International Studies Review (2008) **10**, 1–26

REFLECTION, EVALUATION, INTEGRATION

Managing Transboundary Crises: What Role for the European Union?[1]

ARJEN BOIN
Stephenson Disaster Management Institute, Louisiana State University

AND

MARK RHINARD
Swedish Institute of International Affairs

The nation-state faces an increasing number of what we refer to as ''transboundary threats.'' A transboundary threat is characterized by the potential to cross geographical and functional boundaries. These characteristics outstrip the capacity of nation-states and national bureaucracies that were designed to deal with more classic threats. The institutional challenge, we argue, is to build effective transboundary systems for managing these complex threats. In this essay, we ask what role the European Union can play in such an endeavor. We document the EU's growing crisis management and security capacities and offer an initial assessment of these capacities. We surmise that the EU will play a significant but rather circumscribed role, one which reflects the EU's unique system of supranational governance.

Making Sense of European Security Developments

Today's security threats—from mass terrorism to avian influenza, from climate change to failed states—pose new and complex challenges for political-administrative elites (OECD 2003; Lomborg 2004; Posner 2004; Boin, 't Hart, Stern, and Sundelius 2005; Missiroli 2006). The threats originate from many sources, cross political and functional boundaries with ease and have the potential to affect a wide variety of critical infrastructures (LaPorte 2007). Their potential for devastation is immense.

The complexity of these threats, compounded by their transboundary nature, suggests that national preparations and policy tools for managing critical situations may no longer be sufficient. If threats to safety and security unfold along boundary-crossing trajectories, response capacities of individual states will have to become linked if not integrated. But there is very little agreement regarding how crisis and security management efforts—traditionally the responsibility of

[1]The authors acknowledge the Swedish Emergency Management Agency for its generous funding, and thank Magnus Ekengren, Bengt Sundelius, and John Weller for their suggestions and support.

Published by Blackwell Publishing, 350 Main Street, Malden, MA 02148, USA, and 9600 Garsington Road, Oxford OX4 2DQ, UK.

the nation-state—can be effectively and legitimately organized at the international level. The effective management of these transboundary crises requires innovative design efforts.

The institutions and member states of the European Union (EU) have paid increasing attention to this matter in recent years.[2] A number of crises have exposed the vulnerability of the European continent—densely populated and highly interconnected—to new and unforeseen threats. Recent examples include the outbreak of BSE or ''mad cow'' disease, the terrorist bombings in Madrid and London, electricity blackouts in Austria and Germany, waves of illegal immigrants washing up on European shores, the emergence of avian influenza, and a spate of forest fires across Southern Europe. In response to these threats, the EU has begun to reconsider and redesign its institutions and policy processes in a drive to formulate multilateral responses (Hamilton, Sundelius, and Grönvall 2005; Boin, Ekengren, and Rhinard 2006a).

Over the past 10 years, the EU's capacities in the area of safety and security management have grown considerably. Its role in addressing traditional security threats has ''hardened'' through counter-terrorism coordination and external military missions (Duke 2002; Mitsilegas, Monar, and Rees 2003; Duke and Ojanen 2006; Cottey 2007). The EU's role has also broadened to cover security aspects of public health, critical infrastructure, intelligence cooperation, civil protection, and emergency response.[3] For those accustomed to viewing the EU as merely a vehicle for economic cooperation, this emerging security identity may come as a surprise. Can a governance system designed to develop common policies through incremental, slow, and consensus-building ways really play a role in protecting against transboundary, and potentially devastating, threats?

In this essay, we document the EU's growing capacities to manage complex, boundary-spanning threats and we make an initial assessment regarding these capacities. We show that capacities can be found across the EU's policy spectrum in legislative instruments, decision making procedures, framework policy programs, new agencies, and even in generic administrative functions already performed by the EU. Such capacities must be assessed against the challenges posed by modern threats, which demand particular ways of organizing a multilateral response. Such an assessment, in turn, must take account of the major legal constraints, dispersed authority, and fragmented bureaucratic organizations that characterize the EU. Such characteristics set the EU apart from a traditional state or international organization, giving it a unique set of strengths and weaknesses when it comes to the management of transboundary threats.

We begin by describing the nature of new threats and the challenges they pose to national crisis management structures. We then introduce a set of perspectives on what role the EU could conceivably play in managing transboundary threats followed by an inventory of the EU's transboundary crisis management capacities, both formal and ad hoc, and conclude by critically assessing these capacities against different perspectives on the role of the EU.

Managing Transboundary Crises: Trends and Challenges

Terrorist attacks, water shortages, critical infrastructure failures, unexpected flows of illegal immigrants, progressive climate change, and new pandemics—the

[2]Since the term ''EU'' can have multiple meanings, we should clarify our usage. When referring to the member states that comprise the European Union, we use the term ''EU member states.'' When referring to the institutions and policy processes involved in making European-level rules and laws, we speak of the ''EU.''

[3]In the US context, such developments would be described and discussed in terms of ''homeland security.'' In the EU, no broadly accepted label exists. Some academics have employed the term ''EU homeland security'' (Lindstrom 2004), but most policymakers and politicians in Europe remain reluctant to use such terminology. Other terms used in the EU context include ''protection policies'' (Boin et al. 2006a) and ''societal security'' (Hamilton et al. 2005)

modern nation-state faces an array of threats (Rosenthal and Kouzmin 1993; Rochlin 1999; OECD 2003; Posner 2004; Egan 2007). When a threat becomes acutely manifest, we speak of a crisis (Rosenthal, Charles, and 't Hart 1989; Rosenthal, Boin, and Comfort 2001). The manifestation of a crisis poses intricate challenges for political leaders and policymaking bureaucracies. These challenges are compounded by the changing nature of the contemporary crisis; in effect, in the future we can expect more *transboundary* crises. In this section of the essay, we define these concepts, discuss research findings, and map out the challenges of institutional design that modern nation-states face.

We define a crisis as a threat to core values or life-sustaining systems, which requires an urgent response under conditions of deep uncertainty (Rosenthal et al. 1989; Boin 2004).[4] This definition directs our attention to those who have to make critical decisions under conditions of stress and uncertainty; that is, political leaders and operational commanders (Hermann 1979; Janis 1989; Flin 1996).

From a political point of view, crises are best conceived of in terms of their effects on the polity in which they occur. A crisis, then, marks the ''breakdown of familiar symbolic frameworks legitimating the pre-existing socio-political order'' ('t Hart 1993: 39; see also Edelman 1971; Linz and Stepan 1978; Turner 1978). One of the chief claims legitimizing incumbent leaders and governments is that they protect public order, health, and safety (Dror 1986). The onset of crisis breaches this claim. Incumbent office holders are confronted by the public, the media, and political opponents who want to know what went wrong, what was (not) performed to prevent and contain the crisis, and who should be held responsible. The challenge for crisis leaders is thus twofold: (i) they must make critical decisions and coordinate the response, but (ii) they must also worry about restoring legitimacy. These challenges may well demand incompatible courses of action and create tragic dilemmas (Boin and 't Hart 2003).

It should be noted that crises are fundamentally different from ''routine emergencies'' such as fires, traffic accidents, or kidnappings. An emergency refers to a complex and urgent, but also routine problem. The details of the situation may be new, but well-trained emergency workers usually have a good idea what tasks should be performed and how these should be accomplished.[5] It may be a tragedy for those involved, but an emergency is usually brought to closure rapidly and rarely has wider consequences.

In this regard, consider another contested concept—disaster—that may cause confusion. In colloquial speech, the terms ''crisis'' and ''disaster'' are often used interchangeably. In the academic arena, both concepts (and the relation between them) have generated ongoing and surprisingly intense debate (Quarantelli 1998; Perry and Quarantelli 2005). For the purpose of our discussion here, the term disaster will be used as a label to denote a ''crisis with a bad ending.'' The use of the term disaster, thus, involves a normative judgment concerning the crisis outcome.

When a crisis is perceived to have extremely severe consequences, we speak of a catastrophe. The difference between a disaster and a catastrophe is, of course, merely semantic. The perception of ''how bad is bad'' is affected, for instance, by cultural dispositions (what is a merely an accident in one country may be perceived as catastrophic in others) and experience. A catastrophe is marked by (i) unprecedented damage (both in financial terms and in lives lost) and (ii) a long-term breakdown of the life-sustaining functions in a social system. The crises of the future, as we will argue below, increasingly carry catastrophic potential.

[4]This is a subjective definition; that is, we only speak of a crisis when those involved *perceive* a situation as involving threat, urgency, and uncertainty (Rosenthal et al. 1989).

[5]An extensive literature exists that offers prescriptions with reference to the organization of emergency response systems (Perry and Lindell 2003, 2007; Alexander 2005).

Such catastrophic potential flows from the transboundary nature of future crises. We speak of a *transboundary crisis* when the functioning of multiple, life-sustaining systems is acutely threatened. A transboundary threat is characterized by the potential to cross *geographic* and *functional* boundaries, jumping from one system to another. The ice storms in Canada in 1998 and the electricity blackout in Buenos Aires in 2001–2002 are examples of trans-functional crises: a classic threat agent penetrated and paralyzed a wide variety of critical services (Scanlon 1999; Lagadec, Bertone, and Guilhou 2003). The rolling blackouts in the Northeastern United States and Canada in the summer of 2003 and on the European continent during November 2006 are examples of trans-geographical crises (clearly with functional repurcussions). In effect, a transboundary crisis can escalate along both dimensions; the combination of these geographic and functional dimensions defines its catastrophic potential.

A transboundary crisis often begins with a glitch in one system that crosses over to other systems, snowballing and cascading into a compounded disaster (Turner 1978; Jervis 1997; Wachira 1997; Rochlin 1999). The electricity blackout in the northeastern United States in the summer of 2003, which was triggered by a falling tree, is a good example (Schulman and Roe 2007). The ice storms in Canada and the heat waves in the United States and France also show how seemingly routine problems can develop into catastrophic events (Scanlon 1999; Klinenberg 2002; Lagadec et al. 2003).

Moreover, transboundary threats can impose themselves from ''the outside,'' thus affecting many systems at once. Good examples include hurricanes, tsunamis, and earthquakes. Hurricane Katrina provides the most recent example of an exogenous threat that crippled a wide variety of critical systems in Louisiana and rapidly affected systems across the United States (for example, gas availability and prices in the Northeast) and the world (for example, sending shocks through financial markets).

Challenges of Crisis Management

A crisis, therefore, refers to the outlier event that defies prediction, evolves rapidly and unexpectedly, and carries the potential for widespread destruction. Crises are ''low chance, high impact'' events. While some threat agents—think of asteroids and supervulcanos—are unlikely to happen in our life spans, their occurrence can never be ruled out (Posner 2004; Clarke 2006). When they do occur, their consequences will be catastrophic. The failure of critical systems (emergency services, electricity, communications, transport) for sustained periods of time will bring modern societies to a halt (Boin and McConnell 2007; LaPorte 2007). Recent events such as 9/11, Hurricane Katrina, and the Asian tsunami serve as iconic examples, but the effects of many other catastrophes—both recent and ancient—have been well documented (for example, Keys 1999; Guilhou and Lagadec 2002; Klinenberg 2002; Winchester 2003; Barry 2004; Diamond 2005).

The prevention and mitigation of such adverse events has traditionally been a national government responsibility that has proven difficult to fulfill. As a matter of fact, crises pose ''impossible'' challenges to the political-administrative elites who are called upon to deal with them (Boin et al. 2005).

It is, of course, possible to prevent quite a few catastrophes by investing in custom-built defenses. This strategy aims, in the words of Aaron Wildavsky (1988), to improve the ''brittleness'' of critical systems. For instance, the Dutch have built an elaborate defense system against the catastrophic potential of the North Sea (if only New Orleans had done the same). A missile shield can protect us from rogue states. The protection of commercial airliner cockpits with steel doors is thought to prevent certain terrorist acts. These defenses raise the bar

for crises, but no defense is inviolate (Wildavsky 1988; Sagan 1993).[6] Moreover, preventing low-probability events requires resources that could be used to address other pressing problems such as crime, poverty, and failing schools.

No matter how intensive the effort, societies cannot prevent *all* crises from happening. Not all terrorists can be stopped; nor can earthquakes, hurricanes, asteroids, and tsunamis be ''managed'' by human intervention. And while societies can prevent (or minimize) the consequences of known threats (for instance, by building earthquake resistant buildings), new and unimaginable threats will inevitably emerge.

In our estimation, most societies appear ill prepared to deal with such ''rude surprises''.[7] While it is true that ''crisis awareness'' has risen dramatically since 9/11, the attacks in Madrid and London, and the 2005 Hurricane season, such dramatic events have fed a preoccupation with prevention rather than preparation.[8] One reason is that preparation has few political pay-offs (it is hard to claim credit for being well-prepared). Another, possibly more disturbing, reason is that conventional policymaking and bureaucratic organizations are simply not designed to manage crises well (Dror 2001; Boin et al. 2005).

For instance, public bureaucracies often have a hard time recognizing an emerging crisis. Most crises do not materialize with a big bang; they are the product of escalation (Turner 1978; Masuch 1985; Lebow and Stein 1994; Perrow 1999). Policymakers must recognize on the basis of vague, ambivalent, and contradictory signals that something out of the ordinary is developing (Westrum 1982; Kam 1988; Aguirre 2004). They must appraise the threat and decide what the crisis is about (Parker and Stern 2005)—they must make sense of the situation (Weick 1993). But at the same time, the bewildering pace, ambiguity, and complexity of a crisis tend to overwhelm normal modes of situation assessment. And stress may impair sense-making abilities (Hermann 1979, 1990). Bureaucratic pathologies produce additional barriers to crisis recognition (Wilensky 1967; Rosenthal, 't Hart, and Kouzmin 1991).

Once a crisis unfolds, governments and their leaders must deal with critical issues they do not face on a daily basis; for example, the deployment of the military, the use of lethal force, or the restriction of civil liberties (Rosenthal et al. 1989). In crisis circumstances, the disparities between demand and supply of public resources are much bigger, the situation remains unclear and volatile, and the time to think, consult, and gain acceptance for decisions is highly restricted. Crisis decision making amounts to making hard calls, involving tough value tradeoffs and major political risks (Brecher 1979; Janis 1989).

An effective response requires interagency and intergovernmental coordination (Drabek 1985; 't Hart, Rosenthal, and Kouzmin 1993; Kettl 2003). After all, each decision must be implemented by a variety of organizations and effective implementation requires that these organizations work together. Getting public bureaucracies to adapt to crisis circumstances is a daunting—some say impossible—task (Bardach 2001). The question of who is in charge typically arouses great passions. Most public organizations were originally designed to conduct routine business in accordance with such values as fairness, lawfulness and efficiency. The management of crisis, however, requires flexibility, improvisation, redundancy, and the occasional breaking of rules.

[6]And we will not know how effective they are until these defenses are tested. It is interesting to note that the very expensive and much vaunted Dutch water system erected after the 1953 flood has never had to prove its worth.

[7]The term ''rude surprise'' was coined by Todd LaPorte (2005).

[8]The first step in increased global crisis awareness was the looming ''Millennium problem'', which, of course, never materialized. In response to this transnational threat, Western societies combined prevention with preparatory measures. We can only guess whether the absence of a Millennium disaster may have nurtured a false belief in the power of prevention.

A truly effective crisis response is to a large extent the result of a naturally evolving process (Boin et al. 2005). It cannot be managed in linear, step-by-step, and comprehensive fashion from a single crisis center, and even if it is full of top decision makers and stacked with state of the art information technology. There are simply too many hurdles that separate a critical decision from its timely execution in the field. Military command-and-control models have proven remarkably ineffective during these situations (Comfort 1988; Lagadec 1991; 't Hart et al. 1993; Dynes, Quarantelli, and Rodriguez 2006; McConnell and Drennan 2006).

One would expect all those involved in crisis management to study the lessons of past crises and feed those insights back into organizational practices, policies, and laws. This does not always happen, however. Lesson-drawing is one of the most underdeveloped aspects of crisis management (Stern 1997; Dekker and Hansén 2004). In addition to cognitive and institutional barriers to learning, lesson-drawing is constrained by the role such lessons play in determining the impact that crises have on a society. Crises become part of, and help to define, collective memory (Sturken 1997). The depiction of a crisis as a product of prevention and foresight failures may force people to rethink the assumptions upon which pre-existing policies and rule systems once rested. Learning thus becomes an intensely political process with potential winners and losers.

Given these challenges, we should perhaps not expect too much from public leaders and public bureaucracies. As the causes and consequences of an emerging threat are usually unknown and very little reliable information about the situation is available, critical decisions are typically made in the ''fog of war.'' Plans are only marginally helpful because the emerging situation was most likely never envisioned (Clarke 1999). This does not mean that crises are, by definition, unmanageable. The good news is that some crises are, in fact, contained (the Cuba Missile Crisis serves as a textbook example, see Allison 1971). This statement urges us to recognize that crisis management (and the preparation thereof) matters. The bad news, however, is that the future may bring crises that will be much harder to manage.

The Compounding Challenges of Transboundary Crises

Two distinct trends make the occurrence of so-called transboundary crises more likely in the near future. First, new threats are emerging. Second, modern society has become increasingly vulnerable to threats new and old. Together these trends are set to compound the conventional challenges of crisis management (which continue to bedevil the nation-state). All this creates a fresh set of transboundary design challenges that will confront politicians and bureaucrats as new threats begin to unfold.

The range of threats that can besiege a government has widened considerably over the past decades and will likely continue to do so (Rees 2003; Schwartz 2003; Posner 2004; Clarke 2006; Missiroli 2006). Nation-states have always confronted crises and disasters, most of which have tended to visit in known guises and to follow familiar if destructive patterns. Yet, today's threats appear to be fundamentally different in their disregard of geographical and functional borders.

Three widely recognized developments in particular enhance the catastrophic potential of future crises. First, the dizzying speed by which new technologies emerge and co-evolve with other technologies makes it virtually impossible to assess the unintended consequences of these technologies and their applications (Egan 2007).[9] While new technologies hold immense promises for our well

[9]The termination of the US Office of Technology Assessment demonstrates that not everybody agrees on the importance of this trend.

being, they are sure to ''bite back'' either through unforeseen glitches or unforeseen uses (Tenner 1997; Baer, Heron, Morton, and Ratliff 2005). Second, new forms of terrorism (most notably the indiscriminate use of suicide agents) have emerged (Laqueur 2003; Sageman 2004). While the threat should not be overstated (Mueller 2006), most observers agree that the devastating potential of terrorism is growing. Third, climate change is likely to create new and unforeseen threats (Stern 2006). Even countries that expect to benefit from these changes in one way or another will experience adverse effects (for instance, economic refugees, rising energy costs, and collapsing ecosystems).

To make things worse, nation-states have become increasingly vulnerable to these modern manifestations of old-fashioned threats.[10] Countries have become tightly linked economically, politically, and socially (Castells 1996). People, goods, and services now cross borders with relative ease (Friedman 2005). The same pathways that convey people and goods also enable risks to travel across borders.

Consider the EU member states. European economic integration and globalization have together created some of the most extensive cross-border connections in the world. From its origins in 1957, the EU has prioritized the ''four freedoms'': the free movement of goods, services, capital, and labor across borders (Article 12 EU Treaty). Physical and technical barriers were lowered, regulations were harmonized or made compatible, and critical infrastructures were tied together. In the 1980s, member states agreed to create a single economic market in Europe. The result today is an overall system in which many of the functions that sustain basic societal life (for example, energy grids, transport networks, food distribution, and financial flow structures) cross European political borders.

Nation-states thus have become susceptible to what were once considered ''foreign'' or ''local'' problems in distant places (Schwartz 2003; Sundelius 2005; Missiroli 2006). A crisis in one corner of Europe can now turn into a crisis for the entire continent. The Chernobyl explosion, the outbreak of mad cow disease, inter-ethnic conflict in the former Yugoslavia, illegal immigration in Southern Europe, an energy crisis in the Ukraine, terror attacks in Madrid and London, and attacks planned in the UK and Germany all exemplify ''local'' crises that reach beyond geographical and functional boundaries.

The threat of a transboundary crisis does not simply exacerbate the ''traditional'' challenges for crisis managers that were outlined above. It undermines the effectiveness of the nation-state's traditional organizational, policy, and legal tools. As a result of a rapidly evolving character and unforeseen interactions, it is virtually impossible to recognize and understand a transboundary crisis before its consequences take effect. Moreover, the transboundary crisis is much harder to address because, for one thing, it is unclear who ''owns'' a transboundary crisis and who should act on it. As it morphs from one domain to another, moving across geographical boundaries, responsibilities quickly blur. Perhaps more importantly, we lack the fundamental knowledge that would allow crisis managers to de-escalate chain reactions by swiftly ''de-coupling'' intertwined complex systems (Perrow 1999).

All this may add up to the ''perfect storm'' that can paralyze national governments and cause untold damages. Indeed, national governments have to reconsider and probably redesign the organizational, legal, and policy dimensions of their response systems. The multifaceted nature of the transboundary crisis demands an ''interdisciplinary'' response—a coordinated response among many actors that operate in different systems and increasingly in different countries. The institutional design challenge is to build transboundary response systems.

[10]Modern critical infrastructures appear extremely vulnerable to the effects of natural and man-made catastrophes, an observation that gives rise to the so-called vulnerability paradox: modern societies have become increasingly dependent on critical infrastructures that are likely to fail when we need them most.

Managing Transboundary Crises: What Role for the EU?

The nature and characteristics of transboundary threats, detailed above, challenge the ability of individual states to manage them unilaterally. Nation-states will have to collaborate to organize effectively to deal with them. At the same time, international cooperation on issues of safety and security creates challenges of its own. In this section, we consider the various ways in which one multilateral organization—the EU—could develop to deal with transboundary threats. After we lay out four different ideal-typical futures to which the EU might aspire (which we refer to in terms of ''alternative futures''), we will consider the likelihood of each option by assessing what capacities the EU currently has in place.

The Future Role of the EU: Four Alternatives

In thinking about the possible role of the EU in meeting the challenges of transboundary crises, two elementary questions play a guiding role. The first question, which flows from debates in the crisis management literature, asks whether transboundary crises require a supranational answer. Some argue that a transboundary crisis must be managed at the level at which the crisis unfolds, which would require an upward shift of decision making authority to the supranational level (Perrow 1994). This viewpoint dominates much of recent policy thinking in the United States and gave rise to the Department of Homeland Security (Kettl 2003; see also 9/11 Commission Report 2004). Others argue that centralization is unlikely to be effective and may be, in fact, counterproductive as the crisis (transboundary or not) is best managed at the level where the *consequences* of a crisis are felt (Bier 2006; US Senate 2006).

A second question shifts our attention from crisis challenges to the nature and workings of the EU. It asks whether the EU should be involved in crisis management at all. This question has both a normative and a functional dimension.

From a normative perspective we may ask whether it is politically feasible for member states to shift responsibility for safety and security issues to the EU level. The recent rejection of the EU's Constitutional Treaty by French and Dutch voters suggests a high level of scrutiny and concern regarding the expansion of EU competences. Some public commentators, and by implication some scholars, argue against an expanding role for the EU unless the benefits can be clearly identified (Moravcsik 1999; *Economist* 2007). The idea of proposing a central role for Brussels is considered by many as bridge too far (or possibly too soon). European integration advocates, on the contrary, maintain that precisely because of its declining legitimacy the EU should engage in projects that affect Europe's citizens in a positive way (Barroso 2004). Enhancing the safety and security of Europe would be such a mission.[11] From this viewpoint, it could be argued that the EU has created many of the societal vulnerabilities that now require a supranational ''fix;'' EU preparedness for crisis management is as a result another step in the evolving process of European integration (Wendling 2006).

From a functional perspective, we may ask whether the EU has or can develop the capacity to manage these transboundary threats. Does the EU have the resources—political, organizational, legal, and financial—to prevent, recognize, and mitigate emerging threats? The question here is whether the EU is suitable for these tasks. The *modus operandi* for cooperation in the EU is a slow, incremental process of consensus building intended to integrate economies at a technical level (Wallace and Smith 1995). Managing crises, however, requires a different mode of operation. This question also cuts to the heart of a deeper debate about

[11]According to a recent survey of the German Marshall Fund, 88% of Europeans would like to see the EU assume more responsibility for tackling global threats. At the same time, Europeans do not like to see the EU spend more on military measures (Barber 2007).

the nature of the EU. Both scholars and practitioners tend to base their arguments about the EU on one of two premises. One is that the EU is essentially a venue for intergovernmental cooperation, used by member states to pursue their collective interests but void of any autonomous impact on European level policy outcomes (Moravcsik 1998, 1999; compare to Rosamond 2000). A contending premise is that the EU should be considered a supranational actor in its own right, wielding its own policymaking authority and capable of influencing outcomes independently of the wishes of its member states (Sandholtz and Zysman 1989; Pierson 1998).

If we juxtapose the answers to our two questions in a simple two-by-two figure, four possible futures emerge (Table. 1).[12]

The first alternative future, which we call the ''supranational future,'' asserts that the EU could usefully do more as a transboundary crisis manager and calls attention to the demonstrated benefits of EU institutions in solving common problems. A possible implication of this scenario would be the centralization of EU crisis management responsibilities in a semi-autonomous and flexible agency (see Groenleer 2006; Boin and Sundelius 2007).

This alternative future finds inspiration in studies focused on the utility of supranational institutions in overcoming collective action problems (Sandler 2004; Tallberg 2006) and those highlighting the independent impact of EU institutions on cooperative outcomes (Sandholtz and Zysman 1989; Pierson 1998; Fligstein 2001). It finds outright support in statements of practitioners adopting a supranational perspective and making the case more explicitly and forcefully. Commission officials, for instance, are keen to highlight the importance of ''more Europe'' (Commission 2005). Even heads of state and government (although not all) have exhorted colleagues and European officials to do more in recent years. There appears to be a widespread feeling in European (and non-European) political and policy circles that the EU should assume a more assertive stance in crisis management and security more broadly (European Policy Center 2006). This ''feeling'' has translated into strategies, declarations, and, most recently, the Lisbon Treaty. While the rejection of the initial Constitutional Treaty by French and Dutch voters represented a set-back, it should be noted that these no-votes seem to have had very little to do with the proposed enhancement of the EU's role in crisis management and security.

The second alternative we call the ''subsidiarity future.'' This alternative builds on the conventional wisdom in disaster and crisis management studies, suggesting that the consequences of adversity should be addressed at the local level, that is, where the consequences are most acutely felt. This alternative does not deny a role for the EU. Quite the contrary, it prescribes a facilitating role for the EU. In this future state, the EU enhances the transboundary management capacity of member states and enables cooperation between national organizations. The subsidiarity perspective prescribes a complementary but distinct division of labor between national and supranational crisis management.

TABLE 1. Four Alternative Futures for the EU's Role in Transboundary Crisis Management

A role for the EU?	Do member states invest in supranational crisis mechanisms?	
	Yes	No
Yes	Supranational (1)	Subsidiarity (2)
No	Alternative IOs (3)	Intergovernmental (4)

[12]We wish to remind readers that this figure does not present an exhaustive set of possibilities. These are four perspectives that allow us to structure our thinking about the possible role EU institutions could play in the management of transboundary crises.

This alternative future draws its name from the Roman Catholic principle that decisions regarding a particular problem should be made at the most appropriate level of governance. Subsidiarity is a key principle in the EU. It prescribes that national problems should be addressed by member state governments; the EU should focus its attention specifically on transboundary problems. The subsidiarity perspective is underpinned by an assumption that although EU competences have grown, these competences should be directed at specific ''European'' needs. Underlying this premise is a belief in a division of competences that should be clearly spelled out in legal texts and shaped by a broader philosophy regarding the EU's role.

The third alternative future holds that transboundary threats may require transnational coping capacity, but the EU is not where that capacity should be developed. This scenario suggests that crisis and security responsibilities are better placed in other international organizations (IOs) better suited for such a role. NATO might be a likely candidate for this role (Edwards and Steinhäusler 2007). Alternatively, a new international organization could be formed to address the new crisis management challenges. This alternative does not deny any involvement of the EU. It could well feature an active role in enhancing capacity in an IO and working with that IO, but in this alternative future the EU refrains from further developing its own coping capacity.

This ''alternative organization'' perspective is likely to appeal to those who argue that EU and NATO responsibilities overlap in this area (Heisbourg and Larrabee 2003). NATO possesses a civil contingencies unit that could help coordinate civilian responses to transboundary crises in the Union. The current membership of NATO, however, differs in fundamental ways with EU membership, undermining the alliance's capacity and legitimacy to operate on EU territory. But this does not rule out cooperation between NATO and EU, especially when it comes to certain types of threat, for example, attacks with nuclear, biological, or chemical weapons (Lindstrom 2004).

The fourth alternative future combines a traditional bottom-up perspective on crisis and disaster management with a skeptical view on further expansion of EU tasks and authority. It denies the necessity of a centralized, supranational response structure and points to the unintended consequences that are sure to accompany such a development (see Boin and Sundelius 2007). In addition, it views collaboration on crisis management matters between nation-states as important but not necessarily a job for European Union institutions.

This ''intergovernmental future'' holds that cooperation should entail clearly defined goals for each member state; if cooperation cannot deliver certain functions, individual states are better off acting independently (Moravcsik 1999; Sandler 2004). It suggests that states should not cooperate simply for the sake of cooperation. To so do is to undermine the legitimacy of the EU as a cooperation forum, particularly if the EU institutions do not deliver the expected results. Democratic theorists who study the EU as a polity describe the resulting ''democratic deficit'' with some degree of alarm (Beetham and Lord 1998; Lord 1998). The recent Constitutional Treaty debacle has strengthened the position of those who think that the EU's role has expanded too far and in too many directions. Asking the EU to do more considering its defects is to raise expectations in an irresponsible fashion and should therefore be avoided. An intergovernmental future suggests a renationalization of crisis management functions, that is, eliminating EU competences in crisis management.

Among the practitioner and public proponents of this alternative future are the ''Euroskeptics,'' those who embrace a go-it-alone approach. They, too, may believe in the general merits of cooperation, but resist the siren song of the EU institutions. Euroskeptics in the media and in political office, to simplify greatly,

distrust the effects of EU institutions on policy outcomes and worry that EU cooperation erodes national sovereignty (McCormick 2005).

What Can the EU Do? Identifying Existing Capacity and Constraints

The four alternative futures outlined above can inform policy deliberations on the ways in which the EU's future role in crisis management may develop. However, these alternatives do not take into account the current state of affairs in the EU. Before we can assess the feasibility and likelihood of these alternative futures, we must assess what the EU has in place to manage transboundary threats and consider the constraints operating on any future development.

Today's crisis management capacities are the result of a broader process of policy integration in Europe. As is often the case with policy developments, most reforms in this area were preceded by external ''shocks'' to the system (Sabatier and Jenkins-Smith 1993). For the EU, the Balkans war of the 1990s served as such a shock, dramatically revealing Europe's weaknesses in defense and justifying greater collective action on security questions (Cottey 2007). Heads of government vowed to endow the EU with competences beyond the traditional economic sphere; namely, to be able to act without the assistance of third parties (for example, the United States) in dealing with crises abroad. The result was an emboldened European Security and Defense Policy (ESDP) with both civilian and military intervention capacities (Duke 2002; Duke and Ojanen 2006).

Other events, directly affecting the safety of EU citizens, had a similar effect on the willingness of EU member states to cooperate. The onset of mad cow disease in 1996 highlighted new vulnerabilities, including health threats that rapidly crossed borders (Grönvall 2001). The member states responded by agreeing to new health security measures and the European Commission built institutions for regulating animal and human health questions. More recently, terror attacks have had a galvanizing effect on collective action in crisis management. These events provoked a Europe-wide response, generating a host of new measures regarding internal security such as biosafety preparedness, customs controls, joint policing, and intelligence sharing.

We should also recognize an important internal dynamic driving the build-up of EU capacities in the area of safety and security management. The Commission, as an autonomous institution with its own budget, can initiate its own programs and form new bodies. Moreover, through its formal agenda setting power, the Commission can employ the force of expertise and argument to exploit divisions in member state preferences in the legislative process (Radaelli 1999). Such strategies allow the Commission both to build crisis management capacities within existing legal competences as well as to expand these competences through new legislation when circumstances allow—usually in the aftermath of a major crisis.

The EU's development of crisis management capacity, therefore, has been ''punctuated'' by disasters and crises of different types (Baumgartner and Jones 1993). The evolution of the EU's policies and organizations is characterized by fits and starts, not by an overarching strategy or vision. Partially, this lack of direction reflects an uncertain degree of political commitment regarding the nature of the EU's role. National leaders are keen to profess the importance of cooperation in crisis management, but their apparent enthusiasm sometimes stalls when the actual policy process begins. The member states are wary of giving up too much of their own policymaking autonomy in exchange for the benefits of supranational coordination. It follows that the EU's current role in transboundary crisis management, which we document in more detail below, remains in flux.

An Inventory of Transboundary Crisis Management Capacity in the EU

The inventory presented here is commodious in so far as it includes all the policies and means that relate broadly to transboundary crisis management.[13] Yet it is not comprehensive; instead, it offers a representative overview of what the EU has developed across its legal pillars and throughout its bureaucratic organizations.

We organize our findings along two dimensions. The first dimension includes those capacities developed and justified *formally* to address the various aspects of EU crisis and disaster management. Formal capacities tend to fall across the EU's legal ''pillars.'' The EU is constituted by three areas of policymaking, each subject to its own set of procedural rules and legal niceties. Pillar one, where most EU policymaking activity takes place, consists largely of economic issues and represents the traditional ''European Economic Community'' areas of policymaking.[14] Pillar two includes policy areas related to common foreign and security, including the ''crisis management'' activities by which the EU sends troops abroad to assist in foreign conflagrations. Pillar three involves policy areas related to police and judicial cooperation in criminal matters.

The second dimension includes those capacities that may not have been designed to manage crises or disasters, but which in practice (*de facto*)—according to our conceptualization of crisis management challenges—are highly relevant.

Formal EU Capacity

Much of the EU's formal transboundary crisis management capacity is found within the various sectors that make up the EU's first pillar. For instance, in the environmental sector, the Commission operates a long-standing civil protection program (Ekengren, Matzén, Rhinard, and Svantesson 2006b). Since the 1980s, cooperation in the area of civil protection has grown to include two main components. The first component is training and preparation. The EU conducts joint exercises and training programs for ''first responders'' and funds efforts to harmonize the technologies used by civil protection teams across borders. The second component is response and consequence management. The EU operates a collective database of personnel, supplies, and equipment for deployment when requested by a stricken state. Special EU teams can be deployed to combat disasters both inside and outside the EU, generally within 24 hours. Overseeing such efforts is the Commission's Monitoring and Information Center (MIC), a round-the-clock hub that tracks potential problems, facilitates communication between EU states, and coordinates joint action. As a first pillar competence, civil protection cooperation takes place with considerable Commission involvement. Its traditional focus on natural disasters has expanded to include man-made disasters and terror attacks. To that end, a ''Solidarity Fund'' was created to facilitate reconstruction in EU states affected by disaster.

Another group of activities within the EU's first pillar relates to health security. Particularly in the aftermath of the mad cow crisis and SARS, the EU ramped up its efforts to address the cross-border effects of human health and food safety risks (Grönvall 2001; Lezaun and Groenleer 2006). The EU has established links between national health officials, created rapid alert systems, and formulated

[13]This inventory builds on extensive empirical research conducted as part of a larger research project titled ''Creating EU Crisis Management Capacity for a Secure European Union,'' funded by the Swedish Emergency Management Agency (SEMA).

[14]Other Pillar I policy areas include competition, environment, agriculture, fisheries, consumer protection, social policy, immigration, healthcare, and monetary union.

common protocols for dealing with epidemics in member countries. After the US anthrax attacks in the fall of 2001, new initiatives were formulated in the area of bioterrorism and chemical weapons, including a focus on establishing vaccine supplies (Sundelius and Grönvall 2004). Administrative units were created in both the European Commission and the European Council to coordinate national reactions to the spread of dangerous pathogens.

In other first pillar policy areas, a number of initiatives are aimed at protecting critical infrastructures (Fritzon, Ljungkvist, Boin, and Rhinard 2007). Europe's oil networks are the focus of new legislative proposals by EU authorities concerned about refinery, pipeline, and distribution security, while European regulators have put in place new requirements for securing junctions in the electricity grid. Road, sea, and air transport policies in the EU have been supplemented with a variety of security measures intended to prevent breakdowns in critical transport networks.

EU competences are also found in the second pillar, which relates to foreign policy and external security activities. The main instrument of the EU's external security policy, the European Security and Defence Policy (ESDP), deals with ''crisis management'' as it pertains to situations around the world requiring urgent intervention (peacekeeping or peacemaking) (Howorth 2007). Military cooperation has been institutionalized only recently through the creation of working groups and diplomatic preparatory groups (Smith 2004). The creation of an EU Military Committee and a permanent EU Military Staff in the Council's institutional apparatus marked a subtle but momentous event in the EU's history: the presence of uniformed officers within the EU institutions. The ''Situation Centre'' monitors evolving problems in various parts of the world and links intelligence services and political decision makers within member states. Military crisis management cooperation is decidedly intergovernmental in character, considering its location in Pillar II and the political sensitivities involved.

Since 1999, an explicit focus on ''civilian crisis management'' has been added to the military dimension of the ESDP (Duke 2002). Missions abroad can now include activities pertaining to civil protection, rule of law, police training, and judicial support teams. The civilian dimension to crisis management missions abroad was an initiative of several EU member states intent on preserving their neutrality or nonaligned traditions. Efforts have been made to link the Commission's civil protection capacities in the first pillar with this civilian component of the Council's ESDP in the second pillar. Such linkage would give the EU a broader range of competences to intervene both at home and abroad and in both civilian and military situations.

In 2006, a major proposal was made by a study group charged by the Austrian Presidency of the EU to improve the EU's disaster management capacities. That proposal set forth the idea of a European civil protection force called ''EuropeAid'' that would draw together the crisis management capacities of Pillar I with the civilian and military resources found in Pillar II. Those resources could be deployed by teams of EU and national officials to respond to, and reconstruct after, major disasters at home and abroad (Barnier Report 2006). Following the major forest fires in Greece in the summer of 2007, the EuropeAid proposal is now being seriously considered by the Commission and EU ministers (Kubosova 2007).

Activities broadly related to ''counter-terrorism'' are found in both the first and third pillar (Dittrich 2005; Monar 2006; Rhinard, Boin, and Ekengren 2007). Traditionally, coordination related to domestic policing, judicial cooperation, and the border patrol have taken place under third pillar procedures. The treaties of Amsterdam in 1997 and in Nice in 2001 moved some questions of migration, police cooperation, and the free movement of citizens to the first pillar, however, meaning the granting of more power to the Commission and

qualified majority voting between member states in the Council rather than unanimity voting. The EU's latest Counter-Terrorism Strategy, agreed to in 2005, includes activities spread across all three pillars. Border surveillance has been improved with the creation of the Center for Information, Discussion, and Exchange on the Crossing of Frontiers and Immigration (CIREFI) and the Schengen protocols, which track immigration patterns within a sub-group of EU states. Separate institutional venues have been established, such as the Police Chiefs Task Force and a Counter-Terrorism Group.

A number of recent internal reforms aim to improve political coordination of crises that require a coordinated response from the EU institutions (officials typically use the examples of an influenza pandemic or terrorist attacks in multiple European cities to make the case for reform). The ''Emergency and Crisis Coordination Arrangements'' agreement sets out procedures for convening a ''Crisis Group'' in Brussels when necessary. The Crisis Group comprises relevant EU Commissioners, national diplomats, and Council officials and has the authority to deploy available EU resources and to recommend actions for national officials (Council 2006b). EU member states have been encouraged to put in place the internal structures required to interact efficiently with ''Brussels'' during a crisis (Council 2006a). The new ''ARGUS'' system aims to centralize the EU's various sector-based rapid alert systems (European Policy Center 2006).

Finally, much of the EU's formal capacity to protect its citizens can be found in its agencies (Groenleer 2006). The creation of the European Food Safety Authority, for instance, signaled a growth in the EU's organizational capacity to deal with consumer protection issues. The European Center for Disease Prevention and Control monitors potential pandemics and conducts risk assessments. Monitoring for cross-border weather effects and impending natural and man-made disasters takes place at the EU's Joint Research Center and EU Satellite Center. Eurojust and Europol are used to enhance information sharing, communication, and coordination on justice and police issues.

De Facto EU Capacity

Studying the EU's formal capacities reveals only part of the picture. This section identifies what we refer to as de facto capacities, largely of an organizational nature, that might enhance the Union's role in protecting the European continent (even if these characteristics were not explicitly designed for the purpose of crisis management; see Boin, Ekengren, and Rhinard 2006b for more detail). Here we identify the organizational strengths of the EU that may be brought to bear on the management of transboundary threats.

Monitoring Policy Domains

The EU's bureaucratic administration (consisting largely of the Commission Directorate Generals or DGs) has a well-developed capacity to monitor policy domains across Europe. The Commission has ''eyes and ears'' that allow it to document and follow routine trends while noting sharp deviations that might raise warning flags. In the area of agriculture, for instance, the Commission closely tracks commodity output levels (Grant 1997), while in the area of consumer safety, the Commission attempts to pinpoint emerging food risks (Lezaun and Groenleer 2006). Not all such tracking efforts are geared explicitly toward risks and potential crises. The Commission's monitoring proficiency is largely directed at potential internal market problems and known risks to established policies. Nevertheless, EU authorities are well placed to track and monitor cross-border trends within certain policy domains, greatly benefiting the EU's capacity for

early warning and timely intervention once a transboundary threat materializes (see also Majone 1996).

Planning for the Longer Term

Critics are quick to deride EU decision making as slow and tortuous, requiring general consensus before arriving at decisions. However, EU decision structures can be very effective for delivering long-term, goal-oriented framework policies. The EU policy process has traditionally been dominated by technical experts and policy elites, operating at arm's length from ''political'' interference (Christiansen 2001). For many years that formula worked because sensitive political questions could be broken down into their technical components and depoliticized. Although recent experience with the failed referendums on the Constitutional Treaty challenges this ''technocratic'' approach, it still accurately describes EU policymaking in general. This quality sets the EU apart from national governments, which find their capacity to address long-term goals burdened by the highly politicized nature of the policymaking process.

Regulatory Capacity

The prevention of certain types of crises would benefit from well-formulated rules and regulation. The European Union is a regulatory regime par excellence (Majone 1996). This stems from the original goal of the Treaty of Rome to dismantle barriers between the national economies of member states (Young and Wallace 2000). Supranational regulations were seen as the vehicle through which to pursue the ''market-making'' effort that would improve competitiveness. The EU displays several features that make it a proficient regulator: the strength of the European legal process, the expertise and machinery needed to promote technical cooperation and a distance from national influence so that technical, rather than political, approaches characterize problem solving (Wallace and Smith 1995; Majone 1996).

Coordinating Capacities

The EU has a robust set of institutions and mechanisms for facilitating cooperation that are already in place. The member states interact regularly within them and keep sizable diplomatic delegations permanently stationed in Brussels. Member states have a stake in the system, participating intensely on a daily basis and working to reform and shape the system during treaty revisions (Wallace 2005). In short, the EU has become a known and trusted venue for cooperation. Even in areas in which no formal EU competences exist, states sometimes display a ''coordination reflex'' (Tonra 2003). That is, they seek out the views and opinions of European partners through Brussels institutions before defining national positions. In effect, Brussels has become a familiar and tested site for cooperation in a wide array of areas. This capacity to coordinate complex activities of multiple member states enhances the EU's potential to manage transboundary crises.

Marshaling Expertise

During a crisis, policymakers often need experts to advise on technical issues (Rosenthal and 't Hart 1991). The EU institutions routinely generate, and then call upon, broad networks of competent experts (Pedler and Schaefer 1996; Rhinard 2002). On any given work day, hundreds of advisory groups are meeting in Brussels, bringing together thousands of consultants, civil servants, and scholars to focus on narrow policy questions. The Commission must formulate high-quality policies that accommodate the interests of twenty-seven different countries. As a result, the EU institutions have a proven capacity to quickly assemble and access expert networks, which may be essential in the management of new threats.

Enduring Constraints

The capacities listed above have developed within the context of a supranational political system that constrains how they can be mobilized. Some constraints stem from the unique dynamic of ''pooled sovereignty'' that characterizes EU cooperation. Others relate to the features of complex bureaucracies that are common to any political system. Whatever their origin, these constraints have implications for the future development of the EU's capacity to manage transboundary crises. In what follows, we describe the constraints in terms of three key tensions that characterize EU politics and policymaking.

The first tension is found in the relationship between national problems and supranational answers. Over the past five decades, European governments have progressively delegated authority to address collective problems to the EU institutions. That choice is a ''first-order'' delegation (Nicolaïdis 1999). The decision regarding whether or not to empower the EU institutions to act means giving up some degree of sovereignty in favor of ''pooling'' sovereignty with fellow members (Kohler-Koch 1996). With the benefits of collective action come costs: member states lose a degree of autonomy in pursuing public policy goals and must consider supranational legalities and collective guidelines when governing their own societies. Making the decision to delegate authority to the EU involves a fundamental tension reflected in the debate over whether supranational answers are worth the cost of delegation (Franchino 2007).

In recent years, this tension has become more politicized. Member states used to make delegation choices on functional grounds, using, as we noted above, technical arguments to depoliticize issues and conceal the tension inherent in the particular choice. Nowadays, following growing public attention to EU issues, the perception that member state governments are ''giving away sovereignty'' can come with a high political price at home. The failed referendums on the Constitutional Treaty in EU-founders France and the Netherlands demonstrate this danger. National politicians have become more risk-averse under the glare of scrutiny, being careful to draw ''red lines'' during negotiations and to project a heroic image of guarding national sovereignty.[15] Issues seen as core to the responsibility of the nation-state—such as security and crisis management—generate high degrees of public attention and thus dampen the willingness of leaders to delegate authority to the EU.[16]

Even when a decision is made to give authority to the EU, another key tension arises because of the need to make a ''second order'' delegation (Nicolaïdis 1999). It must be decided which legal procedure will be used to make collective policies. Under Pillar I procedures (used to regulate inter alia the internal market, environment, agriculture, health, consumer safety, and immigration policy), the Community Method is used, meaning that the Commission and the European Court of Justice play a strong role vis-à-vis the member-state dominated Council. Under Pillar II (used when formulating the Common Foreign and Security Policy) and Pillar III (used for Justice and Home Affairs issues), the Council enjoys the predominant role and as a result member states retain more control over EU policies.

[15]The June 2007 negotiation over a new ''reform'' treaty for the EU, presided over by the German Presidency of the EU and intended to move beyond the Constitutional Treaty debacle, illustrates the point. Many observers were struck by how virulently national leaders made reference to ''national interest'' when making demands; this seemed to contrast with the rhetoric and strategies of leaders in previous treaty negotiations (Buck, Blitz, and Bickerton 2007).

[16]The tension between national and supranational governance levels may also reassert itself during the implementation phase of policymaking because member state governments tend to drag their feet when putting policy into practice. They do so despite legal obligations and the threat of European Court of Justice Proceedings (Dimitrakopoulos and Richardson 2001).

The delegation of authority to different legal pillars constrains the ability of the EU institutions to work together. It results in the scattering of crisis management capacities across different policy sectors and makes them subject to different political dynamics and legal procedures (Hix 2005). The Commission manages most EU policies concerning transport safety, public health, civil protection, and food safety, for instance, and guards those competences fiercely. More recent delegations of policy authority to the EU have been made to the pillars in which the Council keeps control. That has been the case in policing across borders, judicial cooperation, crisis management missions abroad, intelligence cooperation, and crisis coordination arrangements for the EU as a whole. Not surprisingly, institutional competition abounds (Peters 1992). The Council is reluctant to draw upon Commission capacities for its own uses (such as ESDP civilian crisis management) lest member states lose too much control, while the Commission thinks likewise. Of course, the question of ''who pays for what'' constantly arises; the Commission controls the vast bulk of the EU budget, even for initiatives in Pillars II and III (but that budget is roughly only 1.5% of the GNP of all EU member states combined).

Tensions between EU institutions also generate constraints on leadership and the ability to ''speak with one voice.'' Leadership is diffused across the EU institutions so that the ability to hold a single actor accountable for his or her actions is problematic. At the national level, familiar forms of democratic legitimacy underpin efforts to hold security actors accountable. At the supranational level, because competences are shared between national and European authorities, accountability suffers (Höreth 1999). Overseeing decisions regarding security, which often collide with civil liberty concerns, is left to the European Parliament, which has little formal authority in most security policymaking endeavors. Holding officials responsible in the aftermath of a disaster or attack can present a similar challenge. During crisis management, such defects can become magnified, potentially threatening the long-term legitimacy of the EU.

Competition between the EU institutions is exacerbated by their focus on different threats and their use of different terminology.[17] A crisis for the Commission's DG Environment typically involves a natural disaster, such as forest fires in Portugal or flooding in Central Europe. Officials in that DG use the term ''civil protection'' to denote their activities. A crisis for the Council's Political and Security Committee (the main decision venue for ESDP), by contrast, is something that occurs abroad, typically in a region plagued by violence, war, or unrest. Here they use the term ''crisis management'' explicitly to describe the instruments and mechanisms deployed. The non-military aspects of such missions are called ''civilian crisis management'' operations. Further still, the term ''security'' is also used in connection with crisis, notably regarding public health measures to prevent a pandemic. Even though the threat of global terrorism on domestic soil has erased the practical importance of some of these distinctions, different approaches and discourses persist (Rhinard 2007).

A third and final constraint for our purposes can be found in the tensions within the EU institutions per se. The Commission, for instance, consists of directorates-general (DGs) that operate along functionally specialized lines (Christiansen 2001) and tend to act independently when it comes to crisis management. The Commission's mapping capacity reflects this reality. Mapping efforts, as discussed above, are generally geared toward identifying known threats that fall clearly within a particular domain (agriculture, nuclear energy, monetary

[17]Interestingly, both scholarly and practitioner attention has followed suit: analysts and policymakers tend to focus on particular sectors and specific crises (see, for example, Grönvall 2001; Mitsilegas et al. 2003; Tonra and Christiansen 2004).

policy, etc.). But most incidents and breakdowns do not respect policy domains. Such transboundary manifestations of adversity may not immediately appear on the Commission's radar screen because one DG does not recognize them as aberrations (precisely because they are unexpected, the DGs are not likely to have developed means to look out for them). Moreover, it is not clear whether the information networks of various DGs can adequately digest information coming from far and wide, possibly indicating the emergence of an incident that may prove critical in its consequences.

Conclusion: Assessing the Likelihood of Alternative Futures

Transboundary crises are ''rude surprises'' that outstrip the coping capacity of standard bureaucratic toolboxes (Lagadec 1991; McConnell and Drennan 2006). The fuzzy character of these threats makes them hard to recognize (they do not fit the known problem categories) and hard to stop. Snowballing threats require a rapid reconfiguration of available administrative capacity, but flexibility is not a characteristic strength of modern public bureaucracies. Transnational surprises thus have serious damage potential: a pandemic threatens all European citizens, a food scare affects the entire European food market, and climate change has implications for all European regions. All this prompts the question concerning what role the EU can and should play (if any) in enhancing the capacity to manage these threats.

In this essay, we formulated four alternative answers to this question. We provided a broad inventory of formal and de facto instruments that together define current EU crisis management capacity. We have also sketched the structural constraints that operate on both the use and development of this capacity. Assessing capacities against constraints allows us now to assess which alternative future or answer is most likely to materialize. This exercise is a speculative endeavor, of course, and needs to be scrutinized and judged against further empirical research and future political developments.

Historically, the EU played no direct role in the provision of supranational capacity to deal with threats to safety and security. Nation-states dealt with man-made and natural disasters using their own national and local organizations. Only major disasters would prompt a state to request assistance from friendly nations, but even here mainly on a bilateral basis. For traditional security threats, nation-states invested in international organizations such as NATO and, to a lesser extent, the United Nations. For other security threats, such as public health disasters or toxic agents, nation-states endowed bodies like the World Health Organization and the Organization for the Prohibition of Chemical Weapons, respectively. Yet no other international organization has taken on such a wide range of crisis and security management tasks as the European Union has recently.

Our data show that the EU has gradually but steadfastly assumed a role in the provision of transboundary crisis management capacity. Across the three pillars and within its institutions a substantial collection of venues, mechanisms, policies, and funding can be found that directly enhance the capacity to deal with future threats. Member states have thus moved away from the intergovernmental future (Option 4 in Table 1). In terms of Table 1, we observe a clear shift to the upper quadrants. Member states appear to accept and to often encourage a continued development toward an expanded EU role.

Other international organizations have been largely bypassed in this development. Political constraints conspire against a significantly expanded role of the most likely candidate, NATO. Even if there were a politically informed consensus that transboundary breakdowns require coping capacity at the supranational level, political realities militate against a driving role for NATO. While some

form of cooperation between the EU and NATO remains a possibility, membership incongruity between the two organizations and political friction exclude the option of delegating coping capacity to NATO for the foreseeable future.

Intriguingly, the expansion of the EU's role identified in this essay has not been followed by an investment in *operational* capacity at the supranational level. Most of the EU's transboundary crisis management capacity is facilitating in nature (the exception being the areas of agriculture, food safety, and animal health). The current state of affairs comes closest to the subsidiarity option 2 in Table 1. The available capacity enables close cooperation between member states and enhances the capacity to coordinate contributions made by member states. But there is a lag between rhetorical commitments to expanding the EU's role and the actual transfer of authority to Brussels. Member states have been careful to protect their sovereignty when it comes to the management of transboundary threats.

In light of the fundamental constraints on EU cooperation discussed above, the EU appears unlikely to develop away from the ''subsidiarity future'' depicted in Table 1. Some governments have become hypersensitive to perceptions that sovereignty is being ''lost'' to the supranational level. Political parties hostile to increased European integration, for instance, are keeping a close watch on government leaders during EU negotiations. The gap between leaders' declarations and actions is likely to widen. Following a major crisis, or when confronted with the complexities of new threats, leaders often declare ''solidarity'' and express a desire to take strong collective action. Yet they rarely follow through by empowering the EU to take action through the provision of strong legal bases on which to act. Privately, national diplomats encourage the EU's institutions to work within existing legal frameworks and with existing capacities. The result of this Janus-faced approach by national leaders is clear: the EU is being asked to coordinate action, but only with a partial ''tool box'' of competences.

The subsidiarity future, it should be noted, does not imply an automatic increase or decrease in security and crisis management cooperation in the EU. The Commission will continue to build competences, even in the absence of a clear and enabling mandate, and member states will continue to offer enthusiastic rhetoric about cooperation while delegating only in an ad hoc fashion. This reality fits with the more general modus operandi of the EU, in which common policies have been forged most successfully without requiring an encompassing plan. The subsidiarity future fits the basic nature of the EU, in which progress is a function of ''muddling through'' rather than grand design (Missiroli and Rhinard 2007).

We thus perceive somewhat of a paradox. While the expansion of the EU's role appears to confirm the notion that transboundary crises will require some sort of supranational coping capacity, empirical realities show that the EU is being used by its member states to strengthen national capacity and to merely facilitate intergovernmental cooperation. Outside of EU aid for disasters, EU food safety teams, and the EU's own monitoring centers, for instance, the EU itself has little autonomous authority in this area.

By drawing such a conclusion, we add grist to the mills of theoretical discussion in EU studies. An ongoing debate, which stretches back to the early days of European integration theory, has taken place between two camps: those who believe that integration will undermine the nation-state and Westphalian notions of sovereignty (Haas 1958; cf. Marks, Scharpf, Schmitter, and Streeck 1996) and those who maintain that integration strengthens the nation-state by ''rescuing'' governments from the challenges of complex public policy issues (Milward 1992; Moravcsik 1998). Our study supports the latter, but we encourage scrutiny of future developments to detect any indications of the former.

The emerging shape of the EU's security and crisis management apparatus, in effect, strikes a relatively neat balance between centralization and

decentralization—quite a feat considering that nation-states rarely seem to accomplish such a task on their own. This state of affairs is all the more intriguing because it has had no architect. The EU's development has been the outcome of seemingly ad hoc reactions to emerging crises.

To be sure, what we are saying here does not mean that the EU is ready to deal with future transboundary threats. In fact, much work remains to be performed to build a ''subsidiarity'' future that will protect citizens from the challenges and detrimental effects of transboundary disturbances. The recent spate of transboundary crises has shown just how difficult it is for the EU to add value to the efforts of individual member states (Ekengren, Matzén, and Svantesson 2006a).

Let us conclude this essay with three problems that undermine European capacity to cope with these threats and which would benefit greatly from additional research:

(1) **Solving the Coordination Riddle**. When it comes to crisis management capacity, the EU lacks coherence. In the aftermath of recent terror attacks, EU leaders have called for a ''comprehensive approach'' to countering threats. As this essay has pointed out, the EU has evolved incrementally into its current role; a clear mission regarding security is missing from the EU policy agenda. Moreover, as a fragmented and complex organization, there is little common ground either in discourse or even goals. These are ''normal'' characteristics of multinational organizations and multicentric policy networks. What is urgently needed is research that helps explain why some of these organizations or networks manage to function in a coherent, coordinated manner in times of adversity, whereas so many others fall apart. Studies on ''transnational governance,'' which constitute a major theoretical school within EU studies, can help to provide a useful framework for exploring coordination under trying circumstances (Rhodes 2003; Kohler-Koch and Rittberger 2006).

(2) **Furthering Effectiveness**. One question not often asked is whether EU crisis policies and structures will work effectively in the ''heat of the moment.'' Existing case studies are few and far between (but see Grönvall 2001; Larsson, Olsson, and Ramberg 2005) and applicable theory is hard to find. Part of the problem here is that theory is not well placed to help answer such questions. For one, most theoretical insights from crisis management research are derived from national studies. Further research on the demands that transboundary crises pose to the EU, therefore, is urgently needed. An important reference point for such research is the work by Scharpf (1988) on the ''joint decision trap'' that plagues the effectiveness of cooperative problem solving in the EU. Insights from the international studies literature can be turned ''inward'' to examine how regional organizations might effectively help manage internal, domestic crises (Peck 2001).

(3) **Enhancing Legitimacy**. The last topic deserving of further research is the democratic legitimacy of the EU's identity as a security provider and crisis manager. The EU has recently come under fire as a technocratic, elite organization one step removed from the legitimizing influence of political processes. A major question is how supranational organizations can preserve, regain, and enhance legitimacy for what they do and how they do it. This research theme should draw upon the growing body of literature examining the democratic constraints on transnational governance (Schmitter 2000; Anderson 2002; Joerges, Sand, and Teubner 2004; Dryzek 2006).

References

Aguirre, Ben E. (2004) Homeland Security Warnings: Lessons Learned and Unlearned. *International Journal of Mass Emergencies and Disasters* 22(2):103–116.

Alexander, David. (2005) Towards the Development of a Standard in Emergency Planning. *Disaster Prevention and Management* 14:158.

Allison, Graham T. (1971) *Essence of Decision: Explaining the Cuban Missile Crisis*. Boston: Little Brown.

Anderson, James, ed. (2002) *Transnational Democracy*. London: Routledge.

Baer, Martha, Katrina Heron, Oliver Morton, and Evan Ratliff. (2005) *Safe: The Race to Protect Ourselves in a Newly Dangerous World*. New York: HarperCollins.

Barber, Tony. (2007) Poll Backs Bigger World Role for EU. *Financial Times,* September 7. Available at: http://www.ft.com.

Bardach, Eugene. (2001) Development Dynamics: Interagency Collaboration as an Emergent Phenomenon. *Journal of Public Administration Research and Theory* 11:149–164.

Barnier Report. (2006) *For a European Civil Protection Force: Europe Aid. Report to the Commission President and Council Presidency*. Commission and Council of the European Union, Brussels, June.

Barroso, José Manuel. (2004) *Building a Partnership for Europe: Prosperity, Solidarity, Security. Speech to the European Parliament*. Brussels: Press Release No. SPEECH/04/375, July 21.

Barry, John M. (2004) *The Great Influenza: The Epic Story of the Deadliest Plague in History*. New York: Viking Adult.

Baumgartner, Frank R., and Brian D. Jones. (1993) *Agendas and Instability in American Politics*. Chicago: Chicago University Press.

Beetham, David, and Christopher Lord. (1998) *Legitimacy and the European Union*. London: Addison Wesley.

Bier, Vicky. (2006) Hurricane Katrina as a Bureaucratic Nightmare. In *On Risk and Disaster: Lessons From Hurricane Katrina*, edited by R.J. Daniels, D.F. Kettl, and H. Kunreuther. Philadelphia: University of Pennsylvania Press.

Boin, Arjen. (2004) Lessons From Crisis Research. *International Studies Review* 6(1):165–174.

Boin, Arjen, and Paul 't Hart. (2003) Public Leadership in Times of Crisis: Mission Impossible? *Public Administration Review* 63:544–553.

Boin, Arjen, and Allan McConnell. (2007) Preparing for Critical Infrastructure Breakdowns: The Limits of Crisis Management and the Need for Resilience. *Journal of Contingencies and Crisis Management* 15:50–59.

Boin, Arjen, and Bengt Sundelius. (2007) Managing European Emergencies: Considering the Pros and Cons of an EU Agency. In *Building Societal Security in Europe: The EU's Role in Managing Emergencies, Working Paper No. 27*. Brussels: European Policy Center. Available at: http://www.epc.eu.

Boin, Arjen, Paul 't Hart, Eric Stern, and Bengt Sundelius. (2005) *The Politics of Crisis Management: Public Leadership Under Pressure*. Cambridge: Cambridge University Press.

Boin, Arjen, Magnus Ekengren, and Mark Rhinard. (2006a) Protecting the Union: Analyzing an Emerging Policy Space. *Journal of European Integration* 28(5):405–421.

Boin, Arjen, Magnus Ekengren, and Mark Rhinard. (2006b) *Functional Security and Crisis Management Capacity in the European Union*. Stockholm: Swedish National Defense College, Acta B36.

Brecher, Michael. (1979) *Studies in Crisis Behavior*. New Brunswick: Transaction.

Buck, Tobias, James Blitz, and Ian Bickerton. (2007) EU Treaty Breaks Years of Deadlock. *Financial Times*. September 14. Available at: http://www.ft.com.

Castells, Manuel. (1996) *The Rise of the Network Society*. Cambridge: Blackwell.

Christiansen, Thomas. (2001) The European Commission: Administration in Turbulent Times. In *European Union: Power and Policy-Making*, edited by Jeremy Richardson. London: Routledge.

Clarke, Lee. (1999) *Mission Improbable: Using Fantasy Documents to Tame Disaster*. Chicago: University of Chicago Press.

Clarke, Lee. (2006) *Worst Cases: Terror and Catastrophe in the Popular Imagination*. Chicago: University of Chicago Press.

Comfort, Louise K, ed. (1988) *Managing Disaster: Strategies and Policy Perspectives*. Durham: Duke University Press.

Commission. (2005) Reinforcing EU Disaster and Crisis Response in Third Countries. Communication from the Commission of the European Communities to the Council, the European Parliament, the European Economic and Social Committee, and the Committee of the Regions, Brussels, April 20. Document No. COM(2005)153.

9/11 Commission Report. (2004) *National Commission on Terrorist Attacks Upon the United States: Final Report*. New York: W. W. Norton.

Cottey, Andrew. (2007) *Security in the New Europe*. New York: Palgrave Macmillan.

Council. (2006a) Reinforcing the European Union's Emergency and Crisis Response Capacities. Document no. 9552/2/06, Council of the European Union, Brussels, July 15.

Council. (2006b) Manual on Emergency and Crisis Coordination. Document no. 9552/2/06, Council of the European Union, Brussels, July 27.

Dekker, Sander, and Dan Hansén. (2004) Learning Under Pressure: The Effects of Politicization on Organizational Learning in Public Bureaucracies. *Journal of Public Administration Research and Theory* 14:211–230.

Diamond, Jared. (2005) *Collapse: How Societies Choose to Fail or Succeed*. New York: Viking Adult.

Dimitrakopoulos, Dionyssis G., and Jeremy Richardson. (2001) *European Union: Power and Policy-making*. London: Routledge.

Dittrich, Mirjam. (2005) Facing the Global Terrorist Threat: A European Response. Working Paper No. 14. European Policy Center, Brussels.

Drabek, Thomas E. (1985) Managing the Emergency Response. *Public Administration Review* 45:85–92.

Dror, Yehezkel. (1986) *Policymaking Under Adversity*. New Brunswick, NJ: Transaction.

Dror, Yehezkel. (2001) *The Capacity to Govern: A Report to the Club of Rome*. London: Frank Cass.

Dryzek, John. (2006) Transnational Democracy in an Insecure World. *International Political Science Review* 27(2):101–119.

Duke, Simon. (2002) *The EU and Crisis Management: Development and Prospects*. Maastricht: European Institute of Public Administration.

Duke, Simon, and Hanna Ojanen. (2006) Bridging Internal and External Security: Lessons From the European Security and Defence Policy. *Journal of European Integration* 28(5):477–494.

Dynes, Russell, Enrico L. Quarantelli, and Havidan Rodriguez, eds. (2006) *The Handbook of Disaster Management*. New York: Springer-Verlag.

Economist. (2007) *Charlemagne: Smoke Gets in Their Eyes*. *Economist*, August 2.

Edelman, Murray. (1971) *Politics as Symbolic Action: Mass Arousal and Quiescence*. Chicago: Markham.

Edwards, Frances L., and Friedrich Steinhäusler, eds. (2007) *On Scene: New Challenges for First Responders and Civil Protection*. New York: Springer.

Egan, Matthew Jude. (2007) Anticipating Future Vulnerability: Defining Characteristics of Increasingly Critical Infrastructure-Like Systems. *Journal of Contingencies and Crisis Management* 15:4–17.

Ekengren, Magnus, Nina Matzén, and Monica Svantesson. (2006) *The New Security Role of the European Union: Transnational Crisis Management and the Protection of Union Citizens*. Stockholm: Swedish National Defence College, Acta B35. Available at: http://www.eucm.leidenuniv.nl.

Ekengren, Magnus, Nina Matzén, Mark Rhinard, and Monica Svantesson. (2006) Solidarity or Sovereignty? EU Cooperation in Civil Protection. *Journal of European Integration* 28(5):457–476.

European Policy Center. (2006) Report of the 4th Meeting (21 June 2006) of the EPC Task Force on Managing Emergencies: The EU's Role in Safety and Security. European Policy Center, Brussels, July 1. Available at: http://www.theepc.be.

Fligstein, Neil. (2001) Institutional Entrepreneurs and Cultural Frames. *European Societies* 3(3):261–287.

Flin, Rhona. (1996) *Sitting in the Hot Seat: Leaders and Teams for Critical Incident Management*. Chicester: John Wiley.

Franchino, Fabio. (2007) *The Power of the Union: Delegation in the EU*. Cambridge: Cambridge University Press.

Friedman, Thomas L. (2005) *The World Is Flat*. New York: Farrar, Straus, and Giroux.

Fritzon, Åsa, Kristin Ljungkvist, Arjen Boin, and Mark Rhinard. (2007) Protecting Europe's Critical Infrastructures: Problems and Prospects. *Journal of Contingencies and Crisis Management* 15(1):30–41.

Grant, Wyn. (1997) *The Common Agricultural Policy*. London: Macmillan.

Groenleer, Martijn. (2006) The European Commission and Agencies. In *The European Commission*, edited by David Spence. London: John Harper.

Grönvall, Jesper. (2001) Mad Cow Disease: The Role of Experts and European Crisis Management. In *Managing Crises: Threats, Dilemmas, Opportunities*, edited by Uriel Rosenthal, Arjen Boin, and Louise K. Comfort. Springfield, IL: Charles C. Thomas.

Guilhou, Xavier, and Patrick Lagadec. (2002) *La Fin du Risque Zéro*. Paris: Editions d'Organisation.

Haas, Ernest B. (1958) *The Uniting of Europe: Political, Social, and Economic Forces, 1950–1957*. Stanford: Stanford University Press.

Hamilton, Daniel, Bengt Sundelius, and Jesper Grönvall, eds. (2005) *Protecting the Homeland: European Approaches to Societal Security – Implications for the United States*. Washington, DC: Johns Hopkins University/Center for Transatlantic Relations.

't Hart, Paul. (1993) Symbols, Rituals, and Power: The Lost Dimensions of Crisis Management. *Journal of Contingencies and Crisis Management* 1:36.

't Hart, Paul, Uriel Rosenthal, and Alexander Kouzmin. (1993) Crisis Decision Making: The Centralization Thesis Revisited. *Administration and Society* 25:12–45.

Heisbourg, François, and Steve Larrabee. (2003) How Global a Role Can and Should NATO Play? *NATO Review* 2003(1):13–17.

Hermann, Margaret G. (1979) Indicators of Stress in Policymakers During Foreign Policy Crises. *Political Psychology* 1(1):27–46.

Hermann, Margaret G. (1990) Hostage-Taking, Stress, and the Presidency. In *The Origins of Terrorism: Psychologies, Ideologies, Theologies, and States of Mind*, edited by Walter Reich. Cambridge: Cambridge University Press.

Hix, Simon. (2005) *The Political System of the European Union*. London: Palgrave.

Höreth, Marcus. (1999) No Way Out for the Beast? The Unsolved Legitimacy Problem of European Governance. *Journal of European Public Policy* 6(2):249–268.

Howorth, Jolyon. (2007) *Security and Defence Policy in the European Union*. New York: Palgrave MacMillan.

Janis, Irving L. (1989) *Crucial Decisions: Leadership in Policymaking and Crisis Management*. New York: Free Press.

Jervis, Robert. (1997) *System Effects: Complexity in Social and Political Life*. Princeton: Princeton University Press.

Joerges, Christian, Inger-Johanne Sand, and Gunther Teubner, eds. (2004) *Transnational Governance and Constitutionalism: International Studies in the Theory of Private Law*. Oxford: Hart.

Kam, Ephraim. (1988) *Surprise Attack*. Cambridge, MA: Harvard University Press.

Kettl, Donald F. (2003) *System Under Stress: Homeland Security and American Politics*. Washington, DC: CQ Press.

Keys, David. (1999) *Catastrophe: An Investigation Into the Origins of the Modern World*. New York: Ballantine Books.

Klinenberg, Eric. (2002) *Heat Wave: A Social Autopsy of Disaster in Chicago*. Chicago: University of Chicago Press.

Kohler-Koch, Beate. (1996) Catching Up With Change: The Transformation of Governance in the European Union. *Journal of European Public Policy* 3(3):359–380.

Kohler-Koch, Beate, and Berthold Rittberger. (2006) The ''Governance Turn'' in EU Studies. *Journal of Common Market Studies* 44 (Annual Review): 27–49.

Kubosova, Lucia. (2007) Greek Fires Prompt Plan for Permanent EU Emergency Forces. September 14. Available at: http://www.EUObserver.com.

Lagadec, Patrick. (1991) *Preventing Chaos in a Crisis: Strategies for Prevention, Control, and Damage Limitation*. London: McGraw-Hill.

Lagadec, Patrick, Laura Bertone, and Xavier Guilhou. (2003) *Voyage au Coeur D'une Implosion? Ce que L'Argentine Nous Apprend*. Paris: Eyrolles Société.

LaPorte, Todd R. (2005) Anticipating Rude Surprises: Reflections on Crisis Management Without End. Available at: http://www.inpuma.net/news/call4paperswrkshp2005.htm.

LaPorte, Todd R. (2007) Critical Infrastructure in the Face of a Predatory Future: Preparing for Untoward Surprise. *Journal of Contingencies and Crisis Management* 15:60–64.

Laqueur, Walter. (2003) *No End to War: Terrorism in the Twenty-First Century*. New York: Continuum.

Larsson, Sara, Eva-Karin Olsson, and Britta Ramberg. (2005) *Crisis Decision Making in the European Union*. Stockholm: CRISMART, Swedish National Defense College.

Lebow, Richard Ned, and Janet Gross Stein. (1994) *We All Lost the Cold War*. Princeton: Princeton University Press.

Lezaun, Javier, and Martijn Groenleer. (2006) Food Control Emergencies and the Territorialisation of the European Union. *Journal of European Integration* 28(5):437–455.

Lindstrom, Gustav. (2004) Protecting the European Homeland: The CBR Dimension. Chaillot Paper No. 69. Paris: Institute for Security Studies–European Union.

Linz, Juan J., and Alfred Stepan. (1978) *The Breakdown of Democratic Regimes*. Baltimore: Johns Hopkins University Press.

Lomborg, Bjørn, ed. (2004) *Global Crises, Global Solutions*. Cambridge: Cambridge University Press.

Lord, Christopher. (1998) Democracy in the European Union. In *Contemporary European Studies*, edited by Clive Archer, and Judy Batt. Sheffield: Sheffield Academic Press.

Majone, Giandomenico. (1996) *Regulating Europe*. London: Routledge.

Marks, Gary, Fritz W. Scharpf, Phillipe C. Schmitter, and Wolfgang Streeck. (1996) *Governance in the European Union*. London: Sage.

Masuch, Michael. (1985) Vicious Circles. *Administrative Science Quarterly* 30:14–33.

McConnell, Allan, and Lynn Drennan. (2006) Another Mission Impossible? Planning and Preparing for Crisis. *Journal of Contingencies and Crisis Management* 14(2):59–70.

McCormick, John. (2005) *Understanding the European Union: A Concise Introduction*. London: Palgrave Macmillan.

Milward, Alan S. (1992) *The European Rescue of the Nation-State*. London: Routledge.

Missiroli, Antonio. (2006) Disasters Past and Present: Challenges for the EU. *Journal of European Integration* 28(5):423–436.

Missiroli, Antonio, and Mark Rhinard. (2007) Muddling Through: A Viable Option for the Future? In *Building Societal Security in Europe: The EU's Role in Managing Emergencies*. EPC Working Paper no. 27. Brussels: European Policy Centre. Available at http://www.epc.eu.

Mitsilegas, Valsamis, Jörg Monar, and Wyn Rees. (2003) *The European Union and Internal Security: Guardian of the People?* London: Palgrave.

Monar, Jörg. (2006) Cooperation in the Justice and Home Affairs Domain: Characteristics, Constraints, and Progress. *Journal of European Integration* 28(5):495–501.

Moravcsik, Andrew. (1998) *The Choice for Europe*. London: UCL Press.

Moravcsik, Andrew. (1999) A New Statecraft? Supranational Entrepreneurs and International Cooperation. *International Organization* 53(2):267–306.

Mueller, John. (2006) *Overblown: How Politicians and the Terrorism Industry Inflate National Security Threats, And Why We Believe Them*. New York: Free Press.

Nicolaïdis, Kalypso. (1999) Minimizing Agency Costs in Two-Level Games: The Controversies Over Trade Authority in the United States and the European Union. In *Negotiating on Behalf of Others*, edited by R. Mnookin, and L. Susskind. Beverly Hills: Sage.

OECD. (2003) *Emerging Risks in the 21st Century: An Agenda for Action*. Paris: Organization for Economic Cooperation and Development.

Parker, Charles, and Eric Stern. (2005) Bolt From the Blue or Avoidable Failure? Revisiting September 11 and the Origins of Strategic Surprise. *Foreign Policy Analysis* 1:301–331.

Peck, Connie. (2001) The Role of Regional Organizations in Preventing and Resolving Conflict. In *Turbulent Peace: The Challenges of Managing International Conflict*, edited by Chester A. Crocker, Fen O. Hampson, and Pamela R. Aall. Washington, DC: United States Institute of Peace Press.

Pedler, Robin H., and Guenther Schaefer, eds. (1996) *Shaping European Law and Policy: The Role of Committees and Comitology in the Political Process*. Maastricht: European Institute of Public Administration.

Perrow, Charles. (1994) The Limits of Safety: The Enhancement of a Theory of Accidents. *Journal of Contingencies and Crisis Management* 2:212–220.

Perrow, Charles. (1999) *Normal Accidents: Living With High-Risk Technologies*. Princeton: Princeton University Press.

Perry, Ronald W., and Michael K. Lindell. (2003) Preparedness for Emergency Response: Guidelines for the Emergency Planning Process. *Disasters* 27:336–350.

Perry, Ronald W., and Michael K. Lindell. (2007) *Emergency Planning*. Hoboken, NJ: Wiley.

Perry, Ronald W., and Enrico L. Quarantelli (eds.). (2005) *What Is a Disaster? Further Perspectives on the Question*. Philadelphia: XLibris Books.

Peters, B. Guy.. (1992) Bureaucratic Politics and the Institutions of the European Community. In *Euro-Politics*, edited by Alberta Sbragia. Washington, DC: Brookings Institution.

Pierson, Paul. (1998) The Path to European Integration: A Historical-Institutionalist Approach. In *European Integration and Supranational Governance*, edited by Wayne Sandholtz, and Alec Stone Sweet. Oxford: Oxford University Press.

Posner, Richard. (2004) *Catastrophe: Risk and Response*. New York: Oxford University Press.

Quarantelli, Enrico L, ed. (1998) *What Is a Disaster? Perspectives on the Question*. London: Routledge.

Radaelli, Claudio M. (1999) The Public Policy of the European Union: Whither the Politics of Expertise? *Journal of European Public Policy* 6(5):757–774.

Rees, Martin. (2003) *Our Final Century*. London: Random House.

Rhinard, Mark. (2002) The Democratic Legitimacy of the European Union Committee System. *Governance* 15(2):185–210.

Rhinard, Mark. (2007) Le Cadrage de la Politique Antiterroriste de L'Union Européenne. In *La Construction des Problèmes Publics en Europe: Émergence, Formulation et Mise en Instrument*, edited by Aurélie Campana, Emmanuel Henry, and Jay Rowell. Strasbourg: Presses Universitaires de Strasbourg.

Rhinard, Mark, Arjen Boin, and Magnus Ekengren. (2007) Managing Terrorism: Institutional Capacities and Counter-Terrorism Policy in the EU. In *The European Union and Terrorism*, edited by David Spence. London: John Harper.

Rhodes, R.A.W.. (2003) In *What Is New About Governance and Why Does It Matter? In Governing Europe*, edited by Jack Hayward, and Anand Menon. Oxford: Oxford University Press.

Rochlin, Gene I. (1999) *Trapped in the Net: The Unanticipated Consequences of Computerization*. Princeton: Princeton University Press.

Rosamond, Ben. (2000) *Theories of European Integration*. London: Macmillan.

Rosenthal, Uriel, and Paul 't Hart. (1991) Experts and Decision Makers in Crisis Situations. *Knowledge, Diffusion, Utilization* 12(4):350–372.

Rosenthal, Uriel, and Alexander Kouzmin. (1993) Globalizing an Agenda for Contingencies and Crisis Management: An Editorial Statement. *Journal of Contingencies and Crisis Management* 1(1):1–12.

Rosenthal, Uriel, Michael T. Charles, and Paul 't Hart, eds. (1989) *Coping With Crises: The Management of Disasters, Riots and Terrorism*. Springfield, IL: Charles C. Thomas.

Rosenthal, Uriel, Paul 't Hart, and Alexander Kouzmin. (1991) The Bureau-Politics of Crisis Management. *Public Administration* 69:211–233.

Rosenthal, Uriel, Arjen Boin, and Louise K. Comfort, eds. (2001) *Managing Crises: Threats, Dilemmas, Opportunities*. Springfield, IL: Charles C. Thomas.

Sabatier, Paul, and Hank Jenkins-Smith, eds. (1993) *Policy Change and Learning: An Advocacy Coalition Approach*. Boulder, CO: Westview Press.

Sagan, Scott. (1993) *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons*. Princeton: Princeton University Press.

Sageman, Marc. (2004) *Understanding Terror Networks*. Philadelphia: University of Pennsylvania Press.

Sandholtz, Wayne, and John Zysman. (1989) 1992: Recasting the European Bargain. *World Politics* 27(4):95–128.

Sandler, Todd. (2004) *Global Collective Action*. New York: Cambridge University Press.

Scanlon, Joseph. (1999) Emergent Groups in Established Frameworks: Ottawa Carleton's Response to the 1998 Ice Disaster. *Journal of Contingencies and Crisis Management* 7:30–37.

Scharpf, Fritz W. (1988) The Joint-Decision Trap: Lessons From German Federalism and European Integration. *Public Administration* 66:239–278.

Schmitter, Philippe C. (2000) *How to Democratize the European Union...And Why Bother?* London: Rowman and Littlefield.

Schulman, Paul R., and Emery Roe. (2007) Designing Infrastructures: Dilemmas of Design and the Reliability of Critical Infrastructures. *Journal of Contingencies and Crisis Management* 15:42–49.

Schwartz, Peter. (2003) *Inevitable Surprises: Thinking Ahead in Time of Turbulence*. New York: Gotham Books.

Smith, Michael E. (2004) *Europe's Foreign and Security Policy: The Institutionalization of Cooperation*. Cambridge: Cambridge University Press.

Stern, Eric K. (1997) Crisis and Learning: A Balance Sheet. *Journal of Contingencies and Crisis Management* 5:69–86.

Stern, Sir Nicholas. (2006) *The Economics of Climate Change: The Stern Report*. Cambridge: Cambridge University Press.

Sturken, Marita. (1997) *Tangled Memories: The Vietnam War, the AIDS Epidemic, and the Politics of Remembering*. Berkeley: University of California Press.

Sundelius, Bengt. (2005) Disruptions: Functional Security for the EU. In *Disasters, Diseases, Disruptions: A New D-Drive for the EU, Chaillot Paper No. 83*, edited by Antonio Missiroli. Paris: Institute of Security Studies—European Union.

Sundelius, Bengt, and Jesper Grönvall. (2004) Strategic Dilemmas of Biosecurity in the European Union. *Biosecurity and Bioterrorism* 2:17–23.

Tallberg, Jonas. (2006) *Leadership and Negotiation in the European Union*. Cambridge: Cambridge University Press.

Tenner, Edward. (1997) *Why Things Bite Back: Technology and the Revenge of Unintended Consequences*. New York: Vintage.

Tonra, Ben. (2003) Constructing the Common Foreign and Security Policy: The Utility of a Cognitive Approach. *Journal of Common Market Studies* 41(4):731–756.

Tonra, Ben, and Thomas Christiansen. (2004) *Rethinking European Union Foreign Policy*. Manchester: Manchester University Press.

Turner, Barry A. (1978) *Man-Made Disasters*. London: Wykeham.

US Senate. (2006) *Hurricane Katrina: A Nation Still Unprepared (US Senate Report From the Committee on Homeland Security and Governmental Affairs)*. Washington, DC: Government Printing Office.

Wachira, George. (1997) Conflicts in Africa as Compound Disasters: Complex Crises Requiring Comprehensive Responses. *Journal of Contingencies and Crisis Management* 5:109–117.

Wallace, Helen. (2005) An Institutional Anatomy and Five Policy Modes. In *Policy-making in the European Union*, by Helen Wallace, and Mark A. Pollack (eds.). Oxford: Oxford University Press.

Wallace, William, and Julie Smith. (1995) Democracy or Technocracy? European Integration and the Problem of Popular Consent. In *The Crisis of Representation in Europe*, edited by Jack Hayward. London: Frank Cass.

Weick, Karl E. (1993) The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster. *Administrative Science Quarterly* 38:628–652.

Wendling, Cecile. (2006) France and EU Crisis Management. Paper presented at the second workshop of the Future Challenges for Crisis Management in Europe Conference in Stockholm, Sweden, May.

Westrum, Ron. (1982) Social Intelligence About Hidden Events: Its Significance for Scientific Research and Social Policy. *Knowledge* 3:381–400.

Wildavsky, Aaron B. (1988) *Searching for Safety*. New Brunswick: Transaction.

Wilensky, Harold L. (1967) *Organizational Intelligence: Knowledge and Policy in Government and Industry*. New York: The Free Press.

Winchester, Simon. (2003) *Krakatoa: The Day the World Exploded*. New York: HarperCollins.

Young, Alasdair, and Helen Wallace. (2000) The Single Market. In *Policy-Making in the European Union*, edited by Helen Wallace, and William Wallace. Oxford: Oxford University Press.