);
b. to conduct systematic studies of crisis management practices at the national level (prevention, preparedness, response, recovery) and when national efforts do not suffice for the purpose of gaining critical insight into prevalent patterns of behaviour; and
c. to apply their expertise in constant dialogue with the relevant officials and agencies, such as in development of training programmes, exercises and public information activities. An EU-based 'rapid reflection' force could be created to offer instant analytical support, when it is needed the most.

The foreseeable future is likely to be even more exposed and complex. It will require timely and strong political leadership to ensure that European governments, European businesses and responsible EU institutions will not be caught unprepared. The European public may expect an EU-based crisis management capacity within the borders of the EU (Commission, 2010). This is not a call for one further instance of Brussels' usurping national sovereignty. It is about developing a flexible capacity for joint problem-solving in the face of common, trans-boundary risks and threats affecting all Member States. Much preparedness work, including training and scenario-based exercises, remains to be done before the new conceptual awareness and the required political commitment can be transformed into stronger and interlocking national and common capacities. The implementation of this revisited agenda for research and training would be a modest first step in the direction of enhanced practices for European safety and security.

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