Crisis Management
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In the days following September 11, 2001, President Bush saw his domestic approval ratings and international standing soar to unprecedented levels. Similarly, New York mayor Rudolph Giuliani’s Zivilkourage during the first days of the World Trade Center tragedy propelled him back into the folk-hero status he once had enjoyed when taking the mayoral office on the wings of his crime-fighting reputation; gone was his image as a weary politician wounded by scandal. Their personal reputations boosted, both leaders were able to muster strong political and societal support for the drastic measures and budget claims they proposed in response to the crisis.

President Bush’s favorable position in the initial phase of the national crisis mirrors that of former president Jimmy Carter. In 1979, Carter enjoyed a wave of leader-focused patriotism when U.S. embassy personnel were kidnapped in Tehran; the wave crested and broke with Carter’s inability to bring his people home. Eleven months into the unresolved hostage crisis, Carter was badly defeated by Ronald Reagan in the presidential elections.

The New York mayor can look across the Atlantic for a similar anecdote. In 1992, an El-Al Boeing 747 crashed into the suburbs of Amsterdam. Mayor Van Thijn directed the city’s popular “caring government” response – victims were assured long-term support. The response came to haunt the city administration years later when victims had lost this promised government support. An ensuing parliamentary investigation in 1999 tarnished the government’s reputation and even threatened the survival of the national coalition.

Crisis and leadership are closely intertwined phenomena. People experience crises as episodes of threat and uncertainty, a grave predicament requiring urgent action (Rosenthal, Boin, and Comfort 2001). It is a natural inclination in such distress to look to leaders to “do something.” When crisis leadership results in reduced stress and a return to normality, people herald their “true leaders.” Successful performance in times of collective stress turns leaders into statesmen. But when the crisis fails to dissipate and “normality” does not return, leaders are obvious scapegoats.

The challenge to “bring things back to normal” is compounded by the sense of opportunity that often accompanies a crisis. It is a widely held notion that crisis generates a window of opportunity for reforming institutional structures and long-standing policies (Kingdon 1984; Keeler 1993). This “crisis-reform thesis” suggests that, in order to be effective reformers, leaders should avoid being tainted by crises and simultaneously exploit their dynamic potential.
We argue that the requirements of crisis management are inherently incompatible with the requisites for effective reform. Our argument unfolds in three stages. First, we set out the changing nature of the crises that beset today’s governments. Second, we show the difficulty of managing these crises in the face of popular expectations. Third, we assert that effective crisis management is at odds with effective reform strategies.

The Transformation of Crises and Crisis Consciousness: Leadership Challenges

Crisis management has never been easy. Organizational chaos, media pressure, stress, and inaccurate information are but a few factors that make it very hard for crisis leaders to make sound decisions. Changes in the nature and context of contemporary crises render these decisions nearly elusive. Certainly, the classic contingencies – natural disasters, industrial accidents, violent political conflict, and public disorder – continue to menace us. But when they transpire on our modern world stage, their sociopolitical impact affects more players than ever before.

The modern crisis is increasingly complex. It is not spatially confined by common boundaries; it entangles quickly with other deep problems, and its impact is prolonged (Rosenthal 1998; ’t Hart and Boin 2001). The modern crisis is the product of several modernization processes – globalization, deregulation, information and communication technology, developments and technological advances, to name but a few. These advances promote a close-knit world that is nonetheless susceptible to infestation by a single crisis. Comparatively slight mishaps within these massive and intricate infrastructures can rapidly escalate in unforeseen ways (Perrow 1999).

A prime example can be found in the European food and agriculture sector. One animal was diagnosed with foot-and-mouth disease in a remote English farm and, within days, the disease had affected all of Europe. Farmers, slaughterhouses, distributors, butcheries, consumers, inspection agencies, policy makers, and politicians endured enormous economic and social-psychological costs. A week later, the world had installed precautionary measures to resist the disease. Canada, Japan, Mexico, Australia – all were on alert, and not without reason. Open international borders permit both economic growth and epidemic proliferation, and so, too, invite massive flows of illegal migration. Epidemiologists warn of resistant killer viruses whose destructive impact is magnified by the enhanced global mobility of people, goods, and animals (Garret 1994). Modern crises are no longer confined to their site of origin.

Equally important is the cognitive and sociocultural context of contemporary crises. After decades of complacence, there is a growing sense of vulnerability. Unease prevails, even though memories of world war have faded, communism has died, political terrorism has decreased, and the modern state has proven a reliable and effective custodian. Highly prosperous countries in Western Europe have experienced more rather than fewer disasters and disturbances in the last decade. As this is being written, America and the West are still reeling from the September 11 attacks and the consuming war on terrorism they unleashed. Scientists issue warnings of many other global threats – medical, ecological, technological, and biological.
The net result of these combined assaults on the public’s peace of mind has been a renewed concern with risk and vulnerability (Beck 1992).

Many citizens are wary of crises; at the same time, they are naive about the intricacies of crises. Citizens expect to be safeguarded by their state; the idea that wholesale crisis cannot be prevented comes as a shock. That crises are not exclusively the fault of exogenous forces does little to reconcile public frustration. Postmortem investigations often unveil erroneous policies or bureaucratic mismanagement. This erosion of public trust in the capability of state institutions to perform their classic custodian functions is accompanied by increasingly assertive and tenacious media coverage of risks, disasters, and other critical events. The aftermath of today’s crises tends to be as intense and contentious as the acute crisis periods are, with leaders put under pressure by streams of informal investigations, proactive journalism, insurance claims, and juridical (including criminal) proceedings against them. Leadership in the face of this sort of adversity is, in short, precarious.

Leadership Issues

Given the nature of modern crises and their ensuing disruption, it is best to reassess our understanding of leadership in modern crises. First and foremost, we should abandon the notion that crises are events that are neatly delineated in time and space (Rosenthal 1998). Instead, we need to treat crises as extended periods of high threat, high uncertainty, and high politics that disrupt a wide range of social, political, and organizational processes. Crises are dynamic and chaotic processes, not discrete events sequenced neatly on a linear time scale. A crisis may smolder, flare up, wind down, flare up again, depending as much on the pattern of physical events as on the framing and interpretation of these events by the mass media, politics, and the general public. The scope of the crisis may expand and contract depending on which themes and issues command attention at different points in time, as the crisis impinges upon and is produced by the broader developmental context of the society in which it occurs (Porfiriev 1996). Political and bureaucratic leaders have a hard time coming to terms with the open-ended duration of contemporary crises, particularly when they seek crisis closure where none is possible (’t Hart and Boin 2001).

The increased scope, complexity, and political salience of crises raises the stakes for policy makers. The physical and psychological impact of crises is increasingly construed as a product of past prevention and preparedness policies, as well strategic political choices made during the crisis that play up or down the importance, unacceptability, and urgency of the events. Not only must policy makers establish beyond a doubt that they cannot be held responsible for the occurrence of any particular crisis, it is assumed they are well prepared for any crisis that may occur and will take effective measures to protect the public, limit harm, and compensate damages. Any event or behavior that deviates from these standards increases public unease and is likely to elicit strong criticism.

For a long time, it was left to mid-level planners and operational agencies to design and implement prevention and preparedness policies. Work in these areas typically occurred in bureaucratic backwaters, far removed from the hurry and strife of high politics. The newly emerging context of risk and crisis management is radically different. A fitting perspective on new forms of crisis management
emphasizes the political-psychological challenges of coping with unexpected contingencies. It assumes massive media interest, and therefore considerable political arousal. It accepts that critical events are inherently ambiguous. The very naming and framing of certain social conditions or clusters of events—say, creeping soil and water pollution, mysterious illnesses among battle veterans, rising crime, or an increase in attacks on foreigners—as “crises” then becomes a major political act (Edelman 1977; Reich 1991; ’t Hart 1993). Whether they like it or not, crisis management has become a leadership issue.

Crisis Leadership in the Risk Society:
A Mission Impossible?

The German sociologist Ulrich Beck (1992) observed that we live in a “risk society,” in which concerns about personal safety and health as well as collective security have risen to the top of the social and political agenda. The risk society is characterized by a substantial gap between citizen expectations and leadership efforts in preventing and containing crises. It nurtures a culture of concern in which political and bureaucratic leaders do not seem to measure up to the increasingly urgent demand for effective crisis prevention, preparedness, and response. This social-psychological and political climate makes it very hard—perhaps even impossible—for leaders to emerge from crises unscathed. There are six public expectations that leaders are often incapable of meeting:

1. **Popular expectation:** Leaders should put public safety first.
   **Research finding:** Leaders consider the economic and political costs of regulating and enforcing maximum safety too expensive. They settle for, and pay for, suboptimal levels of safety.

   In general, there are two conspicuous reasons why public policy leaders settle for suboptimal safety efforts. The most important one is that top-level policy makers have other legitimate concerns than safety (Sagan 1994; Heimann 1997). Enhancing prosperity by stimulating economic activity is a key goal of leaders, who are acutely aware of the regulatory dilemmas they face: Prioritized safety and environmental concerns in a region make firms and investors disinclined to bring their business to that region. The burdens of compliance are too bothersome, and investors will take their interests elsewhere. To amplify the dilemma, there appears to be a positive correlation between economic growth and safety (Wildavsky 1988)—the problem is that growth leads to safety, and not vice versa. Simply, a dollar is better spent on the economy than on prevention. Preventative policies suppress growth. Leaders need to somehow reconcile these realities.

   A second deterrent to prioritizing safety measures is political rather than economical. Politically, crisis prevention and preparedness are delicate and relatively thankless tasks. Because successful crisis prevention and mitigation are nonevents, they draw little media attention and generate no political credit. Ironically, the modern public supports this course, routinely advocating such policies as deregulation and citizen responsibility. Common neoliberal complaints are directed at big government, overregulation, and bureaucratic red tape. Still and all, avoiding crisis prevention is a liability. When a crisis occurs, politicians
and the press engage in retrospective fault finding. Earlier calls for hands-off government policies are drowned out by calls for strong public leadership. Leaders sit precariously, then, between a rock and hard place. If they implement crisis prevention, they are chastised for doing too much too soon. If they ignore crisis prevention, they are scolded for having done too little, too late.

2. **Popular expectation:** Leaders should prepare for worst-case scenarios.  
**Research finding:** Most government and business leaders are reluctant to prepare themselves for their crisis-response roles.

Ideally, leaders enter office with a strong conviction that crisis avoidance and preparedness are inherently important – or at least, they are actively persuaded by their advisers that ignoring crisis issues is done at grave peril. Evidence suggests, however, that neither are regular conditions (Lagadec 1997; Carrel 2000). For example, all but one of the American presidents (ironically, Jimmy Carter) serving during the nuclear age took lightly their role as the ultimate decision maker on war and peace. This is suggested by their lack of active interest and regular attendance at Pentagon exercises (Ford 1985). Reports on crisis planning at other levels of government and in other countries show a similar picture. In general, crisis planning is taken seriously only by leaders with prior crisis experience or within communities that have an emergency subculture born of previous disasters.

The corporate world is no exception. Top business managers are generally averse to take crisis contingency planning seriously (Pauchant and Mitroff 1992). They always seem to have something better to do at the time. The drive for efficiency usually wins out over long-term efforts to improve reliability (Weick, Sutcliffe, and Obstfeld 1999). This lack of crisis preparedness cannot be portrayed solely as the product of harsh trade-offs in the allocation of leadership attention, however. There is a psychological resistance of leaders to face their personal, organizational, and societal vulnerabilities. Leaders at the pinnacle of business and politics alike are socialized into seeking opportunities to outpace their competitors rather than exercising strategic contingency management.

3. **Popular expectation:** Leaders should heed warnings about future crises.  
**Research finding:** Most man-made disasters and violent conflicts are preceded by incubation periods during which policy makers misinterpret, are ignorant of, or flat-out ignore repeated indications of impending danger.

The failure to prevent foreseeable crises is well-documented in the literature on intelligence fiascoes and man-made disasters (Kam 1988; Turner and Pidgeon 1997). The problems that prevent leaders from heeding warnings are manifold and fundamental. Leaders are routinely engulfed in oceans of information and advice. Moreover, they face ambiguous and contradictory signals. Warnings do not come with flashing lights; they are hidden in expert reports, advisory memos, or a colleague’s casual remark. The warnings have to be distilled from a series of seemingly minor and insignificant indications.

An additional problem is that information passageways to leaders often are obscured. Bad news, in particular, faces formidable obstacles on its way to the top of the organization, especially in bureaucratic organizations (Wilensky 1967). These barriers are fundamentally social. Nobody wants to alarm his boss unnecessarily,
and nobody wants to acquire the reputation of a troublemaker (Jackall 1988). In the absence of these signals, leaders run a big risk of becoming the victim of “silences” in the organizational communication pattern. This contradicts the myth that modern administration governs by foresight. Government discovers problems mainly by retrospection and negative feedback (Deutsch 1966; Van Gunsteren 1976). In fact, there is every indication that it takes a disaster for leaders to prepare for others. Nonprevention will continue to constitute the nature of organizations until structural and cultural alterations are actualized. These changes should focus on redirecting a culture of problem avoidance toward “high reliability” (Rochlin 1996; Weick, Sutcliffe, and Obstfeld 1999).

4. **Popular expectation:** During a crisis, leaders take charge and provide clear direction to crisis-management operations.  
**Research finding:** Crisis operations are multiorganizational, transjurisdictional, polycentric response networks. They demand lateral coordination, not top-down command and control.

It is a common belief that the decision-making process guiding crisis-response efforts must and will be centralized (‘t Hart, Rosenthal, and Kouzmin 1993). This so-called centralization thesis underpins the public want of a figurehead who is “in charge” during times of crisis. In reality, crisis-response efforts depend on many people in several networks. At the political-strategic level, efforts to radically centralize decision-making authority tend to cause more friction than they resolve because they disturb well-established authority patterns (Benini 1999). In most democracies, governance takes place in shared power settings: Political leaders and institutions share power among each other, central government shares power with supranational and subnational governments, and the state shares power with societal groups and private corporations. Unless there is an overwhelming need for drastic measures (during war, for instance), actors in the crisis-response network whose policy-making roles are abruptly diminished by the ad hoc centralization of authority will, to say the least, not be motivated to contribute their resources and comply with centrally issued policy directives.

So even if, in most large-scale crisis situations, the myth of centralized response structures is sustained by setting up and formally empowering crisis centers, pivotal policy decisions actually emerge from a multi-actor coordination process, in which consultation, negotiation, and outright confrontation are the orders of the day (‘t Hart, Rosenthal, and Kouzmin 1993). Moreover, at the operational-response level, centralization is near impossible, because many dynamic, situation-specific, and urgent problems arise simultaneously at different places and nodes in the response network. These can only be handled adequately by operational leaders with sufficient mandate to take the actions they deem necessary (Flin 1996).

5. **Popular expectation:** Leaders should be compassionate toward victims of crises. This empathy should play out in both word and deed.  
**Research finding:** Leaders want to provide victims with care, but they often fall prey to their own unrealistic promises.

In the event of a crisis, citizens in the risk society anticipate high-standard government care. The public demands that government meet their short-term physical
and financial needs. They also expect assistance in the years following a crisis; they want help with material disruptions, health problems, and psychosocial trauma. Victims of disaster are both organized and vocal in assuring these needs are met (Reich 1991; Kletz 1994). Only leaders who choose to gamble popularity will attempt to ignore or silence victims’ groups. But tempering victims’ emotional and prima facie eminently reasonable claims is difficult even for the gambler. In the heat of massive tragedy, leaders may be tempted to assure victims of continued government support.

To illustrate, we look again at the 1992 El-Al Boeing 747 crash in Amsterdam. The Israeli cargo plane devastated, in particular, two apartment buildings. Mayor Van Thijn’s “caring government” response promised the inhabitants long-term care. A component of his response was directed at lobbying central government to provide resident status to affected illegal immigrants (Rosenthal et al. 1994). Alas, nonvictim illegal migrants endeavored to exploit the upshot of Van Thijn’s efforts, conniving to obtain resident permits. The mayor’s reaction to this unanticipated entanglement was highly unpopular. He had to respond with screening procedures, which evoked a cold, rational-bureaucratic image – a far cry from the sympathetic face he had painstakingly projected. Also, the local and national health authorities reacted dismissively when a number of inhabitants of the disaster area developed various types of respiratory and other complaints, giving rise to wild speculation about the nature of the undisclosed content of the Israeli cargo plane. Six years later, these complaints escalated to a row of formidable proportions, ending in a highly contentious parliamentary investigation procedure and threatening the ruling coalition (Boin, Van Duin, and Heyse 2001).

During the course of a crisis, leaders may be forced to qualify or retract promises made and face severe criticism for doing so – criticism that may last for many years after the disaster. This is to be expected in the risk society. More and more citizens take their government to court, seeking retribution for unfulfilled promises. Juridification of the crisis aftermath is becoming more common across many nations. This alone, and unpopularity a certainty, should warn leaders that compassionate crisis response is best forerun by logic. At the very least, leaders should install response measures that avoid issuing blank checks, rewarding free riders, and setting costly precedents.

6. Popular expectation: Leaders strive to learn lessons after a crisis. Research finding: Leaders get caught in the politics of blaming that dominates the aftermath of modern contemporary crises. Learning is encumbered in this atmosphere.

Because of their dramatic and disruptive nature, crises naturally induce a series of questions about their causes and implications. Questioning leadership response to crises is just as natural – the answers to these questions determines what kinds of lessons are drawn to prevent reoccurrence.

Crisis would seem to provide definite learning opportunities; clearer forms of negative feedback can hardly be imagined (Deutsch 1966; Stern 1996). Yet impartial diagnosis of what happened is not easy when the passions are aroused. This has always been the case, but in contemporary society where fate is no longer accepted as an explanation for emergencies, disasters invariably are portrayed and experienced as policy failures (Bovens and ‘t Hart 1996). In this environment,
challenges of crisis management

Post-crisis investigations are less about learning than they are about blaming. Journalists and citizens alike seem to think someone must be held accountable for the shortcomings that permitted the crisis. Policy makers know this, and they have responded by perfecting their defensive routines such as acquiring plausible deniability, improving their public communications skills, and spin-doctoring (Edelman 2001). The more time spent polishing these mechanisms, the less time leaders spend focusing on the learning potential afforded by crises. Genuine efforts toward system improvements are lost in postcrisis politics. And engaging in critical self-reflection amounts to political hara-kiri for today’s policy makers.

If post-crisis learning occurs at all, it is generally in the long run. It is a laborious process conducted away from the media spotlight and the turbulence of political and juridical proceedings against top officials. Learning is often a matter of designing unheroic technological improvements and adapting bureaucratic routines. This requires patience, institutional memory, and a low-conflict atmosphere – attributes that political leaders cannot easily provide.

Crisis Leadership Revisited: From Containment to Reform

The very characteristics of crises that make them hard to control also give them dynamic potential. In their enormity, ambiguity, and sensitivity, crises threaten the status quo and delegitimize the policies and institutions underpinning the status quo. Leaders may choose to defend these institutions and policies, operating in self-defensive measures and blame shifting. Or, they may exploit the chaotic mood during crises to change them. Studies of policy reform and organizational change have shown it is common to think of crises as opportunities for desired change (Polsby 1984; Hall 1993; Keeler 1993; Cortell and Peterson 1999). This “crisis-reform thesis” (Boin and ‘t Hart 2000) is predicated on the observation that reform of any kind is difficult to accomplish. Current policies and institutional arrangements are embedded in laws, protected by dominant coalitions, and sustained by habituation and organizational inertia (Hogwood and Peters 1983). Although it may be possible to smuggle in reform through a series of cumulative, incremental policy adjustments (Lindblom 1979; Rose and Davies 1994), this is a time-consuming, easily reversible, and potentially drifting process (Goodin 1982).

Some policy scholars argue that governance unfolds over time as a pattern of “punctuated equilibria” – long eras of stability alternated by short-lived periods of uncertainty and conflict (Baumgartner and Jones 1993). They point to critical junctures during which existing policy settings, policy goals, and institutional arrangements for policy making are under pressure. This pressure may jeopardize their self-evident legitimacy and de-institutionalize governance (Suchman 1995). These notions support the crisis-reform thesis – indeed, the reform potential of crises can be fully exploited by leaders acting on these critical junctures. Recent events in the European agriculture sector underscore this notion. British, Danish, Dutch, and German ministers changed the philosophy and composition of their sectors after bovine spongiform encephalopathy (generally known as mad cow disease), pig fever, scrapies, foot-and-mouth disease, and other viral diseases infringed upon farmers and meat producers throughout Europe. The ministers of agriculture battled with their more conservative and domestically constrained
colleagues in the European Council. The ministers drew in the heads of state, who had to take a stand on the issue. These discussions are continuing at both the national and European levels. In this case, crisis management became a matter of political and bureaucratic reform craft.

Overcoming the many barriers to institutional change in policy making is, however, a daunting task. Reform leadership entails a number of functional requirements. Reform leaders need to articulate that the status quo is untenable, propose a coherent set of radical and politically sanctioned reforms, and guard their integrity during reform implementation. Reform leadership requires the embracing of novel policy ideas, the skills to sell them to diverse audiences, and the wielding of power to see them enacted (Bryson and Crosby 1992; Moon 1995). Reform leaders must exercise their gusto in an environment of inherent uncertainty and considerable resistance in societal, political, and bureaucratic arenas.

The popular notion that crises make it easy to overcome long-standing barriers to reform is not only naive, but also logically unfounded. Crises present reform-minded leaders with an intricate mix of opportunities and risks. Hence, a compounding tension for crisis leadership comes to the fore: The imperatives of effective crisis containment conflict with the imperatives of reform craft. It suggests, at the very least, that crisis management and reform leadership cannot be the province of the same executives.

1. **Reform imperative:** Exploit the crisis damage. To build support for nonincremental reform, portray crises as the result of flaws in the existing institutional order. Communicate a strong commitment to make major changes.

   **Crisis-management imperative:** Minimize the damage, alleviate the pain, and restore order. This requires the reaffirmation of existing values and structures.

Reform leadership is an exercise in “creative destruction” (Schumpeter 1943). Old structures must be destroyed before new ones can be implemented. This explains why reform leaders frame critical contingencies and policy predicaments in terms of crises. This delegitimizes and thus de-institutionalizes existing values and policies. In the wake of a crisis, leaders may seize upon the damage done. Their strategy, then, is twofold: They dramatize the seriousness of the situation, yet at the same time externalize its causes. Leaders can use the language of crisis only if they are not at risk of being blamed for the crisis at hand (newly incumbent leaders are, all else being equal, in a much better position to do so than veteran leaders). The communication of personal commitment to reform is an essential second component of the strategy. If leaders do not effectively articulate this willpower, critics will soon see through their lip service to change. Of course, the devil is in the dosage. A fine line separates effective communication of resolve from an autistic determination to seek reform at all costs.

But in the thick of crisis, reform is not a priority for crisis leaders. They are under tremendous pressure to bring things back to normal first. Core values and proven methods become anchors in stormy seas; crisis is not a time for exploring new options that pay off in the long run only. The use of reform rhetoric at this time of turbulence may compound rather than alleviate the collective stress generated by crisis. It surely will evoke resistance among those who have a stake in the
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status quo ex ante. The political instincts of a successful leader tell him to preserve rather than destroy existing institutions and policies. Even new leaders who have emerged on a platform of change before a crisis occurs may find themselves forced to suspend their reform ambitions. Attractive though it may be in theory, seizing the opportunity to play up crises for the sake of gaining momentum for reform amounts to taking such a huge gamble with history that many leaders may wish to avoid it.

2. Reform imperative: Successful reform leaders persuade their political environment that they have a plan. They present it as the only feasible policy option that will lead to a new and stable future.

Crisis-management imperative: Successful crisis leaders restore political confidence in the effectiveness of pre-existing policies and institutions.

Reform leadership is about persuasion. Commands and intimidation do not work in pluralistic polities. Reform leaders in particular have much persuading to do because their plans differ markedly from what exists. They have to convince multiple audiences that what they want is good, realistic, and inevitable. Moreover, they must convince stakeholders that the benefits of the proposed reform outweigh the sunk costs of existing structures and policies. This requires not only effective command and selection of facts but also the rhetorical skills to present them. It also touches on the socioemotional bond between leaders and citizens. Leaders need to do more than expose a crisis; they also need to reassure followers they know the right (if not the only) way out. Reformist crisis leaders, therefore, need to be constructive and destructive at the same time: build up their case for change, burn down the bridges to the past, and disqualify competing policy alternatives. To some extent, radical reforms need to be “oversold” to persuade constituencies that a sharp break with the past is in their interest – Helmut Kohl’s promise of the “blühende Landschaften” (green pastures) that would result from the crisis of German unification is a case in point.

A crisis may tempt reformers into the mistaken belief that the time is right. Political support is granted near-automatically in the early phases of a crisis. It usually begins to wane, however, as soon as the first shock has been absorbed and the first revelations of causes surface. When allegations about responsibility begin to dominate the political discourse, leaders will feel the political necessity to protect the past record of the policies and organizations they are held accountable for. Leaders who seek to gain momentum for reform by echoing assertions that the current crisis is not so much a tragedy, but a fiasco of existing policies and organizations, are taking a big risk. They may gain political support at large, but they do so at the price of antagonizing many of the stakeholders they have to deal with on a day-to-day basis long after the crisis is over.

3. Reform imperative: Successful reform leaders manage to secure early support of implementing actors for their plans.

Crisis-management imperative: Successful crisis leaders bypass routine policy-making procedures to speed up decision making.

Effective reform leaders anticipate implementation obstacles. They display an awareness of implementation structures, identify key players, and build sufficient
support among them. They know that blueprints made in the ivory tower will not materialize. Organizational heterogeneity, powerful clienteles, and professional autonomy are a few of the factors that make consultation with implementing actors a prime condition for effective reform.

During a crisis, leaders tend to use a top-down, command-and-control style. Short-circuiting the decision-making process speeds up the government’s response capacity in the face of urgent threats. But the fiction of control continues once they are organized into small and coherent crisis centers and special committees. Gone are the endless negotiations with many stakeholders. Instead of brokering painstaking compromises, leaders actually make decisions and issue orders that other actors simply have to follow. In some cases, policy makers enjoy the top-down style so much that it takes considerable persuasion to get them to terminate the crisis regime and, sometimes literally, leave the bunker and get back to politics as usual (Rosenthal et al. 1994). Even well-meaning and considerate leaders who do not become addicted to top-down governance will be forced in a crisis to make crucial and controversial decisions without engaging in the normal procedures of consulting all involved. These centralization tendencies are most likely understood and temporarily accepted by many stakeholders. But if leaders are seen as abusing the centralized decision regime for a “crash through” strategy of pushing controversial reform, the backlash can be strong.

From Crisis-Induced Reforms to Reform-Induced Crises: Traps to Avoid

In their efforts to show effective leadership, crisis leaders may be tempted to exploit the window of opportunity and push through reform packages that would be unimaginable during normal times. The public policy literature suggests that crises enable them to temporarily stop muddling through and actually instigate some form of planned change.

While it may be true that the great leaders in history are those who turned crisis into prosperity, it should be remembered that many failed in the attempt. This should come as no surprise if one realizes the requirements of reformist leadership conflict with the best practices of conventional crisis management. In other words, the standard prescriptions for political reform craft are a dangerous guide for leaders in times of crisis.

What, then, can we tell leaders who are not content with restoring the status quo and seek to deliver long-awaited reform in the wake of crisis? In the absence of systematic research into cases of successful crisis-induced reform, we cannot present a set of managerial prescriptions. But we have culled three lessons from our research that may help crisis leaders to avoid reform-induced crisis.

Lesson 1: Leaders need to formulate a crisis-management philosophy, which can help to negotiate the inherent dilemma of reparation and reform.

Effective crisis management is all about “dynamic conservatism” (Schon 1971). The conservative reflex is to defend core values and institutional commitments (Terry 1995). This can only be done if leaders flexibly adapt the policy-making structures and modus operandi of public organizations to the high-pressure context of crisis. It is not easy to determine what must change so that the rest can remain
the same. Leaders, therefore, need some kind of policy compass or road map to help them negotiate the inherent tension between stewardship and reform craft. They must have a clear idea of what is worth preserving in their society, policy field, or organization. This can guide them once they are forced into the unfamiliar, chaotic terrain of a major crisis. Such a philosophy of crisis management should help to prevent common crisis response modes such as ad hocery, improvisation, and stress-induced rigidity (Holsti 1989; Rosenthal, Charles, and ‘t Hart 1989). It should prevent leaders from making immediate decisions with irreversible consequences; it focuses attention on the long-term consequences of any reform plans. The establishment of an Office for Homeland Security in the wake of September 11 underscores this point: The short-term reassurance effect may not measure up against the long-term coordination burdens the new department implies.

**Lesson 2: Leaders should not push reform without considering opposite arguments. If they use the crisis to ignore critics, they will mobilize their own opposition at a time when their performance is already under scrutiny.**

Leaders tend to overestimate their “crisis dividend.” In the contemporary crisis context, leaders can hardly expect any dividend at all. Even if they are granted emergency powers, even if press coverage is supportive or muted, and even if parliament supports extraordinary measures, leaders cannot get away with radical reform if they do not at least try to build support for them among their constituencies. Crises end. Sooner or later, politics as usual imposes itself, and veto players will resume their positions.

The intricate interplay of objective and constructed features in contemporary crises suggests the management of public confidence is a leadership challenge in itself. But telling the public that government is fully in control and that risk-management policies are by and large effective is hardly an option when the sparks have started flying. In previous times, government leaders could safely assume public sympathy in times of duress. Today, they have to battle to (re)obtain it. Instead of assuming that most crises still generate the rally-around-the-flag effect, as seen in the United States following September 11, leaders must entertain the alternative scenario: When crisis generates a search for political culprits, advocating reform is easily construed by critics as a cheap strategy for avoiding blame.

**Lesson 3: Crisis-induced reform creates exceptional challenges for the long term.**

It is easier to get a reform package accepted than to get it implemented—decades of implementation research have taught us this lesson. The administration of reform programs is a long-term process that generates complex problems for administrative leaders. Contrary to popular expectations, as we have shown, crises do not make these problems disappear. On the contrary, crisis-induced reform is often a product of centralized and rapid decision making. Due process makes way for procedural shortcuts; crisis rhetoric masks implementation dilemmas. Whereas successful reform leaders take the time to placate anyone who may become involved during the implementation stages, crisis decision making tends to be exclusive. The “appreciative gap” that separates policy makers from implementers is not bridged, but widened (Boin and Otten 1996). As soon as the sense of crisis urgency passes, leaders will have to deal with this gap.
Acknowledgments

The authors wish to thank Louise Comfort, Henry Quarantelli, Eric Stern, and Annie Weller for their helpful comments on earlier drafts of this article.

Notes

1. When we speak of leaders, we refer to the people in senior positions in governments and public organizations, whether they are political appointees or career bureaucrats. We do not claim to speak about tactical leaders at the operational level of crisis response (Flin 1996).

2. The exception may be the reform of disaster policy and regulation in the wake of a disaster. Professor Quarantelli has pointed out to us that large-scale disasters sometimes do lead to improved disaster planning.

3. Resilience may be a feasible alternative to crisis prevention (Wildavsky 1988). In short, leaders must make efforts to strengthen organizational or societal capacity to bounce back after the inevitable crisis occurs.

References


The recent foot-and-mouth crisis in Britain began on 20 February 2001 when the first case was confirmed, and effectively ended on 15 January 2002 when the country was officially declared disease-free. The crisis emerged at the tail end of the first Blair administration – reaching its peak in May 2001, just when the government should have been considering the calling of a general election. It followed a succession of other crises such as issues of rail safety after the Paddington rail crash of October 1999, the major fuel protests of September 2000, and the ongoing crisis of BSE and the possibility of transmission to humans. Apart from an isolated outbreak of foot-and-mouth disease (FMD) on the Isle of Wight in 1981, the last major outbreak in the UK occurred between October 1967 and June 1968. This resulted in 2,364 outbreaks and led to the slaughter of 433,987 livestock during the epidemic. By contrast, the 2001 crisis produced marginally-less outbreaks (2,030) but resulted in 4,078,000 animals being culled.

In comprehending this disparity, it is crucial to understand that managing any crisis is not simply a technical matter of finding the optimal scientifically-based ‘solution’ and implementing it. It is also about politics. Nowhere is this more important than in the Blair government’s handling of the FMD crisis. This article explores the political factors which shaped the government’s crisis response. Initially, it provides a brief overview of each stage of the crisis response. It then examines four key factors which are central to our understanding of this response. These are the government’s supersensitivity to public opinion in the context of a general election year; the influence of the National Farmers Union (NFU), a key stakeholder interest in the response; the impact of an increasingly fragmented system of UK governance, as well as the impact of bureaucratic politics – particularly a widespread disenchantment with the Ministry of Agriculture, Fisheries and Food (MAFF); and international pressures which bore down on the Blair administration, ranging from the EU to the many tourists deterred from visiting the UK.

The Crisis Response: An Initial Overview

The first phase of the crisis was diagnosis, followed by a period of limited action and an underestimation of the problem, leading to a ‘we are in control’ mentality. On 19 February 2001, a veterinary inspection in an abattoir in Brentwood, Essex, showed up highly suspicious signs of FMD in pigs. MAFF officially confirmed the presence of the disease the following day. By the time this infection was spotted and control measures initiated, it had spread through thousands of sheep to farms
throughout the country. The initial crisis response focused on the slaughter of livestock in infected premises within 24 hours and the slaughter of all animals in contact with infected livestock. Movement restrictions were imposed around infected premises, comprising 3km ‘protection zones’ and 10km ‘surveillance zones’. The whole of Great Britain was declared a ‘controlled area’, prohibiting the movement of all livestock (unless licensed) while requiring that bio-security measures (such as disinfection) be observed. The impact of these measures was limited, however, with the scale of transmission being considerably beyond government expectation. One reason for this was the ineffective implementation of the crucial 24-hour policy, accompanied by an unwillingness to initiate additional culling policies that would have halted the disease earlier in the campaign. This ultimately exposed a ministry (MAFF) suffering from an institutional malaise and a fragmented civil service, incapable (at last in the early stages) of providing a ‘joined-up’ response to match the scale of the crisis.

In the second phase of the crisis from mid-March onwards, there was a pendulum swing towards ‘overkill’. The Prime Minister, reacting to a multiplicity of political pressures, not least the proximity of the general election, decided to assume control of the crisis response: centralising decision-making in the Cabinet Office Briefing Room (COBR). Accompanying this move, MAFF was removed as the central competent authority and there was a massive mobilisation of extra resources at a local level, including the introduction of the armed forces. The outcome in the front-line was the imposition of excessive, pre-emptive, cull programmes that would attempt to ‘get ahead’ of the epidemic to stop transmission. This included the much-maligned policy of culling (within 48 hours) all premises contiguous to infected farms. In simple terms, this meant the slaughter of apparently healthy animals in farms surrounding a 3km area from infected properties. The cumulative effect of these actions was to instil an ‘overkill’ culture into the crisis response in an attempt to stop transmission.

In the third phase from end of March and beginning of April onwards, the government’s new-found zealfulness hit a crisis of its own. Outbreaks were still increasing and the tourist industry was beginning to suffer. This prompted an intense debate over the legitimacy of the cull policies and the use of vaccination. The government now accepted the case for using protective vaccination but this was not supported by a substantial majority of the farming unions. Their refusal forced the Prime Minister to announce on 2 April that the local elections on the 3 May (also the likely date of the general election) would have to be rescheduled to 7 June. Over the next week, the disease would reach its peak by then over 1,200 farms had been infected); yet, in stark contrast, a charm offensive was launched to declare the UK ‘open for business and pleasure’. By 11 April, however, the number of new cases did begin to flatten out, although there was still widespread farming resistance to culling. With a general election on the horizon, a relaxation of the contiguous cull policy was announced on 26 April, movement restrictions were eased, and there was a concerted effort to open as many areas of the countryside as possible. On 3 May, the Prime Minister announced that the country was ‘on the home straight’. The epidemic was largely forgotten during four weeks of electioneering. Thus, the goal of removing FMD from the election agenda was highly successful and the government had effectively rescued itself from the crisis which it had (to a substantial degree) contributed to in the first place.
In the fourth and final phase, there was a sweeping-up exercise that was accompanied by a higher degree of nervousness than might be expected. After the general election on 7 June, there were still an average of roughly five new outbreaks per day (virtually the same as in the pre-election month) and Secretary of State for Environment, Food and Rural Affairs, Margaret Beckett, stressed the need for continued vigilance and maintaining high bio-security measures. Eventually, this strategy tailed off and the last new case was on 30 September. Arguably, however, the decision to alleviate control measures in the run-up to the general election significantly prolonged the tail of the epidemic.

Let us now consider the range of political factors which help drive the Blair government’s response to the worst FMD crisis in British history. In total, they help explain some of the contradictions inherent in the government’s unfolding crisis strategy.

**The General Election and the Government’s Supersensitivity to Public Opinion**

At the start of 2001 and with the fuel crisis now largely behind him, it seemed likely that Tony Blair would call a general election in May/June of that year. In terms of cultivating public opinion, however, one area of potential vulnerability was the countryside lobby and the farming community, where MORI polls highlighted a bleak picture for New Labour. Polls published in *The Times* (29.3.01) and *Telegraph* (1.4.01) showed that in the previous twelve months there had been a 12.5% swing away from Labour to the Conservatives in rural seats. This swing was one indication of the countryside’s lack of trust in the government after BSE, fox hunting debates, fuel protests and a 70% drop in farm incomes over the past four years. Although rural seats accounted for only 10% of the national electorate and together with semi-rural seats accounted for 24% of the national count, marginal seats were receiving real attention from the three major parties. Before the election, 152 seats were marginal, having less than a 10% majority, of these 114 contained rural or quasi-rural votes of some kind. This meant that roughly three-quarters of the marginal seats in the country were going to be influenced by a rural vote of some form or another, giving the countryside opinion a significant voice. The government was also very aware that the actions it took in relation to the agricultural community during the epidemic were going to have wider public opinion implications. All the factors combined, therefore, helped produce a strategy which was supersensitive to public opinion. This manifested itself in two main ways.

First, on 23 March 2001, the Prime Minister, Downing Street and the Cabinet Office Briefing Room took control of crisis policy-making and relegated the Secretary of State for Agriculture, Nick Brown, and the Chief Veterinary Officer, Jim Scudamore, to assisting with implementation. Once the Prime Minister took charge, the outcome was ‘overkill’. A contiguous cull policy started and livestock slaughter was stepped up. This allowed the government to present a picture of effective crisis management and control during the epidemic; it also allowed it ultimately to remove FMD from the political agenda in preparation for a general election on 7 June. Arguably, however, the policy resulted in something of a pyrrhic victory – given the sheer numbers of livestock losses.
Second, if the bigger picture was one of overkill and a complacent ‘we are in control’ mentality, there were a series of smaller but highly significant measures to accompany it. In late March, the government had agreed to the ‘principle’ of vaccination and was willing to endorse a programme of vaccination in selected areas. This strategy, according to the National Farmers Union, had more to do with cleaning up television screens in order that the general election could go ahead as originally anticipated. Unfortunately for Downing Street, Nick Brown could not persuade the farming unions to accept the policy and was forced instead to propose new measures to keep livestock indoors. The failure to introduce a vaccination policy also meant the government could not avoid contemplating postponement. This became particularly compelling because in the weeks previously, MORI and ICM polls consistently conveyed an indication that the public felt that Labour had not handled the epidemic well and that the election should be postponed. Indeed, there was a real danger that Tony Blair would be viewed as putting his party’s interests above those of the country as a whole. As a result, there was a historic and highly effective piece of agenda management, achieved by delaying the announcement of a general election, widely expected to coincide with the municipal elections in England and Wales on 3 May. Within the Labour Party it was widely accepted that the Prime Minister’s advisor Anji Hunter had played a crucial role in the decision and that ‘the troops didn’t like it’.

Creating a ‘feel good’ factor also extended to the way in which FMD was reported; it often allowed different ‘spins’ to be put on the figures. As public opinion started to stir at the sight of pyres and slaughter, the media and stakeholders such as the Country Land Association and the Soil Association started to query the legitimacy of the cull policy: the way in which statistics released by MAFF significantly downplayed the extent to which healthy animals were being killed by the contiguous cull policy. The House of Commons Select Committee on Agriculture highlighted a common concern during the heightened culling stage, relating to regional vets clinically confirming a case of FMD in a farm and a contiguous cull being initiated on premises within a 3km zone. Subsequently, however, those cases that later proved negative under laboratory testing were still being recorded by MAFF as confirmed infections. This meant that the true extent of healthy livestock called demaned undisclosed throughout the peak of the crisis. A subsequent written answer in the House of Commons by the Animal Health Minister, Elliot Morley, revealed that 208,372 healthy sheep and cattle had been killed in this way. Yet even this statistic downplays the real UK situation, because it applies only to farms in England, and it does not include those slaughtered under suspicion or as part of the dangerous contact policy. When asked why MAFF was still recording negative cases as infected ones, MAFF’s Chief Veterinary Officer, Jim Seuda more, told the Select Committee on Agriculture that a number of factors made laboratory testing unreliable, therefore the statistics had to be based upon clinical diagnosis on site. Later that week, however, the committee interviewed the chief scientific advisors to the government Dr Alex Donaldson, head of the Pirbright Laboratory of the Institute of Animal Health, who was responsible for carrying out sample tests, was asked by the committee ‘What percentage of confidence do you have in those tests? Greater than 90%?’, to which he replied ‘Absolutely Thus, the government’s assertion that statistics recorded on site were more reliable does appear to lack credibility.
A further exercise in agenda management was evident in a gradual longer-term underreporting and reclassification of infected premises. It a farm was slaughtered on suspicion or as a contiguous cull or a dangerous contact premise, then it was not listed as a confirmed outbreak. For example, by 23 April 2001, 1,440 premises had been officially infected and slaughtered; yet when contiguous culls, slaughter under-suspicions and dangerous contacts were taken into account, the number of slaughters at this point was actually 4,940. By doing this, it allowed the government to highlight a daily reduction in outbreaks and declare the epidemic under control (again) as early as 3 May when the Prime Minister declared ‘We are in the home straight’.4 Subsequently, until the general election, it became clear to farmers reporting outbreaks that the Paige Street veterinary committee was resisting confirming case as infected, and was telling local vets to report cases as slaughter-under suspicion, rather than infected outbreaks.

A further development occurred toward the end of April. By 24 April ICM opinion polls were highlighting the nation’s disapproval of the slaughter policy and the government’s handling of the crisis. During this uncertain period the media turned its attention to Phoenix – a young calf that had escaped numerous attempts on his life by MAFF. Scenes of slaughtermen attempting to gain access to Phoenix stirred public opinion, and Tony Blair’s press chief Alistair Campbell became aware that the Daily Mirror was preparing a ‘Save Phoenix’ campaign. Thus, Downing Street made a snap policy judgment in the face of public opinion and decided to refine the cull policy in such a manner that Phoenix could be saved. Regional veterinary officers were to be given more discretion over the implementation of culls in relation to cattle. This represents yet another example of the Prime Minister changing policy to accommodate polling data and public opinion. Indeed, in true New Labour style, the Daily Mirror was informed before the Secretary of State for Agriculture and the Cabinet. The change in policy was announced just in time to make the ten o’clock news bulletins on 25 April. Interestingly, Downing Street attempted to distance itself from the decision, insisting the action was taken by MAFF officials, despite the fact that those same officials had publicly stated earlier in the week that Phoenix had to be slaughtered.

Pressure Politics and the National Farmers Union

Historically, the NFU had a close and much analysed relationship with MAFF. By choosing one key interest group and by mutually advocating common beliefs and policy, both have over the years been able to achieve their respective goals together. The strength of the NFU during the FMD crisis was meant to be its perceived ability to bring about policy delivery through its 60,000 membership and provide support for the government’s crisis response. During the early stages of the epidemic, it declared that it ‘fully support(ed) . . . all the measures which have been speedily put in place by MAFF’ and that it was ‘in constant contact with MAFF and will support them in any action they take’.5 However, as the crisis intensified and consensus between the national and regional layers of the NFU started to strain, its tone began to shift; and this was to have an impact on the government’s crisis response. Four areas are particularly worthy of attention.

(1) There was the failure of the 24-hour cull policy. During February and March it was clear to regional NFU members and local veterinary officers that
MAFF’s initial policy of culling within 24 hours was not being implemented effectively because of a lack of resources. During talks with MAFF, the NFU President, Ben Gill was under considerable pressure from farms near ‘breaking point’ because of the ‘intolerable’ delay in slaughter and disposal. It appears, however, that MAFF was initially not prepared to take this seriously enough – feeling that Gill was exaggerating on the basis of a few cases. The issue was forced on 19 March when Jim Scudamore visited Cumbria in order to consult farmers on a proposed extension of the cull policy to include all premises in a 3km area around outbreaks. Regional opposition to the 24-hour policy had mounted, and therefore Nick Brown sent the chief vet to explain the scientific reasoning behind the additional policy. Nationally, Ben Gill supported the action despite being ‘distressed and unhappy’ about it. It was local veterinary officers and local farmers who convinced the chief vet that the priority was not the 3km cull policy, but getting the 24-hour policy implemented correctly. This led to a partial (and temporary) retraction of the 3km policy in relation to cattle and a public apology from the Secretary of State for ‘the ambiguity’ of his policy statement. Being all too honest, he said ‘We did not explain ourselves very well. I apologise on my behalf and on behalf of the ministry for any harm and distress. I take responsibility’ (Telegraph 17.3.01) The partial policy retraction was an embarrassment for the minister but it highlighted how the regional and national NFU collaborated and influenced MAFF’s crisis decision-making.

This was not the end of the matter. On 29 March, Gill met with the Prime Minister in an attempt to expose the full extent of the ministry’s failed 24-hour response. During the meeting, the NFU President told him that ‘farmers were at their wits end and they needed, desperately needed, the actions they had been promised to be delivered otherwise there would be a day of reckoning’ (Channel Four, Dispatches, 3,7,01). The Prime Minister was at this stage immersed in pre-election planning. With only two weeks to go to his proposed announcement of national polling day, his concern was avoidance of a countryside rebellion similar to the fuel protests. According to Gill, the Prime Minister was ‘angry, his frustration was clear; he thought things were going on and they weren’t. All the messages coming back up had been confused. There had been an attempt to wish things better’ (Dispatches, 3,7,01). This led the Prime Minister to give a robust commitment that the problem would be resolved and that resources would no longer be a problem. That day, the Prime Minister visited Cumbria and was met by angry protestors demonstrating over a lack of slaughter and disposal resources. Later, he repeated his resource commitment, proclaiming that it was necessary to ‘massively gear up’ to the challenge and that ‘absolutely nothing’ would stand in the way of this. The failure of MAFF to listen and react to the concerns raised chiefly by the NFU about the 24-hour cull policy led to Jim Scudamore’s removal from primary control of the epidemic and his replacement by Downing Screen officials.

(2) There was an internal NFU revolt against increased slaughter. The 3km policy prompted over a thousand members of its Carlisle branch to denounce the decision publicly; the National Sheep Association condemned the policy as ‘killing for killing’s sake’; one pressure group, Farmers For Action, declared ‘all-out-war’ on the government. From this point onwards, the NFU could not guarantee the full support of its membership for policy implementation or cooperation. Farmers across the country were threatening to barricade themselves
in their farms to prevent slaughtermen gaining access. In Cumbria, police patrols were increased and firearms were confiscated from farmers who had threatened ministry slaughtermen. An investigation into UK control measures by the Food and Veterinary Office of the European Commission stated that growing farmer resistance has enabled only 3% of contiguous property herds to be culled within 48 hours. This resistance would eventually contribute to the ‘Phoenix’ policy refinement.

(3) Following on from this, there was growing need to appease farmers who were being asked to assist implementation of a slaughter policy: one way of helping secure this was the delivery of a generous compensation policy. Thus, in a symbolic gesture that the government was sympathetic to the needs of farmers, it obtained £152m from the EU, although it was clear that an additional compensation package was needed to keep farmers ‘on board’ in relation to the eradication policy. As a result, the NFU became a pivotal force in the development of a livestock welfare scheme, and stories of allegedly generous payments became a regular feature in media reporting of the crisis. Compensation payments would subsequently become the subject of a National Audit Office investigation.

(4) There was the debate over vaccination. Initially, the NFU, MAFF and the government had spoken with one voice in being opposed to vaccination. During early April, however, Ben Gill was asked to come to an opinion on the use of ‘band’ vaccination in an attempt to dampen down Cumbrian FMD hotspots and potentially save over 100,000 livestock from slaughter. This put the NFU leadership in a compromising position; if it was seen as being insulated from the wants of its membership (mostly opposed to vaccination because of the stigma attached and the impact it would have on the disease-free status of meat exports), then it would lose its powerful position. Thus, in an effort to delay the vaccination decision, the NFU drafted 52 detailed questions about the impact of a vaccination strategy. It argued that the purpose of the questions was to ‘concentrate the thinking in government’ but as one member of the Select Committee on Agriculture noted, it managed to kick the vaccination issue into the tall grass for a period and delay a difficult decision. Downing Street was prepared to force the strategy, but the evidence suggests that Nick Brown did not agree with the policy and offered the NFU an option instead of an ultimatum. Once again, the NFU was to prove influential in shaping the crisis response; in this instance effectively blocking the government’s vaccination proposals.

Bureaucratic Politics and Fragmentation

Most crises require a focused, coherent response, although often there is a tendency towards paralysis through bureaucratic conflict and/or operational fragmentation. FMD is no exception to this rule; taking place in the context of an increasing disaggregated system of UK governance. This refers not only to the advent of arms-length agencies of the civil service, but also to the constitutional shifts brought about by devolution. When we add to this the ‘MAFF malaise’, then we find factors which significantly influenced the management of FMD – often for the worse.

The first matter to consider, therefore, is the MAFF issue. It was perhaps inevitable that New Labour, with its love for all things ‘joined up’, would conflict
with MAFF where a culture of departmentalism was entrenched. There was also its legacy of handling the BSE crisis.” The ministry’s stubborn reluctance to listen to non-Whitehall expertise, its resource weaknesses, its reliance on outdated information, its depart mentally-exclusive attitude – all were factors that led to the Phillips Report emphasising the benefits of seeking out and using expert external advice within government.

From the beginning, this legacy affected the crisis response. When the original outbreak was confirmed and MAFF undertook a tracing exercise, the Chief Veterinary Officer privately admitted that MAFF’s ‘paper and pencil’ tracing methodology was not working and that the strategy was foundering” (Dispatches, 3.7.01). It was taking too long, used huge amounts of resources and was time consuming. Worrying examples of MAFF’s stagnation were evident throughout the crisis. Much of the ministry’s contingency plans mirrored work before the 1967 epidemic. Indeed, the slaughter policy was justified in one press conference using a study from the 1950s, while countless farmers complained of MAFF officials using outdated techniques and resources. Local farmers in many regions expressed disbelief at MAFF officials trying to navigate unsuccessfully around the countryside using prewar maps. These outdated practices were a direct result of an insulated outlook that initially refused external expertise in epidemiological modelling as offered by numerous scientific centres of excellence, including the Imperial College in London and the University of Edinburgh. In particular, MAFF was reluctant to provide Imperial College with the data it required because the information was sensitive. It finally did so (after an intervention by Sir John Krebs of the Food Standards Agency), and the scientists responded by letter, explaining that the failure to slaughter in 24 hours was spreading the disease. At a subsequent meeting on 21 March, the scientists recommended a contiguous cull policy, slaughtering all premises within a 3km radius, and doing so within a 48-hour period MAFF officials were initially not impressed, arguing again that these figures were exaggerated and misrepresented the true picture. Reacting to this attitude, the Prime Minister’s Chief Scientific Advisor, David King, decided to impose himself on the situation and brief the Prime Minister on what had went on at the meeting. It seemed obvious that FMD was by no means under control and that a massive mobilisation of resources was still required. Thus, following the meeting, Jim Scudamore was removed from a primary role in policy formulation and told that the role of MAFF was now to assist the delivery of policy, not to make it. Authority for decision-making transferred to the Prime Minister’s Office, advised by a scientific team chaired by David King. This early episode of bureaucratic politics did have a positive effect on the overall effectiveness of the crisis response. Cross-departmental cooperation and an influx of scientific advice was established through the Cabinet Office. The first decision taken was to implement the contiguous cull policy, while decision-making was centralised with ultimate authority. Thus, departmentalism, defensive decision-making and secrecy were replaced by coordination and more transparent ‘joined-up’ decision making. The subsequent abolition of MAFF and its replacement by the Department for Environment, Food and Rural Affairs (DEFRA) represented a symbolic and practical reform, indicating that an outdated approach to crisis management would not be tolerated.

Another dimension to the crisis response was the sheer fragmentation caused by the multiplicity of actors involved. At a local level, local authorities were statutorily
required to respond alongside the police. Private contractors assisted the army in slaughter and disposal after the State Veterinary Service diagnosed the disease with the assistance of MAFF scientists at Pirbright laboratory. MAFF also had to provide trained slaughtermen and livestock valuers to determine compensation. The chief vet was in charge of the State Veterinary Service throughout the UK (except Northern Ireland) but devolved authorities provided the administrative support for vets in Scotland and Wales. The lack of veterinary officers and administrative staff also forced the government to recruit from EU states and external government departments, deepening the degree of fragmentation. Slaughter-housing and meat hygiene also fell under the remit of the Food Standards Agency. Crisis structures seemed to reflect this. MAFF had already established a comprehensive devolved emergency framework for dealing with Classical Swine Fever the previous year and this blueprint was relied upon for the FMD response. In a positive vein, this meant MAFF initially formulated policy and controlled decision-making centrally through the establishment of a Department Emergency Control Centre located within the National Disease Control Centre in London. Local Disease Control Centres were created in each locality following detection of the disease. According to the EU’s Food and Veterinary Office ‘the organisational response of the UK authorities to the outbreak of FMD has been efficient and effective at both central and local level. The speed with which central and local disease control centres have been established was impressive’. Alongside these encouraging words, however, we must also consider some of the negative consequences which ensued.

The first symptom of fragmentation is usually vertical and horizontal deterioration in communications across different agencies. With FMD there was clear evidence of fragmentation of action and purpose between central and local government. For example, the closure of footpaths is a local government responsibility; when the number of outbreaks grew, many local authorities understandably imposed large blanket bans on their use. The Environment Minister, Michael Meacher, however, was concerned that blanket bans were proving counterproductive to the ‘open for business’ message. In essence, local authorities were never informed of the overarching policy goals and this created a clear division between the purpose of the locality, focusing on eradication and control, and the centre, focusing on multiple policy objectives. Local authority Trading Standards Officers were also required to administer livestock movement. During April, MAFF attempted to introduce a new movement scheme that would ease welfare concerns among farmers. The scheme was to be introduced on 23 April and farmers were given advance notification, yet when the day came most local authorities had received no details from MAFF relating to the administration of the scheme. Ultimately, the delay slowed the movement of animals to abattoirs and caused distress amongst farmers who had expected to be able to move their livestock. Break-downs in communication were also evident between the regional MAFF centres and the centre’s local crisis units. Many farmers complained of being unable to contact crisis centres, and if they did get through, of being told by MAFF officials that they ‘were not in a position to advise’ on various policy areas. This lack of communication added to a feeling of isolation and uncertainty in the country. It led to scare stories and rural myths developing: thus affecting, the government’s ability to gain the support of farmers (and the public) for its various crisis initiatives.
Once Downing Street took charge, the quality of local operations was significantly improved by providing transparent, authoritative decision-making. The creation of the Cabinet Office Briefing Room and the Rural Taskforce reduced the confusion caused by the pursuit of multiple objectives. The conflicting bodies of information and the conflict apparent between the ‘open for business’ and the cull policies seemed to a substantial degree reconciled. This point is important because as the crisis developed, there was a clear division between the two key stakeholders, farmers and the tourist industry. Farmers wanted to minimise the numbers of people circulating in the countryside in order to prevent the disease from spreading; the tourist trade clearly did not, because it needed to promote an ‘open for business’ agenda. Improvement in central government decision-making also led to changes in the overall crisis structure. Twelve regional operations directors were appointed to assist implementation; the army involvement was significantly improved; additional resources were used to free up the State Veterinary Service: allowing it to focus on veterinary, not logistical, issues. The average disposal time in early March was around two to three days, but by the time the Downing Street initiatives took effect, the 24-hour cull deadline was met in 75% of cases. In addition, the new regional directors were able to coordinate disposal alongside the army. Each disposal site was tailored to suit that individual region and in some cases the type of disposal was changed to take account of local opinion. Areas where land has a high water content used pyres to avoid contamination, while local judgment was used to determine the safest disposal method. This represents an improvement on the 1967 epidemic when burying was indiscriminate. As resource levels increased, so did the quality of information gathering and dissemination: both factors contributed to the improved operational performance. At a central level, a Joint Coordination Centre was established to maintain an accurate picture of the operational progress in the field and to relay instructions from the daily Cabinet Office Briefing Room meetings to the regional Local Disease Control Centres and other functional branches. In summary, therefore, improved decision-making caused but did not eradicate levels of horizontal and vertical fragmentation.

No discussion of fragmentation can be considered without also mentioning the new devolution era. The FMD epidemic was the first major crisis that required a coordinated response from all the devolved institutions of the UK. All the institutions pragmatically followed the national policy direction set in London, but also (consistent with the strengths of devolution) they only showed willingness to implement programmes appropriate for their region. A regional slant on policy was achieved by devolved administrations amending implementation routes and by relaying regional considerations to the central policy forums in London. In this way, cull policies in Scotland and Northern Ireland proceeded efficiently and effectively. This efficiency created its own problems in Scotland because the culling in Cumbria, from where the disease spread northward, was running well behind schedule. Without consistent eradication, there was an increased chance of Scottish farms becoming reinfected. Jim Walker, the leader of the Scottish branch of the NFU, pressed hard for to make sure that Cumbria moved at required speed and felt it was ‘not good enough that one part of the country can make this thing work and other parts of the country can’t’.9

It is possible to argue that the involvement of the devolved authorities heralds a new era of national crisis reaction. On the one hand, it means a more fragmented
and less coherent response in term of the UK as a whole. On the other hand, devolution empowers regional voices, and so these new bodies will be held more accountable for the quality of their crisis policies than they might otherwise have been.

**The Politics of International Pressures**

Two major external influences also affected the FMD crisis decision-making processes. There was the impact of international tourism. Initially ignored by the government, it soon imposed itself on the agenda as the economic downturn, allied to increased stakeholder anger, became a serious issue to the Treasury and Downing Street. There was the EU, which regulates more agricultural policy matters than the UK government. Its reactions to wider trade bans also constituted a pervasive influence – legally and politically – on the crisis response. These two pressures reinforced the policy decisions to slaughter excessively and consciously manage public perceptions. They can be considered in turn.

Initially, the farming community obtained prioritised attention from MAFF and was the recipient of specialised policies such as compensation. It soon became apparent however that the tourism industry – far larger than the agricultural sector – was suffering without receiving the same level of public interest or policy consideration. For example, before the epidemic, it employed around 1.85 million people, while agriculture employed around 429,000. In total, 25.3 million overseas visitors came to Britain in 2000. Four million of these were North Americans, constituting Britain’s largest source of tourist revenue. In 2000, overseas visitors spent around £12.76 billion, an increase of 2% from 1999. The English Tourism Council estimated that spending by overseas visitors in the countryside amounted to £12 billion, in revenue and supported around 380,000 jobs. An underpinning factor of the crisis strategy, therefore, became the need to declare the UK countryside ‘open for business’. This was not an easy task, however.

By focusing exclusively on slaughter and control, the initial crisis response, failed to promote a wider perspective, compounding the poor international perception of the crisis. Around 80% of the country we not affected by outbreaks and only a small percentage of the national herd was being slaughtered. Coupled with this, in the early stages of the crisis the government had encouraged local authorities to impose blanket bans on footpaths and movement into the country. MAFF and Nick Brown appealed to people not to go near livestock farms and there was a clear focus on the application of movement restrictions throughout the country. Whilst this seems an eminently sensible policy one level, it has the potential for disaster on the international stage Most developed countries imposed import bans on many UK product and there was clear evidence of international misconceptions, paranoia and ignorance about the nature of FMD. It was late March before the government realised that it needed to act to correct these misconceptions, The US Department of Agriculture and its declaration of ‘war’ on foot and-mouth did not help these misconceptions, offering a list of detailed precautions that should be taken by all Northern Americans visiting the UK. The Blair administration clearly had a battle on its hands. Figure compiled by the British Tourist Authority showed that overseas visitor in March 2000 were down by 30% from the 1.8 million recorded the previous year (Financial Times, 29.3.01).
During April there was a decline of around 20–25% in England and a larger decline in Wales. The English Tourism Council stated that around a fifth of bookings were being lost and advance bookings were down by a third. The Financial Times estimated that the tourist trade in Scotland was losing around £10m a week, and the Wales Tourist Board stated that enquiry and booking levels were down 25% on the normal level. The Centre for Economics and Business Research indicated in March that the overall cost for tourism could reach £8 billion, £2.7 billion from domestic visitors and £4.2 billion from overseas.

Once the ‘perception problem’ was recognised, Downing Street was in a paradoxical position. A charm offensive was launched, designed to counteract the negative images and show that Britain was ‘open for business’; but in many areas farmers and officials, trying to control the disease, did not welcome this kind of message. In many areas, Britain was certainly closed, regardless of the message being broadcast internationally. Thus, there was a clear conflict between the government’s public relations messages of ‘we are open for business’ and ‘we are in control’ on the one hand, and the operational reality of the epidemic on the other. The conflict between responses was most evident in the Prime Minister’s decision to delay the general election. On one level, the first postwar cancellation of elections clearly sent out a message that the UK was embroiled in a crisis, and this affected tourist perceptions of the UK. Indeed, on the day before the cancellation, Chris Smith, the Secretary of State for Culture, Media and Sport, told the media that an election delay would make him ‘extremely worried because of the signal that would be sent out’ which would highlight Britain as ‘an abnormal place’. As one newspaper leader commented ‘We cannot blame the US television networks if they now tell Americans – including would-have-been tourists – that Britain is off limits’ (Guardian, 3.4.01). On another level, however, postponement of the election allowed the Prime Minister to focus primarily on eradication and control. This conflict of priorities between tourism and agriculture was inherent throughout the crisis and was yet another factor that affected the legitimacy of the crisis response. There is a real stakeholder conflict between trying to save a small part of the farming industry from the disease through excessive slaughter on the one hand, and saving the substantially larger tourism trade by not slaughtering and preventing the continuation of prejudices or misconceptions on the other.

The second major international factor bearing down on the UK Government was the EU. Since 1991, the EU had maintained disease-free status without the use of vaccination. Compulsory general vaccination of livestock ceased in 1992 under Directive 90/423/EEC, and was accompanied by a new ‘policy of total slaughter and destruction’. This meant that EU law advocated a clear policy of killing infected herds and initiating strict control procedures, as opposed to vaccination. It may be unfair to argue that the EU applied direct external pressure on the government during the FMD crisis to slaughter unnecessarily. It is perhaps more accurate to argue that the majority of the member states, and the European Commission in particular, endorsed the need to slaughter intensively. More subtly, therefore, pressure applied by the Commission manifested itself in three ways. At a local level, it was applied to increase the level and intensity of additional slaughter policies. At a political level, it opposed general vaccination and steadfastly defended the UK government’s slaughter policy. In relation to emergency vaccination, it applied subtle political pressure in an attempt to stop the
application of any form of emergency vaccination. In essence, therefore, EU law and the policy line coming from the European Commission provided justification for the UK’s intensive slaughter policy.

It is worth noting that in a typical display of interinstitutional politics at the EU level, the European Parliament was less than convinced of the wisdom of this approach. On 5 April, it passed a resolution by a crushing majority (415 votes to 19 with 27 abstentions), asking the Commission for an immediate review of the basic non-vaccination policy and for exploration of alternative solutions to disease control. The resolution asked the Commission to allow ‘ring vaccination’ in certain regions and also to allow temporary ‘buffer’ vaccination to protect other member states from the disease, as well as consider vaccination, which ‘does not necessarily have to lead to culling healthy animals’.

Prior to the European Parliament’s resolution, Downing Street has reacted sympathetically to the possibility of vaccination and had asked the Commission to examine the circumstances under which vaccination might take place – given that Directive 90/423/EEC does permit the use of emergency vaccination in certain defined circumstances. In 1999, the EU’s Scientific Committee on Animal Health and Animal provided a list of ten criteria that should be met before a member state embarks on emergency vaccination. Adherence to these criteria should have led to a decision to vaccinate within the UK. This meant that the Standing Veterinary Committee and the Commission could not object – legally or technically – to the use of emergency vaccination. Commission Decision 2001/257/EEC subsequently permitted the application of emergency vaccination in the UK, within certain restrictive conditions. However, this U-turn (or at least its possibility) met with considerable political opposition (particularly from the NFU) because it could send out the message that FMD was now endemic in the EU. The UK government was therefore under considerable political pressure to intensify ‘stamping out’ policies instead of emergency vaccination because the international markets had not been reassured by the crisis response. Representatives from the European Commission’s Food and Veterinary Office applied this pressure during two separate evaluation missions to the UK. In the second of these, in late April after the cull polices had been intensified, it praised MAFF for increasing the effectiveness of the campaign through pre-emptive and contiguous cull programmes. It was critical, however, of the ‘inconsistent application’ of the contiguous cull policy between regions, caused largely by increased stakeholder resistance. The report concluded that the relaxation and inconsistent application of slaughter indicated that the disease was not fully under control. If anything, therefore, the role of the European Commission as a key crisis overseer, assisted government policy in a manner which intensified the slaughter of livestock.

On an international level, one may also note the export ban which was imposed on the UK in February 2001 at the start of the crisis. It was constantly reviewed and extended by the EU’s Standing Veterinary Committee because the government had been unable to stop outbreaks occurring over a sustained period. Although actual trade between member states is not substantial in sheep or cattle (or associated meats), the ban represented a symbolic external pressure. It was a sign that FMD was with us regardless of what the UK government stated, and it was a rallying point for interest groups like the NFU.
Conclusion

Cumulatively, the four internal and external pressures affected the crisis management of the epidemic and resulted in intensifying the slaughter policies. The government’s supersensitivity to public opinion in a general election year, forced it to show the electorate that the Blair administration could resolve a crisis. This resulted in a clear pressure to eradicate the disease as quickly as possible, as well as show that this was happening, through official figures and manipulation of the political agenda. The NFU was also influential in shaping the crisis response. It endorsed the slaughter policies and argued against the use of vaccination. Even when the government made moves towards supplementing slaughter by vaccination, the national NFU used its position to effectively block this. A further influence on the crisis response was the weakness of MAFF. This manifested itself in an early failure to curb the disease, leading to the installation of further culling policies once the ministry was removed from its centralised decision-making role. The final influences were international ones. International perceptions and misconceptions of FMD provided another rationale to increase the rate of slaughter once a general vaccination strategy had been rejected. The need to declare the country ‘open for business’ required portrayal of a disease-free (and pyre-free) environment to the outside world. By contrast, the initial priorities of eradication and control at the expense of the tourist trade, added internationally to poor perceptions of Britain. Once recognised, the government started to prioritise an ‘open for business’ stance. This may have been a significant factor in the failure to eradicate the disease fully, because the chance of continued transmission was heightened by opening up the countryside. Finally, in terms of the EU, while its institutions were divided over the epidemic, the European Commission was not: it effectively provided legal, political and operational support for an over-kill situation.

Can lessons be learned from the politics of managing FMD? The answer depends to a substantial degree on the ability to learn from hindsight. One potential barrier to this is the government’s steadfast refusal to allow a public enquiry into the epidemic – arguing that it would be too costly, unlikely to yield anything new, and could discourage witnesses from speaking openly. Instead, it has established three separate inquiries. An investigation by the Royal Society focused on the scientific questions relating to the transmission, prevention and control of FMD (and other similar epidemics). The Lessons Learned Inquiry, chaired by Dr lain Anderson, focused on how future outbreaks might be best handled. Finally, the Policy Commission on the Future of Farming and Food examined the longer-term sustainability of the farming and food sectors. In addition, there have been a number of more localised inquiries established – notably by the Devon, Cumbria and Northumberland County Councils, and the Royal Society of Edinburgh.

Whatever the longer-term outcomes, there is a major lesson in all this for students of British government. We should not be surprised if crises caused by scientific problems are dealt with by government in a highly political (as opposed to ‘scientific’) way. Recent history is replete with crises – such as BSE, the MMR vaccine, aids, salmonella in eggs – where the government response has been strongly shaped by a series of political factors. Even on non-crisis matters, government policy is shaped by political factors such as public opinion, powerful interest groups and the competence of ministries and ministers. It would be
mistake to think that these factors suddenly are no longer of importance because we are in a ‘crisis’ situation. Indeed, in times of crisis, political conflict often intensifies because the political, economic and social stakes get higher. In terms of FMD, what was at stake was public confidence in the government in the run-up to the general election. In a world of adversary politics, the stakes do not come much higher than this. Closely behind, was the future of the farming and tourist industries. Ultimately, therefore, the highly politicised response to FMD was ‘successful’ in the sense that it enabled the Blair government to secure a second term in office and eventually eradicate the disease from Britain – though at the cost of a massive overkill of healthy livestock, the loss of billions of pounds in tourism revenue, the postponement of a general election and the decline of a long-established ministry.

Notes

3. HC 363−iii The Select Committee on Agriculture, Minutes of Evidence, 23.4.01, col. 421.
5. NFU, Press Release, 23.2.01.
15. Quarterly Business Forecast, Centre for Economics and Business Research, 22.3.01.
16. ‘007 helps the UK tourism offensive’ at http://europe.cnn.com. 1.4.01.
High reliability organizations (HROs) are harbingers of adaptive organizational forms for an increasingly complex environment. It is this possibility that warrants an effort to move HROs more centrally into the mainstream of organizational theory and remedy the puzzling state of affairs identified by Scott in the epigraph. Stated summarily, HROs warrant closer attention because they embody processes of mindfulness that suppress tendencies toward inertia. The fact that HROs are seldom portrayed this way or used more widely as templates for organizational design is due partly to their seeming exoticness and partly to uncertainty about how they might generalize to organizations that operate under less trying conditions. We will argue that HROs are important because they provide a window on a distinctive set of processes that foster effectiveness under trying conditions.

The processes found in the best HROs provide the cognitive infrastructure that enables simultaneous adaptive learning and reliable performance. A focus on these processes represents a theoretical enrichment of previous discussions on the origin and context of organizational accidents (e.g., Perrow, 1984) which have been framed in a largely macro-level, technology-driven structural perspective. The enrichment arises from the fact that, by explicating a set of cognitive processes that continuously reaccomplish reliability, we supply a mechanism by which reliable structures are enacted. This mechanism is often underdeveloped in non-HROs where people tend to focus on success rather than failure and efficiency rather than reliability. We suspect that failures in process improvement programs built around reliability (e.g., Total Quality Management) often occur because the cognitive infrastructure is underdeveloped.

We will construct the argument that processes as well as consequences distinguish HROs in the following manner. First, we sample the existing literature on HROs to establish the eclectic nature of the data base, the limited range of concepts imposed so far on these data, and the reasons why this literature has not had more impact on mainstream organizational theory. Given this background, we then take a closer look at bridges between HROs and traditional organizational theory afforded by the concepts of reliability and mindfulness. We then move to the heart of the analysis and argue that organizing for high reliability in the more effective HROs, is characterized by a preoccupation with failure, reluctance to simplify interpretations, sensitivity to operations, commitment to resilience, and underspecified structuring. These processes reduce the inertial blind spots that allow failures to cumulate and produce catastrophic outcomes. The analysis concludes with a discussion of the implications for organization theory and practice.
Challenges of Crisis Management

Conceptual Background

The Concept of High Reliability

When people refer to HROs they usually have in mind organizations such as nuclear power-generation plants (e.g., Marcus, 1995; Bourrier, 1996), naval aircraft carriers (e.g., Rochlin, LaPorte, & Roberts, 1987), air traffic control systems (e.g., LaPorte, 1988), and space shuttles (Vaughan, 1996), to list some examples. When we describe processes used in effective HROs, we have in mind cognitive processes found in better nuclear power plants, nuclear aircraft carriers, and the air traffic control system. These three settings constitute our “default” referent when specific studies are not available to illustrate the precise contrast we are making between effective and ineffective practice. Diverse as HROs may seem, we lump them together because they all operate in an unforgiving social and political environment, an environment rich with the potential for error, where the scale of consequences precludes learning through experimentation, and where to avoid failures in the face of shifting sources of vulnerability, complex processes are used to manage complex technology (Rochlin, 1993). There is considerable variation among high hazard organizations in these qualities as is evident in the fact that many of them are known by their failures to remain reliable (e.g., Bhopal, Chernobyl, Exxon Valdez). However, we intend to focus on commonalities in the better ones rather than variation to highlight a distinctive perspective on reliability that these organizations share in theory, if not always in practice.

The literature on HROs that behave “under very trying conditions” (LaPorte and Rochlin, 1994, p. 221), thus the data base available to us for analysis, consists of an eclectic mix of case studies involving effective action (e.g., Diablo Canyon in Schulman, 1993b), limited failure (e.g., Hinsdale telephone switching center fire in Pauchant, Thierry, Mitroff, Weldon, & Ventolo, 1991), near catastrophes (e.g., Three Mile Island cited by LaPorte, 1982), catastrophic failures (e.g., Tenerife disaster in Weick, 1990b), and successes that should have been failures (e.g., nuclear weapons management in Sagan, 1993). Existing analyses of these cases tend to emphasize structure and technology rather than process; activities involving anticipation and avoidance rather than activities involving resilience and containment; more focus on interorganizational macro levels of analysis than on micro group levels of analysis; more concern with fatalities than with lasting damage in other domains such as reputation, legitimacy, and survival of the social entity; and more implied comparisons with traditional trial and error organizations than with other high reliability organizations where the first error is the last trial.

At least two streams of work have addressed organizing around high hazard technologies within organizations – Normal Accidents Theory (NAT) and High Reliability Theory (HRT). NAT is based on Perrow’s (1984) attempt to translate his understanding of the disaster at Three Mile Island (TMI) into a more general formulation. What stood out about TMI was that its technology was tightly coupled due to time-dependent processes, invariant sequences, and limited slack. The events that spread through this technology were invisible concatenations that were impossible to anticipate and that cascaded in an interactively complex manner. Perrow hypothesized that any system in which elements were tightly coupled and interactively complex would have accidents in the normal course of
operations precisely because of this combination of lack of control and inability to comprehend what was happening. These systems include aircraft, chemical plants, and nuclear power plants. He argued that a change in either dimension – from tight to loose coupling, or from an interactively complex to linear transformation system – would reduce the incidence of catastrophic error.

HRT also considers high-risk technologies but focuses on a subset of high-risk organizations, high reliability organizations, that take a variety of extraordinary steps in pursuit of error-free performance (e.g., Weick, 1987; Roberts, 1990; Rochlin, 1993; Schulman, 1993a, 1993b; LaPorte, 1994). Some of the necessary but not sufficient conditions that HRT emphasizes are a strategic prioritization of safety, careful attention to design and procedures, a limited degree of trial-and-error learning, redundancy, decentralized decision-making, continuous training often through simulation, and strong cultures that create a broad vigilance for and responsiveness to potential accidents (LaPorte & Consolini, 1991; LaPorte, 1994).

Because HRT is relatively new, some of the basic assumptions included in this body of work continue to evolve. Early characterizations of HROs emphasized the total elimination of error and the absence of trial-and-error learning (Weick, 1987) while later characterizations appear to allow for the inevitability of errors and the importance of a limited degree of trial-and-error learning based on those errors (LaPorte & Consolini, 1991). Early high reliability theory stressed the closed system nature of high reliability organizations (Weick, 1987; Weick & Roberts, 1993) by suggesting that these organizations tend to be more buffered from environmental influences and work actively to develop and maintain those buffers (LaPorte & Consolini, 1991). Later versions of high reliability theory (Rochlin, 1993; LaPorte & Rochlin, 1994) recognize the active influence of exogenous influences like regulations and public perception. Similarly, earlier versions of high reliability theory appear to stress the singular focus of HROs on safety where more recent work recognizes how HROs actively pursue multiple objectives (e.g., safety AND service) (Rochlin, 1993; LaPorte & Rochlin, 1994).

Each stream of work has registered serious concerns about fundamental premises contained in the other’s theorizing. Normal accident theorists (principally Perrow and Sagan) criticize high reliability theorists’ for neglecting complex environmental influences that compromise the alleged single-minded pursuit of safe operations. They point to the complex political and social forces that often corrupt the capacity to honestly report and learn from shortcomings. Specifically, ambiguous cause and effect relationships and politically motivated cover-ups of accidents compromise trial and error learning (Sagan, 1994). Moreover, they argue that competing interests seldom align behind safety. Rijpma (1997) has argued that NAT theorists believe that reliability-enhancing strategies actually increase the likelihood of normal accidents. Thus, redundancy can make the system more complex by making it more opaque, centralized decision premises can induce blind spots, conceptual slack can “shatter” a common perspective and spread confusion, and learning may anticipate complexity but fail to stop it from escalating.

Conversely, high reliability theorists have criticized normal accident theorists for their disregard of the conditions under which a tightly coupled interactively complex system will not fail. Assertions such as, “no matter how hard we might try, the characteristics of complexly interactive and tightly coupled systems will cause a major failure, eventually” (Perrow, 1994a, p. 216) raise the question, how long does a system need to avoid disaster for that avoidance to count as evidence against
the hypothesis of vulnerability to normal accidents. Also, most organizations are not frozen into one of the four combinations that are possible in Perrow’s 2 x 2 of loose/tight coupling and linear/complex interaction. Instead, whole organizations change character in response to changed demands, some portions of any organization fit all four combinations, and all organizations, because of interconnected technologies and interconnected resource demands, are moving toward an interactively complex tightly coupled state (Weick, 1990a, pp. 29–34). Rijpma (1997) also weighs in with the suggestion that interactive complexity and tight coupling may actually increase overall reliability. Complexity and tight coupling motivate designers to create more redundancy in a system, inspire operators to customize centralized decision premises, favor the development of multiple theories of system functioning, and encourage learning and discourage complacency.

If we return to Scott’s question of why HROs are not linked to the mainstream, one answer is that there is insufficient coherence to generalize. Perrin (1995, p. 157) draws a similar conclusion and cites the Royal Society’s observation that the research map on the topic of organizational risk looks “a bit like the population map of Australia, with almost everything clustered round the edges and hardly anything in the central conceptual areas.” Other plausible answers to Scott’s question are that the existing work is more descriptive than theoretical; the literature itself is treated more as if it is about accidents than about organizations; the meaning of the idea of reliability is treated as obvious; simplistic binary distinctions contrast HROs with all other organizations; and there is limited development of Scott’s themes of effectiveness (see Creed, Stout, and Roberts, 1993 for an exception) and learning (see Turner & Pidgeon, 1997, pp. 191–195 for an exception).

Our review of the HRO literature suggests that there is an additional reason that a more robust connection has not been made, namely, key HRO processes have remained unarticulated. Processes in HROs are distinctive, though not unique, because they focus on failure rather than success, inertia as well as change, tactics rather than strategy, the present moment rather than the future, and resilience as well as anticipation. We will argue later that HROs strive for reliability through processes of cognition as much as processes of production. As a result tendencies toward inertia are suppressed. It is mindlessness coupled with thoughtlessness action that makes it difficult to cope with a continuous open-ended stream of surprises and non-routine events. HRO processes that counteract inertia are potentially important because most theorists who discuss organizational learning and adaptation overlook them. We elaborate these ideas below.

The Concept of Reliability

While the phrase “high reliability” has been annexed by some theorists to convey the idea that high risk and high effectiveness can coexist, these same theorists have been somewhat circumspect in their attention to just what they mean by reliability, where it is localized, and how it is accomplished. This oversight is not trivial since reliability itself has been seen as an important competency made possible by organization. Commonly defined as the “unusual capacity to produce collective outcomes of a certain minimum quality repeatedly” (Hannan & Freeman, 1984, p. 153), reliability depends on the “lack of unwanted, unanticipated, and
unexplainable variance in performance” (Hollnagel, 1993, p. 51). Organizational reliability is thought to be achieved through the development of highly standardized routines (Hannan and Freeman, 1984, p. 154). In fact, the notion of repeatability or reproducibility of actions or patterns of activity is fundamental to traditional definitions of reliability. And, over time, routines and reliability have become synonymous with one another and also have become linked as an antecedent of inertial tendencies that are presumed to reduce adaptive capabilities (Hannan & Freeman, 1984). Unfortunately, this taken-for-granted definition (grounded in an engineering perspective), while useful for theorizing on more macro levels (e.g., population level), is misleading and restrictive at a more micro level.

The singular focus on repeatability as the primary defining quality of reliability in traditional definitions, fails to deal with the reality that reliable systems often must perform the same way even though their working conditions fluctuate and are not always known in advance. For a system to remain reliable, it must somehow handle unforeseen situations in ways that forestall unintended consequences. This is where previous definitions of reliability are misleading. They equate reliability with a lack of variance in performance. The problem is, unvarying procedures can’t handle what they didn’t anticipate. The idea that routines are the source of reliability conflates variation and stability and makes it more difficult to understand the mechanism of reliable performance under trying conditions.

What seems to happen in HROs is that there is variation in activity, but there is stability in the cognitive processes that make sense of this activity. This pattern is found in Schulman’s (1993b: 369) analysis of Diablo Canyon: “The proposition that emerges from analyzing Diablo Canyon is that reliability is not the outcome of organizational invariance, but, quite the contrary, results from a continuous management of fluctuations both in job performance and in overall department interaction” (emphasis in original). To see how this works, consider Woods’ (1988, p. 132) description of cognition in complex systems cited in Perrin (1995, p. 156). “[To be] opportunistic and flexible in order to detect and to adapt to events which require revision of situation assessment and plans...problem solvers need to revise their understanding of the situation, their evidence collection and evaluation tactics, or their response strategy when new events are detected and evaluated. Failures to revise in any of these ways produce what are seen as fixation failures.” By separating the variation and stability folded into routines and assigning the variation to routines and the stability to processes of cognition, we stop treating stable patterns of activity as the source of reliable outcomes. Instead, reliable outcomes now become the result of stable processes of cognition directed at varying processes of production that uncover and correct unintended consequences.

Unexpected events require revisions of assessments, plans, and tactics but this revision is possible only because processes of “understanding,” “evidence collection,” “detection,” “evaluation,” and “revising” themselves remain stable in the face of new events. These stable cognitive processes do the “detecting,” the variable patterns of activity do the “adapting to events which require revision.” The contrasting case is organizations that focus on efficiency. Efficient organizations often enact the opposite split, namely, stable activity patterns and variable cognitive processes (Starbuck, Greve, & Hedberg, 1978, pp. 114–119). For example, Hynes and Prasad (1997) show that prior to the Westray mine explosion on May 9, 1992, which killed 26 miners, production routines kept “rolling” while monitoring of methane
buildups, spilled fuel, and enforcement of limestone dusting to neutralize coal dust, were done only sporadically. Efficient organizations often experience errors when they do the same things in the face of changing events, these changes going undetected because people are rushed, distracted, careless, or ignorant. Variable cognition falls to detect faults in machinery, substandard materials, or declining compliance, and these oversights lead to unintended consequences. Thus, to understand how organizations organize for high reliability, we need to specify what is done repeatedly – in our case this is cognitive processes – and what varies – in our case this is routinized activity manifest in performance.

Our point is simply that each time a routine is re-enacted, it unfolds in a slightly different way, a point also made by March and Olsen (1989, p. 38), Feldman (1989, p. 130), and Nelson and Winter (1982). In an unknowable, unpredictable world, ongoing mutual re-adjustment is a constant, and it is this adaptive activity that generates potential information about capability, vulnerability, and the environment (e.g., Landau & Chisholm, 1995, p. 70). That information is lost unless there is continuous mindful awareness of these variations. By this line of argument, unreliable outcomes occur when cognitive processes vary (e.g., are not stable) and no longer stay focused on failures, simplifications, recoveries, situations, and structuring, or when patterns of activity fail to vary and unexpected events are normalized (Vaughan, 1996). This conceptualization of reliability is more grounded in adaptive human cognition and action (Hollnagel, 1993) than is the engineering definition that equates reliable outcomes with repetitive cognition and action. Furthermore, our conceptualization highlights reliability as an overall goal of the system and whether the system, in the global sense, works appropriately; not only individual components or sub systems. This distinguishes it from definitions that focus on the repeatability or reproducibility of single observable actions.

To grasp the distinctiveness of HROs, one needs to look more closely at the ways in which diverse but stable cognitive processes interrelate in the service of the discovery and correction of errors. There has been ample recognition in the literature that diverse cognitive processes are associated with high reliability organizations. Westrum (1992, 1997), for example, alludes to a “generative” organization in which information is actively sought, failures cause inquiry, and new ideas are welcomed, a pattern which he refers to as a “license to think” (1992, p. 405), acting with “utter probity” (1992, p. 402), and a “protective envelope of human thought” (1997, p. 237). Evocative as those images are, their mechanisms remain largely unelaborated. The same holds for Klimoski and Mohammed’s (1994) thoughtful survey of team cognition, Thordsen and Klein’s (1989) discussion of team mind, and Hutchins’ (1990) use of connectionism to interpret crew interaction in ship navigation.

While there has been some recognition that cognitive processes are important in high reliability functioning, what has been missing from these accounts is a clear specification of ways in which these diverse processes interrelate to produce effective error detection. When people in HROs focus on failures, tendencies to simplify, current operations, capabilities for resilience, and temptations to over-structure the system, these concerns cover a broader range of unexpected events. As shown in Figure 1, these separate concerns are tied together by their joint
capability to induce a rich awareness of discriminatory detail and a capacity for action. We label this capability mindfulness, following Langer (1989, 1997). It is this enriched awareness, induced by the distinctive concerns of HROs with potentials for catastrophe, that facilitates the construction, discovery, and correction of unexpected events capable of escalation (Rochlin, 1989, pp. 164–165). In Langer’s model, the rich awareness associated with a mindful state is expressed at the individual level in at least three ways: active differentiation and refinement of existing categories and distinctions (Langer, 1989, p. 138); creation of new discontinuous categories out of the continuous streams of events that flow through activities (Langer, 1989, p. 157); and a more nuanced appreciation of context and of alternative ways to deal with it (Langer, 1989, p. 159). In our extension of this model to the group level, we assume that awareness is expressed in at least these same three ways as byproducts of the five cognitive processes we discuss later.

To grasp the role of collective mindfulness in HROs, it is important to recognize that awareness is more than simply an issue of “the way in which scarce attention is allocated” (March, 1994, p. 10). Mindfulness is as much about the quality of attention as it is about the conservation of attention. It is as much about what people do with what they notice as it is about the activity of noticing itself. Mindfulness involves interpretive work directed at weak signals (Vaughan, 1986, chap. 4), differentiation of received wisdom, and reframing, all of which can enlarge what is known about what was noticed. It is the enlarged set of possibilities that suggests unexpected deviation that needs to be corrected and new sources of ignorance that become new imperatives for noticing.

Mindfulness in HROs is distinctive because it is closely related to the repertoire of action capabilities (Westrum, 1988, p. 8). The close relationship between mindfulness and the action repertoire in HROs is a key to their effectiveness. The central idea is found in Westrum’s (1988) discussion of “the ecology of thought.” Westrum argues that organizations that are willing to act on specific hazards are also organizations that are willing to see those hazards and think about them. Thus, when people bring new variables under their control and enlarge their ability to act on them, they also enlarge the range of issues they can notice in a mindful manner. Conversely, if people are blocked from acting on hazards, it is not long before their “useless” observations of those hazards are also ignored or denied, and errors cumulate unnoticed. Thus, the richness of a state of mindfulness is determined by the richness of the action repertoire. The richness of that action repertoire, in turn, is determined partly by the extent to which the cognitive
Processes are stable and continue to develop and partly by the extent to which the repertoire of variable routines that uncover and manage unexpected events continues to expand. HROs that are less effective (e.g., Osborn & Jackson, 1988) have a more limited range of action repertoires, use fewer of the cognitive processes associated with effective failure-avoidance, and update and enlarge their action repertoires less often.

When fewer cognitive processes are activated less often, the resulting state is one of mindlessness characterized by reliance on past categories, acting on “automatic pilot,” and fixation on a single perspective without awareness that things could be otherwise. As we move away from the better HROs and their pre-occupation with failure, we find more organizations that are preoccupied with success. While people can be mindful about success, the irony is that this pre-occupation tends to encourage simplification and exploitation of existing performance routines, adherence to institutionalized categories, and compliance with inherited job descriptions, all of which represent acts that are largely mindless (Miller, 1993). If artifacts of mindlessness dominate, mindfulness occurs less frequently which means that small errors with potentially large consequences go undetected. This state of affairs is what HROs try to forestall.

To say that an organization is drifting toward mindlessness is simply another way of saying that the organization is drifting toward inertia without consideration that things could be different. Whether the condition is labeled inertia or mindlessness, the important point for organizational theory is that HROs actively strive to suppress it, which means they are important sources of insight about the conditions under which inertia is not indigenous to organization. Thus, HROs with their ongoing mindful renegotiation of routines, provide valuable information about ways in which organizations in general might forestall their own drift toward inertia by more effectively managing surprises that challenge adaptability.

**Processes of Mindful Organizing**

Our examination of the literature on HROs suggests that the combination of stable cognitive processes and variations in action patterns enables the more successful HROs to manage unexpected events effectively. These outcomes appear to be mediated by a way of being that is fostered by an apparent ongoing focus on failure, simplification, current operations, resilience, and underspecified structures, a way of being that we refer to as mindfulness. Mindfulness is less about decision making, a traditional focus of organizational theory and accident prevention, and more about inquiry and interpretation grounded in capabilities for action. Furthermore, mindfulness in HROs is not activated solely by novelty, but rather is a persistent mindset that admits the possibility that any “familiar” event is known imperfectly and is capable of novelty. This ongoing wariness is expressed in active, continuous revisiting and revision of assumptions, rather than in hesitant action.

A state of mindfulness appears to be created by at least five processes that we have induced from accounts of effective practice in HROs and from accident investigations:

1. Preoccupation with failure
2. Reluctance to simplify interpretations
3. Sensitivity to operations  
4. Commitment to resilience  
5. Underspecification of structures  

Preoccupation with Failure  

A chronic worry in HROs is that analytic error is embedded in ongoing activities and that unexpected failure modes and limitations of foresight may amplify those analytic errors. In their study of a nuclear submarine, Bierly and Spender (1995, p. 644) found “collective bonds among suspicious individuals,” LaPorte in his study of air traffic systems (1996, p. 65) observed “prideful wariness,” while Rochlin (1993, p. 14) describes “suspicion of quiet periods.” Schulman in his study of Diablo Canyon (1993b, p. 364) describes the chronic worries this way: there is “widespread recognition that all of the potential failure modes into which the highly complex technical systems could resolve themselves have yet to be experienced. Nor have they been exhaustively deduced. In this respect the technology is still capable of surprises. In the face of this potential for surprise, there is a fundamental reluctance among higher management to put decision or action frameworks in place that are not sensitive to the possibilities of analytic error.”  

Worries about failure are what give HROs much of their distinctive quality. The distinctiveness arises from the simple fact that failures are a rare occurrence. This means that HROs are preoccupied with something they seldom see. Their ways of working around this shortfall and the cues they use as substitutes for failure, suggest modes of organizational learning that go beyond the simple duality of explore versus exploit (March, 1996). If we view failure as an important precondition for learning (e.g., Sitkin, 1992), then safe HROs should find it tough to learn since they have so few data points of failure. To be preoccupied with failure, therefore, is to make do with these less than ideal learning conditions and convert them into grounds for improvement. Effective HROs do this in at least three ways: by treating any and all failures as windows on the health of the system, by a thorough analysis of near failures, and by focusing on the liabilities of success.  

If serious failures are rare, one means to get more data points for learning is to broaden the number and variety of failures that are given close attention. Effective HROs both encourage the reporting of errors (Tamuz, 1994) and make the most of any failure that is reported. They remedy a paucity of data with richer analysis of the data they do gather (Bierly and Spender, 1995, p. 644). Schulman (1993a, p. 34) argued that the more effective nuclear power plants use reliability as a proxy for organizational health. We interpret this to mean that any failure, regardless of its location, is treated as a window on the reliability of the system as a whole. One lapse could be a weak signal that other portions of the system are vulnerable. While most organizations tend to localize failure, effective HROs tend to generalize it. Carroll (1997) made a similar point when he observed that many nuclear power plants attend to small incidents in the belief that the accumulation of such incidents increases the probability of a major problem. They act as if there is no such thing as a localized failure and suspect, instead, that causal chains that produced the failure are long and wind deep inside the system.  

One byproduct of this increased attentiveness to all failures is that in contrast to their inconsequential role in traditional organizations, maintenance departments
in HROs become central locations for organizational learning (Kmetz, 1984; Marcus, Nichols, & McAvoy, 1993, p. 352; Bourrier, 1996). Maintenance people come into contact with the largest numbers of failures, at earlier stages of development, and have an ongoing sense of vulnerabilities in the technology, sloppiness in the operations, gaps in the procedures, and sequences by which one error triggers another. These observations enlarge the database for learning and are given detailed attention.

To increase the data points available for learning, effective HROs also encourage and reward the reporting of errors. Rochlin (1993, p. 27) argues that HROs are unique because they “self-organize to encourage and reward the self-reporting of errors...on the explicit recognition that the value to the organization of remaining fully informed and aware of the potentiality for the modality of error far outweighs whatever internal or external satisfaction that might be gained from identifying and punishing an individual and/or manufacturing a scapegoat to deflect internal or external criticism.” Westrum (1992, pp. 405–406) emphasized the important lesson conveyed when Wernher Von Braun sent a bottle of champagne to an engineer who, when a Redstone missile went out of control, reported that he may have caused a short-circuit during pre-launch testing. Checking revealed that this had caused the accident, which meant that an expensive redesign was avoided. As Westrum (1988, p. 14) observed, “Note here that the engineer took two risks: he was not sure what had caused the problem so he was advancing a guess; and if he had, he could face sanctions. In most organizations, such an admission would have received a very different response.” Landau and Chisholm (1995, p. 77) describe a seaman on the nuclear carrier Carl Vinson who loses a tool on the deck, reports it, all aircraft aloft are redirected to land bases until the tool is found, and the seaman is commended for his actions the next day at a formal deck ceremony. Edmondson (1996) found, contrary to her hypotheses, that the highest performing nursing units led by skilled and supportive managers, had higher detected error rates for adverse drug events than did units that were lower on these dimensions. She interprets these results to mean, not that more errors were made in the high performing units, but that a climate of openness had been created that made people more willing to report and discuss errors and to work toward correcting them. Supplementary analysis and observational data were found to be consistent with this interpretation. The general point is that, one means to learn even though trial and error is limited, is by broadening the set of errors that are available from which to learn and by instituting practices that encourage people to report all of those errors that are detected.

To broaden the variety of data points available for learning close attention is paid to analyzing near misses. Using as an example a near collision in aviation, the issue in a near miss is that “Every time a pilot avoids a collision, the event provides evidence both for the threat and for its irrelevance. It is not clear whether the learning should emphasize how close the organization came to disaster, thus the reality of danger in the guise of safety, or the fact that disaster was avoided, thus the reality of safety in the guise of danger” (March, Sproull, & Tamuz, 1991, p. 10). Attending to failure in more effective HROs takes the form of seeing the reality of danger in a near miss, whereas in less effective HROs it takes the form of seeing the reality of safety.

A third means to learn in the face of limited trial and error is to define as failures any dysfunctional response to success. HROs after all are highly successful in the
sense that failures are rare. What is distinctive is that it is this very success and the
temptations that arise from it that define a new form of failure from which HROs
can learn. These failures that arise as consequences of success include restricted
search, reduced attention, complacency/inertia, risk aversion, and homogeneity
(Sitkin, 1992, pp. 234–236). All of these outcomes arise because people expect suc-
cess to repeat itself. Thus, these outcomes represent dangerous expectations and
the better systems treat them as proxies for failure.

Starbuck and Milliken’s (1988, pp. 329–330) analysis of the Challenger disaster
points to the liabilities of success. “Success breeds confidence and fantasy. When
an organization succeeds, its managers usually attribute success to themselves or
at least to their organization, rather than to luck. The organization’s members
grow more confident of their own abilities, of their manager’s skills, and of their
organization’s existing programs and procedures. They trust the procedures to
keep them apprised of developing problems, in the belief that these procedures
focus on the most important events and ignore the least significant ones.” Under
the assumption that success demonstrates competence, people drift into com-
placency, inattention, and habituated routines, which they often justify with the
argument that they are eliminating unnecessary effort and redundancy. What they
fail to see is that this pattern increases the likelihood of human errors, and that
each of the liabilities of success must be detected and opposed. In the more ef-
effective HROs, complacency is interpreted as a failure of striving, inattention is
interpreted as a failure of vigilance, and habituation is interpreted as a failure
of continuous adjustment. Attending to potential failures implicit in success is
equivalent to acting on the assumption that any current success makes future
success less probable.

Reluctance to Simplify Interpretations

Members of all organizations handle complex tasks by simplifying the manner in
which the current situation is interpreted. These simplifications, variously referred
to as worldviews, frameworks, or mindsets, basically allow members to ignore
data and keep going. This is a common property of all organizing (Turner, 1978).
However, simplifications are potentially dangerous for HROs because they limit
both the precautions people take and the number of undesired consequences they
envision. Simplifications increase the likelihood of eventual surprise. They allow
anomalies to accumulate, intuitions to be disregarded, and undesired consequences
to grow more serious.

The issue in simplification is “whether the simplified diagnosis of the pre-
sent and likely future situation is accurate enough to enable the organizational
goals to be achieved without encountering unexpected difficulties that lead on to
catastrophe. The central difficulty, therefore, lies in discovering which aspects of
the current set of problems facing an organization are prudent to ignore and which
should be attended to, and how an acceptable level of safety can be established as
a criterion in carrying out this exercise” (Turner, 1976, p. 379). Thus, from the
perspective of work on HROs, perhaps the most crucial fact about organizations of
all kinds is that they “achieve a minimal level of coordination by persuading their
decision-makers to agree that they will all neglect the same kind of consideration
when they make decisions” (Turner, 1978, p. 166). Organizations are defined by
what they ignore, which means they are also defined by what can surprise them. Traditional organizations tend to overlook the question of what they ignore (e.g., Pearson & Mitroff, 1992, p. 55) whereas effective HROs respect this question and know more about what they don’t know.

Since precautions are designed to fit a simplified view of the world, HROs tend to restrict their simplifications (Roth, 1997) in order to enlarge the number of precautions they enact. Thus, while all organizations make assumptions and socialize people to ignore the same things, HROs are distinctive because they make fewer assumptions and socialize people to notice more (Xiao, Milgram, & Doyle, 1997). Many have argued that what sets HROs apart is the effort they make to match internal complexity with external complexity (e.g., Meshkati, 1989; Perrin, 1995, p. 165). To restrain temptations to simplify, HROs cultivate requisite variety and assume that it takes a complex system to sense a complex environment. These efforts take such forms as diverse checks and balances embedded in a proliferation of committees and meetings, frequent adversarial reviews, selecting new employees with non-typical prior experience, frequent job rotation, and re-training.

Simplification is also curbed through negotiated complexity (Schulman, 1993b, p. 361). In HRO’s, “not only are a wide range of informal interorganizational agreements observable, their negotiation and continual renewal are recognized and embraced formally in the organization as an integral foundation of its safe and reliable operation” (Schulman, 1993b, p. 362, emphasis in original). In this way, procedures become increasingly complex rather than simple. This process of renewal, revision, or rejection means that “each procedure encapsulates new experience (often won the hard way through error)” (Schulman, 1993b, p. 362). The process of constantly tending to procedures mitigates complacency and rigidity.

Schulman (1993b) defines requisite variety as “conceptual slack” by which he means “a divergence in analytical perspectives among members of an organization over theories, models, or causal assumptions pertaining to its technology or production processes” (Schulman, 1993b, p. 364). This divergence of perspectives is not about what the organization is doing, but rather about how it is going about it. Divergent perspectives provide the organization with a broader set of assumptions that sensitize it to a greater variety of inputs. The price of this expansion is that it can increase the incidence of disagreement and conflict when it comes time to act. HROs are distinguished not just by their diverse views, but also by the mechanisms they institutionalize to manage disagreements among those who hold these diverse views. Bourrier, in her observation of nuclear power plants (1996, p. 105), puts it this way: “Cooperation is constantly elaborated through the mutual adjustments of the strategies of individuals who continually re-negotiate their participation inside the organization, trying to get control of what is relevant for their tasks.”

We emphasize the point about the centrality of negotiation because it is missed so often, even among scholars of HROs. What they miss is that when people convert divergent perceptions into action, they may focus only on those perceptions that are held in common among the divergent thinkers (Sutcliffe, 1994). Even though diverse groups have more information available than more homogeneous groups, communication patterns and cognitive limitations lead to a situation where unique information does not get shared (e.g., see Larson et al., 1996). And it is the divergence not the commonalities, that holds the key to detecting anomalies. Thus, there is a premium on interpersonal skills (e.g., Schulman, 1993a;
Weick and Roberts, 1993), mutual respect (Weick, 1993a), norms that curb bull-headedness, hubris, headstrong acts, and self-importance (Schulman, 1993a, p. 45), continuous negotiation (Perrin, 1995), reaccomplishment of trust, and simultaneous cultivation of credibility and deference (Bierly & Spender, 1995).

To preserve awareness of simplifications, HROs often implement a novel form of redundancy. Normally, redundancy in any system means that there is duplication and backups (Landau, 1969; Lerner, 1986; Husted, 1993). This is true of high-reliability systems. But redundancy in HROs also takes the form of skepticism and is one of the reasons that trust has a problematic stature in this literature (Bierly and Spender, 1995, p. 644). When a report is met with skepticism and the skeptic makes an independent effort to confirm the report, there are now two observations where there was originally one. The second set of observations duplicates and backs up the first set and may itself be double-checked by still another skeptic. This skepticism may counteract the potential complacency that redundant systems may foster. Redundancy involves cross checks, doubts that precautions are sufficient, and wariness about claimed levels of competence. Conceptual slack is also a form of skepticism since it represents concern that when others see what they believe, both their seeing and believing miss a lot. Concomitant with trust is the belief that all humans are fallible, and that skeptics improve reliability.

Sensitivity to Operations

Sensitivity to operations in HROs is often described by a phrase borrowed from the Navy, “having the bubble” (Roberts & Rousseau, 1989). Rochlin (1997, p. 109) describes the phenomenon this way: “Those who man the combat operations centers of US Navy ships use the term ‘having the bubble’ to indicate that they have been able to construct and maintain the cognitive map that allows them to integrate such diverse inputs as combat status, information sensors and remote observation, and the real-time status and performance of the various weapons and systems into a single picture of the ship’s overall situation and operational status.” The notion of “having the bubble is similar to the notion of “situational awareness” (Endsley, 1997, p. 270) defined as “the perception of the elements in the environment within a volume of time and space. The comprehension of their meaning and the projection of their status in the near future.” Both phrases refer to the integrated big picture of operations in the moment, an accomplishment that is difficult to maintain. Whereas situational awareness refers generically to the big picture that any operator forms, having the bubble refers to an effortful achievement of a high level of situational awareness. LaPorte (1988, p. 224) puts it this way: in HROs “the effort and intensity of purpose required to build what we sometimes characterize as the ‘bubble’, the state of cognitive integration and collective mind that allows the integration of tightly-coupled interactive complexity as a dynamic operational process, is enormous.”

If someone has the bubble at all times in HROs, then catastrophic failures are forestalled by large numbers of ongoing small adjustments that prevent errors from cumulating (Wildavsky, 1991, p. 26). To forestall cumulation is to reduce the likelihood that any one error will become aligned with others and interact in ways not previously seen. Furthermore, maintaining the bubble is another way to describe what it means to act thinkingly in HROs. When people have the bubble,
ongoing action occurs simultaneous with attention, and people act thinkingly with wisdom and heed (Meacham, 1983; Weick, 1993a, 1998).

The importance of sensitivity to current operations is reflected in much of the terminology associated with HROs. Descriptive words such as struggle for alertness, misinterpretation, overload, decoys, distraction, mixed signals, surprise, vigilance, near misses, warnings, anomalies, lookouts, clues, and neglect, all portray the concern to catch errors in the moment. Dangers inherent in the loss of this sensitivity can be illustrated by a totally new class of problems called “automation surprises” (Miller & Woods, 1997, p. 143). These surprises occur, for example, in automated cockpits when pilots command the aircraft to do one thing, and it does something else because on-board computers are integrating a different set of inputs in a different way. The crew finds itself in the unfamiliar position of asking “now what is it doing? what will it do next?” and losing valuable time and separation among aircraft while seeking an answer. Situational awareness and sensitivity to operations reduce the incidence of automation surprises and shorten the period of inaction.

One obstacle to the maintenance of broad operational awareness is the danger of production pressure and overload. For example, the grounding of the carrier Enterprise on Bishop Rock (Roberts and Leuschner, in press) was attributed in part to saturation of the captain by multiple demands which led him to misinterpret a red light that warned of shoal waters and to see that light instead as a white light warning of a fishing net buoy. More effective HROs tend to be more self conscious in dealing with pressures of overload and to “exhibit extraordinary sensitivity to the incipient overloading of any one of its members” (Reason, 1990, p. 483) as when air traffic controllers gather around a person working a very high amount of traffic and look for danger points. The issue of awareness of production pressure and its effects on judgment and performance is crucial, because many organizations have raised production pressure and overload through downsizing.

Endsley (1995) suggests that situation awareness emerges from the perception of elements in the environment, the synthesis of discrete elements in order to achieve comprehension of the current situation, and the projection into the future to envision possible future states of the situation. Because HROs involve complex technologies operating in complex environments, each of these situation awareness dimensions depends on the sharing of information and interpretations between individuals. The expression “having the bubble” may actually mislead to the extent that it suggests that an individual possesses the one correct representation of a complex environment. The limited cognitive resources of the individual prevent the development of a cognitive map that accurately registers the entirety of an HRO and its operating environment. Even sophisticated cognitive maps will have limited range and incorporate a potentially high level of generalization or simplification. Having the bubble, when achieved, is typically a shared accomplishment and bubbles of varying focus and range may coexist in a high-functioning HRO.

Roth’s (1997) studies of operator decision making in simulated nuclear power plant emergencies illustrate the ways in which effective HROs retain sensitivity to operations. Sensitivity to operations is achieved through a combination of shared mental representations, collective story building, multiple bubbles of varying size, situation assessing with continual updates, knowledge of physical interconnections and parameters of plant systems, and active diagnosis of the limitations of
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Preplanned procedures. The value of her work lies in the articulation of the ways in which higher-level cognitive activities, social construction of coherent explanations, and knowledge of the physical plant, all produce mindfulness in the moment.

Roth's picture of effective operational HRO functioning, reveals important details that are not tapped by the simplified processes implied by the seductive phrase, “situation awareness.” It is clear, for example, that operators “actively generate situational assessments” (plural) (Roth, 1997, p. 178) for the symptoms they notice, revising each assessment when they fail to observe symptoms expected on the basis of that assessment. They were not simply “aware” of the situation but searched for a “coherent explanation that minimized the number of separate faults that need to be postulated” (p. 178). These coherent explanations often consist of “story building” (p. 177) and monitoring to see “whether actions indicated in procedure steps made sense in the context of the particular event” (p. 180). Operators used knowledge of the assumptions and logic that underlie preplanned procedures to deal with situations not fully covered by the procedure (p. 181). There was an ongoing effort “to determine whether observed plant behavior was the result of known influences on the plant, such as manual and automatic actions and known malfunctions, or was unexpected and signaled an unidentified plant malfunction” (p. 179). This emphasis on actual operations and plant characteristics is noteworthy across effective HROs and is the reason why we chose the label “sensitivity to operations” to capture this process. Roth describes knowledge of plant characteristics this way: “crews needed to utilize mental models of physical plant systems and to reason qualitatively about expected effects of different factors influencing plant state in order to localize plant faults and identify actions to mitigate them” (p. 181). Finally, Roth also observed that efforts to improve the accuracy of representations were social and interactive: “[W]e saw repeated cases where operators stopped to discuss as a group whether the procedure path they were following would eventually lead them to take the actions they recognized to be important for safe recovery of the plant” (p. 180).

What becomes clear in Roth’s work is that images such as “the bubble” and “situation awareness” are overly static and are neither deep enough nor dynamic enough to capture continuous formulating, monitoring, story building, and acting. Although our phrase “sensitivity to operations” highlights only the first of Endsley’s (1995) three phases of situation awareness – perception – the above description underscores the importance of integration and extrapolation as well. Further, it appears to us that integration and extrapolation are actually products of the mindfulness created by all five processes, rather than activities tied specifically to operations. It is collective knowledge of failures, details, potentials for recovery, and relevant past experience, gathered into mindful processing, that provides the context within which present operations either make sense or are reconstructed to make sense.

Commitment to Resilience

The maritime industry is renowned for its low reliability organizations (e.g., Perrow, 1984, chap. 6). For example, in the case of tanker ship oil spills Nalder (1994, p. 260) expressed skepticism that requiring double hulls on these ships would do much to prevent environmental damage: “Double hulls will not solve
the problem if ships carry the maximum amount of oil with the minimum amount
of steel and people; if vessel-traffic systems exist in only a few waterways of the
world; if standards for crew training do not change; if regulators are fragmented
and weak; and if the profit margin squeezes out safety. History show that things
return quickly to business as usual in this tanker trade.” While the “maritime
business is one huge accident waiting to happen all the time” (Nalder, 1994,
p. 118), in one regard mariners are exemplary. They are accustomed to resilience.
They have no choice but to rely on their own coping skills when most of their
operations consist of “blue-water” cruising away from land and rescuers and spare
parts and expert diagnoses. (See Danton, 1991, for discussion of how to cope
with such conditions as collision damage, heavy weather damage, loss of rudder,
stranding, handling disabled vessels.) If a rudder breaks, if power goes off, the crew
is dependent on its own resourcefulness to do something right now, even if it is
only to drop anchor and buy time to figure out the problem. Most HROs engage
in their own form of blue-water operations when they stumble onto problems
far from informed rescuers, uncommitted resources, and expertise, and have no
choice but to respond to the unexpected in real-time.

Earlier, we noted that reliable performance in the face of unexpected events was
achieved at Diablo Canyon through “continuous management of fluctuations.”
In that earlier discussion we focused on the word “fluctuations” and argued that
variation rather than invariance in reliability-enhancing activities was necessary to
cope with the unexpected. Here we want to focus on the equally important word
“management” because it makes clear that people deal with surprises, not only by
anticipation that weeds them out in advance, but also by resilience that responds to
them as they occur. Furthermore, to manage a surprise is to contain it rather than
eliminate it (Schulman, 1993b, p. 369). In the case of Diablo Canyon, both resilient
containment and reactive responsiveness are made possible by continuous rein-
forcement of three “perishable” values: credibility, trust, attentiveness (Schulman,

Effective HROs tend to develop both anticipation and resilience in the sense
defined by Wildavsky (1991, p. 77). Anticipation refers to the “prediction and pre-
vention of potential dangers before damage is done,” whereas resilience refers to
the “capacity to cope with unanticipated dangers after they have become manifest,
learning to bounce back.” Unlike effective HROs, traditional organizations tend
to lean heavily toward one or the other of the two, typically toward anticipation of
expected surprises, risk aversion, and planned defenses against foreseeable risks.
While it is to be expected that HROs would devote enormous attention to
anticipating possible failure modes (Wildavsky in fact uses nuclear power plants
to epitomize over-reliance on anticipation, 1991, p. 147), it may be less obvious
that HROs develop capacities for resilience. Resilience is not only about bouncing
back from errors, it is also about coping with surprises in the moment. It is im-
portant to retain both connotations of resilience to avoid the idea that resilience is
simply the capability to absorb change and still persist. To be resilient also means
to utilize the change that is absorbed. The best HROs don’t wait for an error to
strike before responding to it. Rather, they prepare for inevitable surprises “by ex-
 panding general knowledge and technical facility, and generalized command over
resources” (Wildavsky, 1991, p. 221). Even though a central tension in the HRO
literature is the possibility that once a mistake starts to amplify in a system, that
error may be the system’s last trial, it is clear that HROs accept the inevitability

challenges of crisis management
of error. HROs acknowledge the reality of fallible humans, murky technology (Vaughan, 1996, p. 200), and narrow specialties. To cope with this reality they pay attention both to error-prevention and to error-containment.

An example of a commitment to resilience is the capability on aircraft carriers to contain emerging crises through informal “epistemic networks” (Rochlin, 1989, pp. 161–168). This form of resilience materializes when events get outside of normal operational boundaries and knowledgeable people self-organize into ad hoc networks to provide expert problem solving. These networks, which have no formal status, dissolve as soon as normalcy returns. Bourier (1996, p. 105) describes these structures as “informal latent networks activated only in the face of uncertainties and rapidly developing contingencies as a supplement to the normal patterns of formal hierarchy and compliance with strict roles.” The value of these networks is that they allow for rapid pooling of cognitive knowledge to handle events that were impossible to anticipate. Thus epistemic networks represent a strategy for flexible crisis intervention that enables systems to deal with irreducible uncertainty and imperfect knowledge. They are also an ideal example of the generalized, uncommitted resources that are necessary if one is to cope in a resilient manner with the unexpected (Wildavsky, 1991, p. 85).

The commitment to resilience in HROs is also visible in their formal support for improvisation (see Bourier, 1996, p. 109). To understand the counterintuitive idea that improvisation co-exists with potentials for catastrophe, recall the argument made earlier (p. 90) that organizations that are able to act on hazards are also able to see those hazards and think about them. In the earlier discussion we implied that the addition of specific actions enabled people to recognize new issues in a mindful manner. Here, we want to make the additional observation that effective HROs also have the capability to recombine actions already in their repertoire into novel combinations. And the possibility of recombination enlarges the size of the action repertoire just as surely as does the addition of specific actions. With an extended range of action goes an extended range of perception of new threats (Jervis, 1976; Weick, 1988). Theoretically, a system with a well-developed capability for improvisation should be able to see the threatening details in even the most complex environment, because, whatever they discover, will be something they can do something about. The range of possible action, and, by implication, the range of possible things that can then be noticed, are both extended if HROs develop competence at recombination and bricolage (Levi-Strauss, 1966; Harper, 1987; Weick, 1993b, pp. 351–353). As Wildavsky makes clear, this is the ultimate form of resilience: “Improvement in overall capability, i.e., a generalized capacity to investigate, to learn, and to act, without knowing in advance what one will be called to act upon, is a vital protection against unexpected hazards” (Wildavsky, 1991, p. 70).

Finally, resilience also takes the form of ambivalence toward the applicability of past practice. HROs, unlike most organizations, are able simultaneously both to believe and doubt their past experience (Weick, 1969, pp. 86–96; 1979, pp. 217–224). Simultaneous belief and doubt is important for adaptive action when a hazard is encountered, as Ryle (1979, p. 129) makes clear: “(T)o be thinking what he is here and now up against, he must both be trying to adjust himself to just this present once-only situation and in doing this to be applying lessons already learned. There must be in his response a union of some Ad Hockery with some know-how. If he is not at once improvising and improvising warily, he is
not engaging his somewhat trained wits in a partly fresh situation. It is the pitting of an acquired competence or skill against unprogrammed opportunity, obstacle or hazard.”

Underspecification of Structures

In our analysis of high reliability organizing we confronted the paradox that the adoption of orderly procedures to reduce error often spreads errors around, an observation made earlier by Turner (1978, p. 180). Turner (1978) described a manufacturing firm, Evans Medical that made sterile fluids for hospitals that were distributed through an efficient distribution network. When in 1971 Evans made a batch of dextrose infusion fluid that was not sterilized adequately, and information about the low preparation temperature was ignored, that same efficient distribution network sent the contaminated fluids to several British hospitals where “untoward reactions” (Turner, 1978, p. 108) were immediately observed. The reliable system insured that the contaminated fluids got to the hospitals swiftly with their contamination intact. Vaughan (1996, p. 65) also highlights this paradox in her description of how the orderly routines put in place at NASA (e.g., the five step process to handle deviations) allowed the erosion of O-rings to continue across more launches and be accepted as normal by more units than if NASA’s procedures had been less orderly. In both cases, an early error was amplified by an orderly system.

We interpret these data to mean that effective HROs are sometimes failure-free in spite of their orderliness, not because of it. Any orderly hierarchy can amplify errors, especially when those miscues occur near the top (Turner, 1978, p. 187). Higher level errors tend to pick up and combine with, lower level errors, which makes the resulting combination harder to comprehend and more interactively complex. It is the very reliability that HROs cultivate, that makes it possible for small errors to spread, cumulate, interact, and trigger serious consequences.

In the face of such dangers, HROs gain flexibility by enacting moments of organized anarchy (Rasmussen & Batstone, 1989; Perrow, 1994b, p. 216; Vaughan, 1996, pp. 200, 203). Changes are made that move the organizations in the direction of a garbage can structure (Cohen, March, & Olsen, 1972). In a garbage can, problems, solutions, decision makers and choice opportunities are independent streams flowing through a system. These streams become linked by their arrival and departure times and by any structural constraints that affect which problems, solutions, and decision makers have access to which opportunities. In an absolute garbage can there are no structural constraints, so solutions become linked to problems and decision makers become linked to choices, primarily by their joint presence in the same moment (March & Olsen, 1986, p. 17). This emphasis on temporality contrasts with a more common organizational emphasis on consequences. In a system held together by close attention to consequences, “wanting something leads to doing something connected to the want, and doing something leads to consequences related to the intention” (March & Olsen, 1986, p. 17). In garbage cans, coexistence in time, as opposed to rational intention or hierarchical position tends to determine problem solving processes.

Effective HROs achieve flexibility simultaneously with orderliness by enacting partial garbage cans. They do so by opening the access to what is normally a hierarchical authority and decision structure. In a closed hierarchical structure,
important choices are made by important decision makers, and important decision makers can participate in many choices. What is distinctive about effective HROs is that they loosen the designation of who is the “important” decision maker in order to allow decision making to migrate along with problems. When HROs move in the direction of a more garbage can like structure, people loosen the filters on who gains access to what with the result that hierarchical rank is subordinated to expertise and experience. When problems and decision rights are both allowed to migrate, this increases the likelihood that new capabilities will be matched with new problems. As a result, a wider range of capabilities and solutions gain access to a wider range of problems. Expertise at the bottom of the pyramid may rise temporarily to the top when the filter of formal position is loosened. This depiction of how HROs enact flexibility is supported by field research. With respect to aircraft carriers Roberts observed: “[D]ecisions are pushed down to the lowest levels in the carriers as a result of the need for quick decision making. Men who can immediately sense the potential problem can indeed make a quick decision to alleviate the problem or effectively decouple some of the technology, reducing the consequences of errors in decision making. The ability of any man on the deck to call it foul, thereby enabling some of the extreme time pressure to be reduced and decisions to be made quickly is an example of the behavior in these organizations....[M]any events in [HROs] are unique. Uniqueness coupled with the need for accurate decisions leads to decisions which ‘search’ for the expert and migrate around the organization. The decisions migrate around these organizations in search of a person who has specific knowledge of the event. This person may be someone who has a longer tenure on the carrier or in the specific job” (Roberts, Stout, & Halpern, 1994, p. 622). Similarly, in nuclear power plants Bourrier (1996, p. 109) “found that the most important characteristic [during a planned outage] is the formal delegation of power to craft personnel supported by a nearly complete availability of top-management at all times. By being a very flexible and adaptive organization, any problem can rapidly receive the attention it requires at all levels of the organization.”

This enactment of more anarchic modes of functioning by the loosening of hierarchical constraints is facilitated by the mindful system in place in HROs. As discussed, when effective HROs’ focus on failure they treat every signal as if it were novel. This generates the attentiveness necessary to link expertise with problems, solutions, and decisions in the moment. Because they are mindful of failure, this also preserves awareness of consequences. Mindfulness, then, is attuned to timing as well as to consequences, which means that a mindful system counteracts the typical flaws in garbage can decision making of decisions made by flight and oversight.

The shift to anarchy is part of the ongoing project of mindful action. When people examine an anomaly, they turn to others in an effort to understand what the anomaly means. This turn is a subtle loosening of hierarchy in favor of expertise. The “agency” that triggers this loosening is not an edict from the top, but rather a collective, cultural belief that the necessary capabilities lie somewhere in the system and that migrating problems will find them. In a mindful system, structure is a variable and activity of structuring is a constant. This is just another way of saying that routines and designs are fluid. Invariant mindfulness grasps both anomalous events and structural constraints that make it difficult to comprehend
the meaning of those anomalies. To grasp these limits mindfully is to counteract them with consultation that is less hierarchical. To loosen the filter of hierarchy is to spread the troublesome cues around and to expose them to a more varied set of capabilities. When filters are loosened, people also pay more attention to inputs in the moment, they are more sensitive to their time of arrival, and processes are more influenced by temporal connections. This heightened sensitivity to temporal sorting decouples problems from high ranking decision makers, allows problems to migrate, and allows a wider variety of people to make sense of novel cues and determine whether they signify a problem or a transient event.

Discussion

We started with the observation that HROs are important because they are harbingers of adaptive organizational forms for an increasingly complex environment. They provide a window on a distinctive set of processes directed toward fostering effectiveness that can unfold in all organizations. It is important to reiterate that our goal is not to minimize what is distinctive about HROs. Instead, we want to use that distinctiveness as the occasion to see all organizations in a different manner and to suggest a different set of processes that influence their effectiveness. HROs remain the anchor of this exercise in generalization, but we believe that everyday organizations increasingly display some of the character of HROs. Therefore, we need to revise our theories of organization so that they are more sensitive to the themes outlined here. The need to do so is driven by the fact that longer term environmental conditions such as increased competition, higher customer expectations, and reduced cycle time create unforgiving conditions with high performance standards and little tolerance for errors. These conditions are likely to continue, as environments become more competitive, uncertain, turbulent, and complex (D’Aveni, 1994). Many organizational settings contain a million accidents waiting to happen, but most organizations don’t see things that way. As organizations are driven to squeeze slack out of their operations through downsizing or mergers or resource constraints, or through complex distributed computer technologies (Shin and Sung, 1995; Rochlin, 1997), they come to exhibit the tightly-coupled, interactively complex profile of many HROs (Weick, 1990a). The important question is are those transformations accompanied by increased capability for mindfulness?

There are a number of continuities between HROs and non-HROs. For example, failures that occur in HROs and non-HROs alike are similar in the sense that some event disrupts prevailing cultural assumptions about the efficacy of current precautions. These failures can be called failures of foresight, since it is likely that some forewarning was available and some avoiding action was possible (Turner, 1976, p. 380). Because the incident was potentially foreseeable and avoidable, this suggests that the precautions were not as adequate as they were thought to be. When failure is defined as “an event, concentrated in time and space, which threatens a group with unwanted consequences as a result of the collapse of precautions which had hitherto been culturally accepted as adequate” (Turner, 1976, p. 380), the common features across both HROs and non-HROs are blind spots induced by cultural presumptions, the collapse of precautions, concentrated triggering of a visible disruption, and unwanted consequences.
Further continuities are implicit in the fact that the five processes we discuss can counter the dreaded combination of interactive complexity and tight coupling associated with normal accidents (Perrow, 1984). Mindfulness both increases the comprehension of complexity and loosens tight coupling. People preoccupied with failure comprehend more of the potential complex interactions in a system and create alternative paths for task performance that loosen couplings. People who simplify reluctantly pay close attention to the details of complexity rather than abstract them away and see more components that can be rearranged in more ways to avoid tight invariant sequences. People who maintain sensitivity to operations see more interconnections and comprehend more complexity in the moment which enables them to make adjustments that loosen time-dependencies, introduce redundancy, and in general, loosen tight coupling. People who develop capabilities for resilience stay attuned to unfolding events for longer time intervals which increases the likelihood that they will be able to comprehend puzzling interaction. Resilient systems also create slack resources and alternative means to a goal, both of which loosen couplings. And people who loosen hierarchical access structures increase the comprehension of complexity by marrying problems more closely and more quickly to experience and expertise, and reduce the likelihood of tightened coupling by isolating problems earlier in their development before they spread and constrain other system properties.

When we propose these five ways in which mindfulness counters normal accidents, we differ from other analysts such as Perrow and Sagan because we do not treat technology as a given that dominates organizational life through its own imperatives. Instead we treat technology as an equivocate (Weick, 1990a), as a sequence of events that can be understood more fully, and as a sequence of events that can also be interrupted, redirected, isolated, loosened, slowed, patched, halted, accelerated, etc. We see technology less as an intractable technological imperative and more as a controllable option if it is engaged by effortful, continuous collective mindfulness enacted by smart, trusting, trustworthy, self-respecting (Campbell, 1990) people willing and able to negotiate the differences among their diverse views under intense time pressure. We realize how big that “if” is. We are mindful that engaged collective mindfulness is a complex and rare mix of human alertness, experience, skill, deference, communication, negotiation, paradoxical action, boldness, and caution. Which is why infallibility is so hard to achieve. But we are also mindful that effective HROs do exist and that they are distinguished by the form of their fallibility. Effective HROs are known by their capability to contain and recover from the errors they do make and by their capability to have foresight into errors they might make. Both capabilities serve to illuminate complex interactions, loosen tight couplings, and insure that complex, tightly coupled technologies do not automatically dominate outcomes.

There are also continuities between HROs and non-HROs in consequences, an observation that may be less obvious. HROs with their consequences on a catastrophic scale may seem irrelevant to organizations in which people shuffle papers and lose a few, attend meetings and solve nothing, catch airplanes and miss connections, conduct briefings and persuade no one, evaluate proposals and miss the winners, and meet deadlines for projects on which the plug has been pulled. We have argued throughout that the magnitude of consequences is not as crucial
in conceptualizing HROs as is the nature of their cognitive processes and the likelihood that those processes induce a state of mindfulness.

This is not to dismiss consequences as a defining feature of high reliability, since it was their inclusion originally that set these systems apart. But those consequences varied enormously in the range of their severity (Three Mile Island killed no one while Bhopal killed thousands and Challenger killed seven). If people wish to remain attentive to consequences in their conceptualization of reliability, then they should put those consequences on the same scale as the activities being observed. To halt an assembly line is not an absolute catastrophe, but it is a catastrophe relative to what the foreman expects not to fail and for which she or he takes precautions. The failure of those precautions can cause reputational harm and end careers. A visit from Mike Wallace to a CEO’s office is not an absolute catastrophe in the sense of producing fatalities, but it can affect markets, share price, legitimacy, and liability, all of which the CEO counted on not to fail given the precautions that were envisioned. To put catastrophes on the same scale as one’s tasks is to see the potential for big trouble arising from small moments when intentions fail, when a surprise occurs, or when a near miss and good luck reveal unexpected danger. Small though those moments may be, they recapitulate on their own scale what happens in larger HROs on a larger scale. And small moments on any scale can cumulate, enlarge, and have disproportionately large consequences as complexity theorists keep telling us.

Theory Refinements

Among the many issues raised earlier that need further conceptual development and empirical research, we would single out four for their centrality to organization theory: effectiveness, learning, meaningful levels of analysis, and requisite variety.

Effectiveness

HROs are important to mainstream organizational theory because they are “non-normal organizational performance situations” (Whetten & Cameron, 1994, p. 136) that enrich our conceptualization of organizational effectiveness. At first, HROs seem to be simply one more ideal type of organization whose effectiveness is measured by a single universalistic criterion. Thus, the ideal HRO that maximizes reliability takes its place alongside the ideal bureaucracy that maximizes efficiency, the ideal cooperative system that maximizes need satisfaction, or the ideal natural system that maximizes resource acquisition. The problem of course is that a universalistic criterion of effectiveness is insensitive to the diverse environmental conditions and the diverse preferences of strategically critical constituencies with which any organization contends (Cameron, 1995, p. 393). Furthermore, reliability is not the full story of effectiveness in either HROs or organizations in general. “[T]o the extent that some researchers persist in claiming that HROs are unique, they fail to recognize that reliability is really one of many concepts that fall under the rubric of organizational effectiveness. HROs seek to operate effectively using their own distinctive criteria much as McDonald’s makes good food and clean bathrooms its endeavor” (Creed, Stout, & Roberts, 1993, pp. 56–57).
Sensitivity to simultaneous conflicting definitions of effectiveness is regained when observers pay closer attention to the paradoxical logic of effective organizational performance. And it is here where HROs aid articulation. Paradoxical logic is necessary to capture “the inherently paradoxical nature of organizational life. Administrators must not only make tradeoffs between day-to-day competing demands on the organization’s resources, but more importantly, they must balance competing expectations regarding the core identity of the organization as an institution. From this point of view, effective organizations are both short-term and long-term focused, flexible and rigid, centralized and decentralized, goal and resource control oriented, concerned about the needs of members and the demands of customers” (Whetten & Cameron, 1994, p. 141). Cameron (1986) found that the presence of simultaneous opposites created the highest level of effectiveness in recovering institutions of higher education, organizations that are loosely coupled and interactively complex in Perrow’s (1984, p. 97) matrix of the “organizational world.” HROs suggest that the acceptance of paradox continues to create high effectiveness when systems become more tightly coupled and more interactively complex. As we have seen, HROs pursue simultaneous opposites such as rigidity and flexibility, confidence and wariness, compliance and discretion, anticipation and resilience, expertise and ignorance, and balance them rather than try to resolve them.

Rochlin (1993, p. 24) neatly summarizes some of the paradoxes of effectiveness in HROs: HROs “seek an ideal of perfection but never expect to achieve it. They demand complete safety but never expect it. They dread surprise but always anticipate it. They deliver reliability but never take it for granted. They live by the book but are unwilling to die by it. If these beliefs seem wonderfully contradictory, those who express them are under no particular pressure to rationalize their paradoxes, indeed, they seem actively to resist such rationalization….This lack of goal rationalization extends to the organizational as well as the individual level. The observed deliberate, and often self-conscious, effort to create and maintain multiple modes of decision making and duplicative error searching regimes, and to hold differing perspectives and rank-ordering of preferences by different groups is a manifestation of collective organizational response rather than individual behavior. Such representational ambiguity is implicitly (and sometimes explicitly) acknowledged and accepted by the organization, not just as part of the cost of maintaining performance levels, but as an active contributor to problem solving.”

HROs, however, provide more than just a comparative window on the role of paradox in effectiveness. They also depict an important sense in which effectiveness is defined by conditions to be avoided rather than conditions to be sought. As Roberts and Creed (1993, p. 254) put it, “reliability-enhancing organizations identify sets of outcomes they continually work never to experience.” Effectiveness defined in terms of avoidance necessitates much more mindfulness, capability, and alertness than does effectiveness defined in terms of approach. The complexities inherent in effective avoidance affect culture as well as perception in HROs. In the case of culture, “Reliability, as a cultural value [in HROs], is oriented against ineffectiveness rather than toward effectiveness. If this is true, it may be that these organizations – existing as they do in an era of continuous technological change – can enjoy no equilibrium state and are characterized by continually changing cultures striving to avoid a non-goal” (Roberts & Creed, 1993, p. 252). In the case
of perception, Schulman (personal communication, 6/25/97, p. 2) has distilled his research on Diablo Canyon into these two propositions: “(1) The major determinant of reliability in an organization is not how greatly it values reliability or safety per se over other organizational values, but rather how greatly it disvalues the mis-specification, mis-estimation, and misunderstanding of things; (2) All else being equal, the more things that more members of an organization care about mis-specifying, mis-estimating and misunderstanding, the higher the level of reliability that organization can hope to attain.”

If HROs strive to reduce mis-specification, then they need structural and cognitive mechanisms that encourage the sensing and organization of detail. These mechanisms need to be complex in order to register complexity. But they also need to keep that complexity unintegrated to preserve its detail. Efficiency and simplification encourage integration and discourage unintegrated complexity. To pursue unintegrated complexity, however, is to run the risk of appearing disorderly, messy, and unsafe, which could jeopardize legitimacy. The safest organizations may look the most dangerous. And vice versa. There may be a fine line between messes that promote requisite variety and messes that undermine it. Effective HROs manage this tension artfully. More importantly, effective organizations in general may be those that are wise enough to accept the reality of paradox in organizational life and bold enough to define their effectiveness in terms of its preservation.

Learning

HROs are distinguished by the fact that their modes of learning do not fall neatly into the currently popular distinction between exploitation and exploration (March, 1996). Exploitation involves the use and development of things already known, exploration involves the pursuit of new knowledge. The prevailing high reliability literature, however, cautions against exploration where trials can ramify in unexpected, dangerous ways. Exploitation, however, is also difficult because systems are understood imperfectly and all possible failure modes have not yet occurred.

High reliability organizations seem to cope with these limits on exploitation and exploration in part through exploration of meaningful analogues. In the early debates over the lessons of Three Mile Island, LaPorte (1982, p. 189) called attention to the “need for analogous, less risky phenomena from which to learn” and suggested that nuclear power plants might learn analogically from petrochemical plants. Effective HROs, faced with infrequent failures, learn from the failures of others. What is unusual is that they are sensitive to the ways in which these “outside” failures are better or worse analogues of what they might experience. Thus, accidents on submarines and aircraft carriers are potentially more instructive to nuclear power plants than are accidents in petrochemical plants, since most contemporary submarines and carriers are nuclear powered. Failures within wildland firefighting crews (e.g., Weick, 1995) may be more instructive to aircraft crews than failures in nuclear power plant control room crews, since firefighting crews and cockpits crews have continuous rotation of personnel and control rooms do not. The intent in using these analogues as modes of exploration is to uncover assumptions people take for granted, trace out new implications of old assumptions, and identify latent organizational flaws.
But what is perhaps even more striking in our analysis is that high reliability is not totally dependent on conventional learning processes. We concur with those who argue that learning is stored in routines; but we also emphasize that assumptions store much of what an organization learns. Attention to failure and situational awareness seem to create many of the adaptive changes that would ordinarily be attributed to learning. Since surprise is the primary non-repetitive input that threatens reliable operations, other than strengthening the processes that heighten mindfulness, it is not obvious what can be learned from surprises that may happen only once and which may never happen again. It is as if, the more fully a system maintains a state of mindfulness, the less that remains to be explained by concepts of organizational learning. Said differently, when people in HROs concentrate on situational awareness, resilience, and containment, they deal with what is in front of them through operations that have an emergent quality similar to the activity of bricolage (Weick, 1993b). People combine fragments of old routines with novel actions into a unique response to deal with a unique input. To portray this rich mixture of perception, surprise, bricolage, and experience as mere learning would seem to conceal the fine-grain of complex adaptation that HROs actually accomplish.

**Levels of Analysis**

A further implication of our analysis is that there is nothing sacred about the organizational level of analysis when processes become the focus. Instead, to pursue reliability in a meaningful fashion is to pay closer attentions to systems (Carroll, 1997, pp. 24–27), positions (Vaughan, 1996), or programs (Perrin, 1995, p. 162).

Consider “systems,” for example. Perrow (1984) argues that the concern in normal accident theory is with system accidents rather than component failures, although he tends to draw systems somewhat narrowly (Vaughan, 1996). Woods, Johannesen, Cook, and Sorter (1993, p. 36) similarly argue for more attention to systems: “Erroneous actions that lead to bad consequences involve multiple people embedded in larger systems. It is this operational system that fails. When this system fails, there is a breakdown in cognitive activities, cognitive activities which are distributed across multiple agents and influenced by the artifacts used by those agents” (emphasis in original). It is also possible to move away from large systems to much smaller ones and argue that in HROs the operating crew enacts the organization. It is the risk handlers who embody the organization and its reputation in their manual, interpretive, experience-based work (Perrin, 1995, p. 158) and not the risk-analysts or others who espouse safety. As the Captain of the tanker *Arco Anchorage* put it, “The boat people can take the corporation down in one move” (Nalder, 1994, p. 223). The organization is the crew in the same sense that the organization is the meetings it convenes (Schwartzman, 1987, p. 288). The organization is realized and comes into being in its meetings and in the working of its crews.

Concerns with a shift in level of analysis is consistent with Wiley’s (1988) suggestion that “organization” is not a meaningful level of analysis in social science. He argued, instead, that the sui generis breaks in the evolution of the social animal occur at the levels of the individual, the intersubjective (synthesis of two communicating selves), the generic subjective (self as filler of roles and follower
of rules), and the extrasubjective (pure meanings without a knowing subject as in culture). In the previous discussion, key issues were framed intersubjectively and dyadically (e.g., Van Braun rewards an engineer who volunteers that he may have caused a launch failure), generic subjectively (e.g., supervisors help overloaded air traffic controllers), and extrasubjectively (e.g., medication errors are reported when the culture is friendly to errors). It is conceivable that HROs have languished outside the mainstream of organizational theory precisely because they did not fit traditional definitions of organization. The lesson, however, may be that almost nothing looks like a conventional organization any more when we see forms shaped uniquely for high velocity environments (Eisenhardt, 1993), knowledge-intensive practice (Starbuck, 1993), hyperturbulence (D’Aveni, 1994), and virtual existence (Sotto, 1993).

Given this rethinking of the appropriate level of analysis for conceptualizing HROs, it becomes less surprising that Vaughan (1996, pp. 413–415), in her analysis of the Challenger disaster, is able to move seamlessly between intimate dyads and NASA systems. She argues that turning points in intimate dyadic relationships occur when one partner begins to pull away from the other. These turning points show the very same pattern of normalization of signals of danger that she observed in the far more complex decision-making that led up to the Challenger disaster. In both cases, the focal object displays discontent/malfunctioning through weak, mixed signals that soon become treated mindlessly as they are embedded among other signals that have taken-for-granted meanings. In both cases, those mixed, embedded signals are seen to form a clear ominous pattern only when an exiting partner or an exploding space shuttle trigger retrospective sensemaking.

The reason Vaughan is able to juxtapose images of such diverse complexity and size is that she maintains a consistent focus on process. She argued that intimate relationships are small organizations that exhibit organizing. “When we marry or live with another person, we develop a division of labor, share some goals, compete for scarce resources, and socialize new members. We come and go regularly, making decisions daily, creating precedents, decision streams, culture, and history. Like their larger and more formal counterparts, these small organizations are also subject to failures with human consequences.” Thus, the feedstock for studies of reliable organizing is much closer at hand than a nuclear power plant, aircraft carrier, or chemical plant. The fundamental processes involved in reliable performance are processes indigenous to all relationships that matter.

Requisite Variety

Finally, the concept of requisite variety has been central in previous discussions of HROs and it remains central in our analysis. However, when pushed, this concept raises other questions, one of which is when does requisite variety help and when does it hamper the pursuit of reliability? We noted earlier Schulman’s redefinition of requisite variety as conceptual slack: “a divergence in analytical perspectives among members of an organization over theories, models, or causal assumptions pertaining to its technology or production processes” (Schulman, 1993b, p. 364). This definition resembles Turner’s description of the variable disjunction of information. Variable disjunction refers “to a complex situation in which a number of parties handling a problem are unable to obtain precisely the
same information about the problem so that many differing interpretations of the problem exist” (Turner, 1978, p. 50). Our focus is on the similarity between Schulman’s “divergence in analytical perspectives” and Turner's “many different interpretations of the problem.”

Early work by Reeves and Turner (1972, p. 91) elaborated the idea of variable disjunction this way. “It is variable because the state is not one in which no information can be exchanged or amplified to remove discrepancies: such exchanges are constantly being made, so that the content of the sets of information which are disjoined is always varying. However, no single agreed-upon description of the situation exists. People who have to operate in a situation in which there is disjunction of information are unlikely to reach complete consensus about the information which describes the total situation, simply because of the problem of convincing others of the status of their own set of information and thus of the validity of their analysis of the situation and their suggestions for action.” What is jarring when we juxtapose Schulman and Turner is that conceptual slack supposedly reduces the incidence of disasters whereas variable disjunction increases the incidence. Are diverse perspectives dangerous or an investment in safety?

We suspect that important boundary conditions for requisite variety are implicit in the answer. Divergent perspectives may reduce the incidence of disaster when they occur within an organization (Schulman speaks of members of an organization) or when tasks are not decomposable, but increase the likelihood of incidence when they cross boundaries and connect multiple organizations or when tasks are decomposable. Turner's data show that it is commonplace for disasters to happen “when a large complex problem, the limits of which were difficult to specify, was being dealt with by a number of groups and individuals usually operating in separate organizations” (Turner, 1976, p. 384). This suggests that reliability will be an emerging concern as organizations increasingly participate in interorganizational networks because interorganizational coordination is so difficult to achieve and because the system becomes more complex and harder to comprehend.

Our analysis updates thinking on requisite variety, but it also raises a number of other issues. For example, if we focus on key phrases in Reeves and Turner (1972), then additional boundary conditions become clearer. Requisite variety may have the potential to increase disasters when corporate cultures emphasize,

(1) accuracy rather than plausibility: A culture that values accuracy may influence people to withhold judgments and communication until they have “precisely the same information” and can demonstrate “the validity of their analysis.” Since accuracy is difficult to demonstrate in a dynamic partially understood environment, norms that favor accuracy may silence the reporting of imprecise hunches about anomalies that could cumulate into crises.

(2) advocacy rather than active listening: If people define their job as “convincing others of the validity of their own set of information” rather than listening to others to determine the validity of their own information, then advocacy replaces analysis and synthesis. As a result, subtle cues that are ordinarily registered when requisite variety is high, go unacknowledged and the errors they point to are left unattended and remain available for cumulation.

(3) constant rather than periodic exchange of information: A culture in which information “exchanges are constantly being made,” may make it harder to detect small changes than one in which exchanges are periodic. With periodic exchanges,
contrasts between past and present become more clear-cut than is the case when exchange is continuous. With more frequent reporting, there is less change to report and more of a tendency to assimilate a current report to an earlier report (Hutchins, 1991). Errors that begin to cumulate in a single direction go unnoticed when exchange is continuous. This suggests that there may be an optimal frequency or periodicity for information exchange that varies from organization to organization. But it also suggests that continual talk is problematic as a blanket formula for increased reliability.

(4) complete consensus rather than partial “working” consensus: A culture that encourages people to seek a “single agreed-upon description” and to “reach complete consensus” ignores the reality of diversity in experiences and the impossibility of anything more than general agreement. Pressure for consensus is dangerous because it stifles the reporting of anomalies and because it takes time to attain it, time during which conditions can worsen and origins become harder to uncover.

Thus, high requisite variety may not improve reliable performance unless it is developed intra-organizationally as part of a context that encourages plausible judgment, active listening, periodic information exchange, and a working consensus. Departures from any of these potential boundary conditions may turn a system that uses variety to destroy variety into one in which variety amplifies variety.

Practice Refinements

Perhaps the key question for practice is, does it make sense for mainstream organizations to invest time, energy, and human resources in processes of high reliability in order to prevent mistakes of relatively minor consequence? The answer is more straightforward for HROs driven by failure-avoidance and the prospect of catastrophe than it is for traditional efficiency-oriented organizations driven by success and the prospect of a weak bottom line. Although that is a gross simplification, it does reach the point that safety costs money (Wildavsky, 1991, p. 214). And when safety boils down to the non-occurrence of bad outcomes, there is strong temptation to use that non-occurrence as proof that an investment in safety is no longer necessary (Starbuck & Milliken, 1988).

The piece that is missing in this tidy picture is that it is not just safety that costs money. Learning does too. And this is where the pragmatics of reliability and efficiency begin to blend. If we view safety as a process of search and learning (Wildavsky, 1991, p. 207), then the costs of building an infrastructure that induces mindfulness, can be viewed as an investment in both learning and safety. Investments in safety are defined as investments in mindfulness that mean greater familiarity with the system, an enlarged response repertoire, and clearer accountability, all of which can create competitive advantage (Thompson, 1995). To invest in mindfulness is to assign a high priority to the probability of error and to the importance of responsibility for mistakes, internal criticism, and the removal of self-serving defensive postures (Landau & Chisholm, 1995, p. 77). Furthermore, to encourage mindfulness is to tap into intrinsic motivation and increase performance-enhancing perceptions of efficacy and control (Langer, 1997; Pfeffer, 1997, pp. 67–71). But whether a high reliability approach leads to sufficient returns in the form of avoided disasters or enhanced performance to justify its implementation, remains an empirical question, difficult to assess and
perhaps ultimately unknowable. The choice by mainstream organizations to pursue high reliability organizing in the absence of obvious threats may ultimately be an issue of identity and appropriateness (who do we want to be and how do we want to go about our business), rather than an issue of reality and consequentiality (March & Olsen, 1989, pp. 21–52).

An additional question for practice is, what is new here in our analysis of mindful organizing in HROs? That question arises in part because many of the recommendations that flow from HROs sound like what Perrow (1987) calls “motherhood items.” He argues that few managers would question the value of intense effort, group trust, complete knowledge of how everything works, no mistakes by anyone, buffers to contain failure, clear specifications of jobs, thoughtful plans, ample resources, redundancy, conforming to rules, complex skills for complex work, constant alertness, continuous learning, open and frequent communication, and effective leadership. It is lists like this that lead some observers to equate good management with safe management (e.g., Allinson, 1993).

Part of what’s missing from any list of motherhood items are contingent propositions, propositions such as high requisite variety promotes reliability in non decomposable tasks but hinders reliability in decomposable tasks. But one is also tempted to say, what’s missing here are “good mothers.” If these are motherhood items, then a case can be made that in a downsized, outsourced, acquisitive, divesting, reorganizing, insecure, competitive world, a good mother is hard to find. Managers aren’t managing because, with too few resources, they don’t have the time to. Absorption in details normally handled by subordinates keeps managers from coordinating, building overviews, increasing the capacity for resilience, and anticipating much farther than the next week, let alone the next quarter. Managers faced with these pressures are not just overworked. They are dangerous because of the potential to make high level errors that disperse and cumulate. And that’s where a thorough understanding of HROs begins to produce a different set of insights into organizing.

The lessons to be learned from HROs are not just lessons of motherhood, although successful implementation of even those lessons could be the source of competitive advantage. In fact, many organizations are already capable of serious failure that can create serious harm, but are unable to see these possibilities (Roberts & Libuser, 1993; Rochlin, 1997) and may benefit from the lessons outlined here. Additional lessons implicit in the preceding analysis include,

1. The expectation of surprise is an organizational resource because it promotes real-time attentiveness and discovery (Schulman, 1993b, p. 368).
2. Anomalous events should be treated as outcomes rather than accidents, to encourage search for sources and causes (Edmondson, 1996).
3. Errors should be made as conspicuous as possible to undermine self-deception and concealment (Tamuz, 1994).
4. Reliability requires diversity, duplication, overlap, and a varied response repertoire, whereas efficiency requires homogeneity, specialization, non-redundancy, and standardization (Landau & Chisholm, 1995, p. 68).
5. Interpersonal skills are just as important in HROs as are technical skills (Westrum, 1997).
Lessons such as these have direct implications for practice issues such as those that focus on quality and decentralization to name two examples described below.

There is some overlap between practices that improve quality and practices that induce mindful error detection and correction. Our hunch is that the greater the overlap, the higher the incidence of sustained quality improvement. There are obvious parallels even when the overlap is modest. The core concern in quality programs with the elimination of defects and reducing variability has obvious links with goals in HROs. Recall that Deming (1982) emphasized defining quality efforts in terms of a sustained and broad-based organizational vigilance for finding and addressing problems over and above those found through standard statistical process control methods. Moreover, if high reliability organizing is understood in part as a strategy to deploy attention, quality practices could be viewed as devices to direct and channel that attention. A process orientation in quality programs focuses attention on issues such as the interrelation of units or individuals, origins of errors, and the consequences of different process changes (Winter, 1994). Customer focus directs attention beyond an internal focus toward consideration of a larger set of consequences. And systematic and continual attention to fact-based analysis heightens awareness of potential and existing errors.

All of these processes intended to improve quality have their counterparts in HRO processes that deal with failure, resilience, and operations. Interestingly, however, quality programs seem to overlook HRO processes that reduce simplification and loosen structures. These two oversights may explain why some total quality efforts fail. When quality programs preserve simplification and tight structure they ignore complex, emergent problems (Sitkin, Sutcliffe, and Scchroeder, 1994). We interpret this preservation as a clear case of stable routines and variable cognitive process, a combination that may be dysfunctional.

There are limits, however, in the extent to which a move toward total quality represents a move toward high reliability. Organizations may adopt total quality programs as much for institutional reasons as for reasons of enhanced performance (Westphal, Gulati, & Shortell, 1997). The pursuit of legitimacy through adoption of formal quality programs neutralizes the mindful pursuit of reliability. Similar neutralization of mindfulness occurs if quality programs are adopted as part of a fad (Abrahamson, 1996). Finally, the very quality practices designed to encourage mindfulness may themselves become routinized and mindless in the interest of efficiency. In each of these cases improvements in quality processes bypass several features of the cognitive infrastructure associated with HROs.

HROs have implications for decentralization, as well as quality. As systems increase in complexity, centralized organizations lose the ability to respond at local levels (Lustick, 1980). In these cases they must delegate authority to create a more elaborate sensing mechanism capable of detecting possible dangers on a local level. This delegated capacity for local detection must be held simultaneously with a centralized capacity that maintains the organization’s larger awareness of its vulnerability and serves to coordinate responses and learning that occur at the local level. In high reliability organizations decentralization and centralization are held in critical balance (Weick, 1987), often by means of tight social coupling around a handful of core cultural values, and looser coupling around the means by which these values are realized. In ordinary organizations where reliability is
becoming increasingly important, excess centralization may weaken local containment and resolution of problems, while excess decentralization may weaken the comprehension of wider threats and of the capacity to coordinate responses.

Consider the practice of outsourcing. Many organizations confront external conditions that are tightly coupled and interactively complex (e.g., increased competition and reduced slack). To control costs more organizations resort to practices such as outsourcing. Outsourcing sacrifices many of the reliability-enhancing qualities of decentralization such as more fine-grained local understanding of complex environments and swift detection, isolation, and resolution of problems. For example, when Valujet outsourced maintenance to Sabre-Tech, this reduced the complexity of Valujet but it did not reduce the complexity of the system within which it operated. That system became more interactively complex and harder to comprehend. Thus, when Valujet outsourced it made itself less complex at the very moment that its interdependencies became more interactively complex. In our terminology Valujet lost requisite variety right when they needed to increase it. Outsourcing appears to be one of a growing number of devices for cost-saving that also leave firms with less variety to cope. Outsourcing of maintenance is also a good example of removing an antecedent of mindfulness (preoccupation with failure), thereby reducing the capability for error detecting. When maintenance is outsourced, the supplier, not the buyer, now must become preoccupied with failure, which means that the buyer becomes more mindless. That may be unimportant if the buyer faces only predictable forms of failure that are easy to anticipate. But if novel forms of failure are possible, then the loss of a preoccupation with failure to an outsider could make the buyer less mindful and more vulnerable.

**Conclusion**

Effective HROs organize socially around failure rather than success in ways that induce an ongoing state of mindfulness. Mindfulness, in turn, facilitates the discovery and correction of anomalies that could cumulate with other anomalies and grow into a catastrophe. Mindfulness, with its rich awareness of discriminatory detail, enables people to manage juxtapositions of events they have never seen before. But the ways in which they do this are still not fully understood. Our analysis represents an effort to further this understanding.

Effective HROs represent complex adaptive systems that combine orderly processes of cognition with variations in routine activities in order to sense and manage complex ill-structured contingencies. In a dynamic, unknowable, unpredictable world one might presume that organizing in a manner analogous to HROs would be in the best interest of most organizations. Hints of such moves are evident when traditional organizations graft TQM cultures onto a pre-existing preoccupation with efficiency, and aspire to the relatively error-free performance found in HROs. But many of these attempted changes fail because traditional organizations demonstrate little awareness of just what kind of infrastructure it takes to support reliable performance. Unfortunately, mainstream organizational theory isn’t much help in developing this awareness.

The purpose of our analysis has been to consolidate conceptually a body of work that begins to articulate the social infrastructure of reliability. The language
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of a near miss, having the bubble, migrating decisions, conceptual slack, resilience, normal accidents, redundancy, variable disjunction, struggle for alertness, performance pressure, situational awareness, interactive complexity, and prideful wariness, describes how people organize around failures in ways that induce mindful awareness. That mindfulness, in turn, reveals unexpected threats to well being that can escalate out of control. And that, in our estimation, is a central theme for mainstream organizational theory.

Acknowledgments

We wish to thank Barry Staw, Charles Perrow, Gene Rochlin, John Carroll, Ron Westrum, Robert Burgelman, Diane Vaughan, Michael Cohen, Gary Klein, and especially Paul Schulman and Kyle Weick, for their help improving various drafts of this analysis.

References

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Introduction

In this paper, we examine organisational resilience in the response to the World Trade Center disaster in September 2001, using as a case study the re-establishment of the Emergency Operations Centre after the destruction of the primary facility. The Emergency Operations Centre (EOC) on the 23rd floor of 7 World Trade Center (7WTC), one of the most sophisticated centres of its type in the world, was the designated coordination site for the various organisations that were expected to respond to any major emergency affecting the city. It contained computer-equipped workstations for organisational representatives, a communications suite, a conference room, a press briefing room and a large number of staff offices. On 11 September 2001, the EOC was evacuated shortly after the attacks on the twin towers. At 5:20 pm, the entire 7WTC structure collapsed as a result of fires that are thought to have been ignited by the collapse of WTC Tower 1. The destruction of 7WTC was the only recorded case of the collapse of a large steel-frame building as the result of fire (Federal Emergency Management Agency, 2002). Following the evacuation of the EOC, emergency management personnel moved to intermediate facilities, and finally relocated it to a semi-permanent location at Pier 92 on the Hudson River. Less than three days after the attack, emergency management personnel had established a site that in many respects mirrored the destroyed facility and that, although lacking in elegance, preserved and magnified many of the functional attributes of the original EOC complex.

An EOC is both a place and a social system (Quarantelli, 1997). It is comprised of representatives from various public, private and non-profit organisations. Although those representatives answer to their respective organisations, when functioning within the EOC they comply with additional requirements. The resilience of a functioning EOC is related to features of each organisation as well as to features of the operational environment, such as suitability of equipment and furnishings, and of the set of participating organisations as an integrated socio-technical system. Because the Mayor’s Office of Emergency Management (OEM) permanently staffs the EOC space and plays an instrumental role in its activation, the resilience of the EOC as an organisation during an emergency is possibly more closely related to OEM’s organisational robustness than it is to that of other departments within the city. At the same time, the instrumental role each department plays in the EOC organisation cannot be overstated.
Re-establishing the EOC demanded multi-organisational coordination (including among organisations that were new to disaster response), access to resources, identification of new resources and the intelligent maintenance of familiar operational patterns as well as the incorporation of new ones.

**Methods**

Findings in this paper result from inductive analysis and are based on qualitative data gathered during exploratory fieldwork that commenced within two days of the attack and continued for two months thereafter. During that time the field team conducted over 750 collective hours of systematic field observations. These included close observation of key planning meetings at secure facilities, including the EOC, the Federal Emergency Management Agency’s (FEMA) Disaster Field Office and incident command posts near the ‘Ground Zero’ area. The field team spent extensive periods observing operations at Ground Zero; respite centres established for rescue workers; family-assistance centres established for victims’ families; and sites for marshalling volunteers, supplies and food. The field team also observed activities at major security checkpoints in lower Manhattan and at other locations that were important in the emergency response. The team wrote voluminous notes that provide a rich description of observations and experiences; it took over 500 photographs; and sketched and collected floor plans of various facilities to chart the spatial and organisational changes over time. We were thus able to track the evolution of the reconstituted EOC, and other facilities, from very early stages. We were particularly interested in the activities of formal and informal organisations and the multi-organisational coordination of different aspects of the response: identifying which organisations were involved in particular functions of the response and early recovery, the effectiveness of inter-organisational interaction, the degree to which responders implemented planned emergency response activity and the extent to which alternative response strategies emerged. We sought, in general, to identify successes and challenges experienced by those responding to the disaster.

In addition to direct observation in New York City, we collected numerous documents produced by local, state and federal agencies as well as by individuals and organisations with less formal ties to response efforts. These documents included internal and public reports, requests for information or resources, informational handouts, internal memos, schedules, meeting minutes and agendas, maps and internal directives.

DRC also assembled an extensive electronic database of articles and web-based information. The database includes articles from major New York City newspapers for six months following the attack. The database includes articles from major periodicals, selected articles from newspapers worldwide and information from the many government, charity, community-based, individual and private Internet sites that emerged after the disaster. All of the information was later coded according to relevance to the response and early recovery as well as to the primary operational functions related to the response effort. The identification of these operational functions was informed by the literature on disasters and based in large part on the activities observed during the field component of the research.
The use of multiple data-gathering methods and sources, including direct observation, documents produced by New York City agencies, documents produced by victims of the disaster and by informal supporters of the official response, newspaper accounts, and Internet-based data, allowed us to triangulate the resulting data. That is, we were able to compare the information collected from one source with other sources as a means to check for accuracy and validity of the data (Denzin, 1998; see also McKendrick, 1999).

The Emergency Operations Centre

Quarantelli (1979) identifies six functions of EOCs: coordination, policymaking, operations management, information gathering, public information and hosting visitors (see also Wenger et al., 1987). Perry (1991: 204) has called the EOC ‘the key to disaster response’. It centralises at a single location the personnel and equipment that are needed to manage a response to diverse types of emergencies. All EOCs are expected to have multi-hazard response capabilities; that is, response managers should be able to cope with a variety of disaster types (see Kreps, 1991). At the EOC, representatives from organisations crucial to response efforts interpret information gathered from the remote locations of the emergency site and from outside sources (using such means as maps, satellite data, weather reports, resource inventories, health and safety statistics and news accounts) in order to understand and coordinate the disparate, shifting elements of an evolving dynamic situation and to mount an effective response through mobilising the assets of many branches of government. EOCs are not fully staffed at all times; rather, they are activated only when an event crosses a certain magnitude threshold requiring a multi-agency response. EOCs differ in their design, equipment configurations and capacities, based on their community’s resources, technical sophistication and risk exposures, but they all share the goal of coordinating the interactions of various agencies at different levels of government. EOCs serve as the headquarters for planning and response decision-making during a disaster event and support operational response implementation undertaken in the field. The EOC concept allows for interpersonal communication, technically supported information exchange, and decision-making among the representatives of different agencies, who are in turn communicating with their personnel either at the scene of an emergency or elsewhere in their respective organisations.

The New York City EOC boasted an array of technological capabilities to support the generic functions that Quarantelli (1979) elaborated. The facility at 7WTC was outfitted with computer-equipped workstations for up to 68 agencies, arranged into groups called ‘pods’ (based on response functions such as health and medical, utilities, public safety, infrastructure, human services, transport, government and administration) with an ability to expand by another 40 workstations if the need arose (OEM, 2001). Workstations were equipped with software that made it possible to perform the specialised tasks of the various constituent agencies. The site was equipped with computer messaging systems for communication among staff, a phone system with provision for microwave back-up, separate systems for fire department, police department and EMS communications, coastguard-operated video monitoring of New York’s waterways and traffic monitoring of the city’s streets. A raised ‘podium’ provided selected staff
an overview of the EOC and its operations and allowed for access to a variety of sources of weather information – including direct National Weather Service feeds – video conferencing and ARCFVIEW and MAPINFO geographic information systems (GIS) packages. Podium staff could use databases and maps to view the location of critical systems and facilities, such as the electric grid, water system and hospitals (OEM, 2001).

In addition to its explicit, instrumental capabilities, the EOC at 7WTC fulfilled another more symbolic emergency management capability: the projection of the city’s authority and influence. A large table dominated the mayor’s conference room with a telephone for each person seated at the table. Projection screens along one wall facilitated the display of maps, charts and images. Windows enabled policy-level conferees to look out across the work floor of the EOC, where the representatives of the different agencies staffed the workstations. The mayor and staff from the mayor’s office were clearly awarded a privileged space that symbolised and facilitated their leadership. At the opposite end of the EOC was the press briefing room; the wall behind the lectern was transparent and allowed for a view of the EOC work floor where dozens of personnel from various agencies would be working during a typical emergency. During news conferences or other broadcasts, cameras directed at the speaker would also look out at the work floor and project to the public images of response personnel as a backdrop to the messages being delivered by the mayor at the lectern. The focal point of the work floor was the podium, installed on a raised platform, staffed by officials of the mayor’s Office of Emergency Management (OEM) whose job is to coordinate the interaction between the other agencies. For example, one feature of this process is calling agency representatives ‘to the podium’ to give or receive information. The OEM official thus was in a commanding position both physically (looking down on the agency representative) and organisationally (able to influence although not totally control the information flow). The visual impression from all directions was that of a busy, competent, technologically advanced emergency response in a well-designed, well-equipped facility.

The Destruction of 7 World Trade Center

The broad outlines of the events of 11 September 2001 are now widely known, featured as they have been on television and in other media. Because of the extreme hazard caused by its close proximity to the towers, 7WTC was among the buildings evacuated after the second airplane strike. In addition, early reports of a possible third hijacked aircraft with an unknown destination contributed to the decision to evacuate.

The evacuation of the facility was very rapid, and little or no equipment or documentation was saved. Emergency managers, along with the Mayor and some agency representatives, kept falling back from the attack area to intermediate sites in order to set up a command post. Before long each of these alternative sites proved hazardous or otherwise untenable. During the initial period after the attack, the city made use of a mobile emergency operations unit that was able to provide a base for initial re-establishment of the EOC.

Preliminary accounts conflict regarding the nature of communications difficulties during this early time; most communications were down, but the 800Mhz
capability remained and OEM personnel could communicate with other staff. Eventually OEM personnel reached the library of the Police Academy but they soon found its configuration and communications capability to be inadequate. Meanwhile, a parallel operations centre was established at a nearby high school to serve as a forward-staging area. This was an improvised arrangement, with cafeteria tables being used for meetings, wires running everywhere and very old telephones. Nevertheless, this site was set up to resemble the spatial organisation of the original EOC, with workstations and a command table. During the night of 13 September, approximately 60 hours after the attack, the operations at the Police Academy moved to a large cruise ship facility at Pier 92 on the Hudson River. This semi-permanent location housed the EOC until mid-February 2002, when OEM moved to a facility in Brooklyn.

Conceptions of Resilience and Their Relevance to the World Trade Center Response

Various conceptualisations of resilience, which can be found in several different literatures, suggest an ability to sustain a shock without completely deteriorating; that is, most conceptions of resilience involve some idea of adapting to and ‘bouncing back’ from a disruption. Wildavsky contrasts resilience with anticipation in this fashion:

Anticipation is a mode of control by a central mind; efforts are made to predict and prevent potential dangers before damage is done... Resilience is the capacity to cope with unanticipated dangers after they have become manifest, learning to bounce back (1991: 77).

Elsewhere, he argues that dealing with unknown hazards ‘as they declare themselves’ is another expression for resilience (Wildavsky, 1991: 70). Others have defined resilience somewhat differently. For example: ‘Resilience is the ability of an individual or organisation to expeditiously design and implement positive adaptive behaviors matched to the immediate situation, while enduring minimal stress’ (Mallak, 1998a: 1); and ‘Resilience is a fundamental quality of individuals, groups, organisations, and systems as a whole to respond productively to significant change that disrupts the expected pattern of events without engaging in an extended period of regressive behavior’ (Horne and Orr, 1998: 31).

While defining resilience is clearly challenging, identifying the features of organisations and other social units that make them resilient is even more difficult. Although researchers differ in the terms they use to describe various features of organisational resilience, they nevertheless orient their analyses around such features as redundancy, the capacity for resourcefulness, effective communication and the capacity for self-organisation in the face of extreme demands. Resilience appears to be as much a set of attitudes about desirable actions by organisational representatives as it is about developing new capabilities. Identifying resilience where it exists is less onerous than creating it where it does not. Nevertheless, the various literatures do appear to consider resilience as the ability to respond to singular or unique events.
Weick's (1993) analysis of events surrounding the deaths of firefighters at Mann Gulch offers one important approach to conceptualising resilience. In subjecting the account of that disaster in Norman Maclean's book *Young Men and Fire* (1992) to an organisational reanalysis, Weick identified four principles, tenets or features that allow for effective response in rapidly changing, ambiguous conditions. When in place, these principles facilitate the collective ‘sensemaking’ that is required for a group to comprehend and respond to crisis or sudden change. These principles include, first, ‘bricolage’ (following Levi-Strauss, 1962), which is the capacity to improvise and to apply creativity in problem-solving. Weick cites Bruner (1983: 183), who argues that creativity (which Weick sees as a component of resilience) is ‘figuring out how to use what you already know in order to go beyond what you currently think’. Second, ‘virtual role systems’ preserve intact in each person’s mind a conception of the system of which they are a part. Each person ‘mentally takes all roles’, so that even in situations of peril and disruption everyone is able to maintain a shared vision of risks, goals and possible actions. This allows people both to fill in for an absent member (one who is either physically or cognitively absent) and to refer to that conception in order to align their actions continually with the shared goals of the group. Third, ‘wisdom’ is the capacity to question what is known, to appreciate the limits of knowledge and to seek new information. Fourth, ‘respectful interaction’, following Campbell (1990), consists of respecting the reports of others and being willing to act on them; reporting honestly to others; and respecting one’s own perceptions and trying to integrate them with others.

Weick et al. (1999) expand on these themes in their discussion of ‘high reliability organisations’ (HROs), adding to resilience a number of other qualities that engender the ‘mindfulness’ needed to ‘discover and manage unexpected events’. This is an urgent requirement in the organisations generally studied in the HRO line of research – nuclear power, air-traffic control, aircraft carriers – because of their rigorous operational environments and the necessity of forestalling the interactive complexity and tight coupling (Perrow, 1984) that are conducive to ‘normal accidents’.

For Weick et al. (1999), resilience is comprised of ‘coping skills’. They further elaborate on the related idea of improvisation as ‘the capability to recombine actions already in [the organisational] repertoire into novel combinations’ (101). In addition, the ability of people or subunits of an organisation to self-organise (they cite Rochlin (1989) in calling these self-organising systems ‘epistemic networks’) spreads problems around to a greater scope and range of expertise, thus boosting the chance of finding successful options. Weick et al. (1999: 100) note that ‘[t]his form of resilience materializes when events get outside of normal operational boundaries and knowledgeable people self-organize into ad hoc networks to provide expert problem solving’.

‘Ambivalence to past practice’ is another aspect of resilience noted by Weick et al. (1999). Here, the organisation shows a willingness to overturn or bypass experience, knowing that the current troublesome situation, although similar to those encountered previously, may in fact have quite novel features that require enquiry and ingenuity to address. They cite Ryle’s (1979: 129) concept of response to the unexpected as ‘a union of some Ad Hockery [sic] with some know-how ... the pitting of an acquired competence or skill against unprogrammed opportunity, obstacle or hazard’.
Weick’s research argues for the importance of virtual role systems, in which each member cognitively reproduces the organisation. Comfort’s (1999) work suggests that such networks can be achieved by linking those cognitions via improved communications and imaging technology. Comfort urges the fostering of responsive, adaptive behaviour among organisations: to get them to create a shared vision of risk from their separate identities. In the same vein, Weick, Weick et al. and Horne and Orr (1998) want to enable an organisation to maintain a shared vision among its constituent parts during times of crisis.

Although Weick et al. (1999) deal with resilience as a feature of HROs, in their review article, they argue that the features of HROs that make them reliable need not be confined only to organisations that manage complex, dangerous technologies.

High Reliability Organisations (HROs) have been treated as exotic outliers in mainstream organisational theory because of their unique potentials for catastrophic consequences and interactively complex technology. We argue that HROs are more central to the mainstream because they provide a unique window into organisational effectiveness under trying conditions (Weick et al., 1999: 81).

Mallak (1998a) has applied Weick’s (1993) conception of resilience to hospital settings. He chose three dimensions of Weick’s conception: ‘bricolage’, ‘virtual role systems’ and wisdom to explore resilience among health-care workers. While in the HROs that Weick et al. (1999) studied, resilience was a feature needed to help forestall catastrophe, Mallak suggests that resilient behaviours should help facilitate other welcome outcomes, such as shorter hospital stays, improved treatment results and lower costs. Mallak tested scales for measuring resilience through a survey of nursing executives. Factor analysis results from his survey yielded resilience factors different from, but still analogous to, those discussed in Weick’s (1993) paper, and which are also broadly aligned with those reviewed in Weick et al. (1999). These include the following:

- ‘goal-directed solution seeking’, encompassing ‘goals and a vision to guide creative processes in seeking solutions to problems’, which is comparable to ‘bricolage’;
- ‘avoidance’, or ‘approaching new situations with skepticism’, which Mallak notes is related to wisdom, but somewhat contrary to the idea of ‘bricolage’;
- ‘critical understanding’ or ‘effective use of information ... to make sense of the situation when chaos ensues’;
- ‘role dependence’ or ‘the ability to fill in for a missing team member’, which Mallak associates with Weick’s virtual role systems;
- ‘multiple source reliance’, which is the use of multiple sources of information to develop a coherent understanding of changing conditions; and
- ‘resource access’, or the use of tools or supplies as needed, even without securing permission each time (Mallak, 1998a: 6–8).

Mallak (1998b) elaborated additional resilience-enhancing principles: ‘perceive experiences constructively’; ‘perform positive adaptive behaviours’; ‘ensure
adequate external resources’; ‘expand decision-making boundaries’ (a dimension analogous to the underspecified structures of Weick et al. (1999) or the application of Rochlin’s epistemic networks); ‘bricolage’; ‘tolerance for uncertainty’ (that is, an ability to make good decisions when complete information is lacking); and ‘virtual role systems’. Mallak has interpreted this to mean that an organisation can function ‘in the absence of one or more members’. While this is important, Weick envisages another meaning: a virtual role system isn’t significant only when someone is missing, but at all times, enabling all members of an organisation to develop simultaneously a shared vision of emergent challenges and ranges of action.

One of the distinguishing features of HROs that appear repeatedly in the literature is their concern that novel, anomalous or surprising situations can develop; by their nature, these highly unusual and perhaps unique situations are not amenable to unvarying procedures, checklists or protocols. This is not to downplay the importance of procedures in this literature; rather, the character of the procedures is important. Some procedures stifle resilience while others facilitate it. A high-reliability organisation is one that exhibits resilience, among other qualities, in the face of unanticipated occurrences.

Researchers at the Disaster Research Center and the Multidisciplinary Center for Earthquake Engineering Research (Kendra, 2001; Bruneau et al., 2002) have identified several dimensions along which resilience can be measured. These are robustness, resourcefulness, redundancy and rapidity. Robustness is ‘the ability of elements, systems, or other units of analysis to withstand a given level of stress or demand without suffering degradation or loss of function’ (Bruneau et al., 2002: 6). Our analysis of resilience in this paper is concerned with the ability of a specific unit, the organisational network of the EOC, to withstand and rebound from stress. Alternatively, robustness is concerned with the ability of elements that support or comprise that specific unit to withstand or rebound from stress. Examples of elements supporting the organisational network of the EOC include the building housing the EOC and OEM. While the physical structure housing the EOC was not sufficiently robust to survive the 11 September attack, OEM did exhibit considerable robustness as an organisation, demonstrating an ability to continue to function even after losing its facility and a great deal of its communications and information technology infrastructure, the latter of which, when reconstituted, contributed to the resilience of the EOC as a functional and effective organisational network.

Redundancy is ‘the extent to which elements, systems, or other units of analysis exist that are substitutable, i.e., capable [of] satisfying functional requirements in the event of disruption, degradation, or loss of functionality’ (ibid.). Resourcefulness is the ‘capacity to identify problems, establish priorities, and mobilize resources when conditions exist that threaten to disrupt some element, system, or other unit of analysis’ (ibid.). Rapidity is the ‘capacity to meet priorities and achieve goals in a timely manner in order to contain losses and avoid future disruption’ (ibid.). As a performance indicator, the quality of rapidity perhaps comes closer to representing a more objective measure of resilience, while the others, especially resourcefulness and redundancy, are semi-subjective indicators. Bruneau et al. (2002: 1) note that the dimensions of redundancy and resourcefulness are the means toward the ends of robustness and rapidity. But these features may also be seen as having a telescoping relationship, wherein the robustness, redundancy, resourcefulness and capacity for rapidity of elements that constitute a socio-technical
system contribute to the system's overall resilience; that system further contributes to the resilience of any larger system of which it is a constituent.

An interpretation of the literature discussed above suggests that resilience should be seen not merely as the application of scientific knowledge and techniques, but also as an art. Weinberg (1985: 60), for example, argues that 'Science deals with regularities in our experience; art deals with singularities.' Although Weinberg's statement suggests a too-rigid distinction between the work of art and of science, it illustrates what emerges from recent writing on resilience: a concept of resilience as the product of a kind of craft skill, or an artistic interpretation and response to singular, unexpected, anomalous events as opposed to a rationalised predetermined response to what is regular or expected. Achieving resilience thus requires:

- a high degree of organisational craftsmanship, comprised in turn of individually exercised craftsmanship;
- the ability to respond to the singularities in the interactions of social, technological and natural systems, which requires artistry; and
- a sense for what is the same and what is different from prior experience in every new experience, so that responses are continually adjusted, anomalies are sensed, and learning occurs and is incorporated into the next incremental unit of response.

Indeed, the theme of 'same yet different' is common throughout our interviewees' comments. Meeting the vagaries of the operating environment and being prepared for sudden discontinuities require vigilance and the capacity for combining experience with new learning.

**Resilience in New York City**

We do not argue that all of the aspects of resilience summarised in the foregoing section apply to the organised response to the 11 September attacks in New York City. Some of those conceptions are, if not contradictory, then at least poorly aligned with each other. Rather, we have tried to show links, similarities and points of departure for recent thinking about resilience. We do argue that the emergency management organisation in New York City evinced many qualities of resilience and that, to the extent that those qualities can be reproduced elsewhere, other emergency managers might be able to enhance their capacity to respond to catastrophic events.

One key aspect of the response to the 11 September attack is that, although the EOC was destroyed, the emergency management organisation was not. Rather, the organisation itself exhibited robust, adaptive behaviour, demonstrating considerable improvisation, evidence of goal-directed solution-seeking and incorporating resources from diverse sources. A pier on the Hudson River, which had been scheduled to be used for a bio-terrorism drill on 12 September, was leased for long-term use. OEM staff, working closely with the Department of Citywide Administrative Services and other departments, then arranged for the delivery of office equipment and other supplies and hundreds of computers; these were installed within 36 hours, with more arriving thereafter.
When we arrived at the new EOC, some 96 hours after the attack, we found not a makeshift facility, but a two-city-block-long space already half-filled with an expanding number of people, worktables, copy machines, maps, charts and over 200 computers, all networked and functioning – a number which was to grow during the period of our observations. The number of workstations alone was nearly twice that possible at 7WTC, with spaces laid out for meetings, press briefings and offices: sometimes merely demarcated by seclusion from ongoing activity, sometimes by curtains, but soon evolving in the formality and semi-permanence afforded by modular partitions. The facility did lack the well-appointed furnishings and finished touches of 7WTC and it did bear abundant evidence of its rapid assembly, but it was nevertheless a functioning, continually-maturing site for the performance of all necessary emergency management functions.

Mirroring the pods in the original EOC, staff established comparable pods at the new EOC. It is important to stress, particularly in terms of the resilience dimension of rapidity, that the improvised EOC that was set up over a period of 48 to 72 hours of the attack was already twice the size of the original, both in size and in terms of the number of organisations represented and computers involved. By September 15, an additional pod for logistics was established, as was one for debris, with at least eight computers assigned to it, demonstrating rapid organisational adaptation to the particular needs of this event. Over 250 computers and a comparable number of organisations were eventually present in the EOC, and some 700 people worked there or passed through during the day. The features of redundancy, resourcefulness and rapidity are well-illustrated in the re-establishment of the EOC, though the significance of redundancy was to a large extent illustrated by its absence. These events, however, show the qualities of redundancy and resourcefulness to be strongly interrelated. Resources, and resourcefulness, can create redundancies that did not exist previously. The redundancy exists in a latent form as a set of possibilities to be enacted through the creative efforts of responders.

There was no pre-established back-up facility at which OEM staff and other responding departments could conduct operations even on an interim basis. Any backup facility should also have been geographically removed from the primary centre, and this might have increased the rapidity with which the city could orchestrate the multi-organisational response. Instead, OEM staff had to seek space at several intermediate locations, eventually settling on the Police Academy for two to three days. Nevertheless, events would later demonstrate that any back-up facility would probably have been inadequate given the wide-ranging demands of this disaster. Improvisation on a large scale would still have been necessary, as was seen at the site that became the EOC for the next five months. One senior OEM official said, in fact, that the city would have been unable to manage the event entirely from 7WTC even if it had not been destroyed.

OEM compensated for the EOC's lack of physical robustness and physical redundancy through strategies that not only succeeded in mobilising resources but also created an alternative physical facility where none had existed before, which in turn contributed to the overall resiliency of the EOC organisation. With space as well as computing and communications equipment, OEM staff were able to establish a functioning replica of the old facility. There was no pre-existing redundancy for the EOC, but with access to resources from within the
city and relationships with the private sector, OEM substituted for redundancy. Obviously, one source of this enormous capacity for resilience inheres in the city itself. New York City alone, even without recourse to external sources of assistance, possesses immense capacity, with emergency services departments equalling the population of a small city, and a resident citizenry possessing every art and talent.

New York was also the focus of an outpouring of support that further enhanced its response capacity. Resources of nearly every description arrived, with convergence becoming at times a management problem in itself. This convergence of volunteers and equipment is well-documented in reports of other disasters as well (see, for example, Neal, 1992, 1994. See Kendra and Wachtendorf, 2001 for a discussion of convergence in New York City). In terms of the community aspect of resilience, there was a network of personal contacts between the emergency managers in OEM and their colleagues in other nearby communities. They knew each other and often attended meetings and conferences together, and thus were able to ask for and give assistance more readily. For example, personnel from nearby Nassau and Suffolk counties worked at the logistics station, augmenting the existing staff. Police officers from New York State Police staffed barricades and checkpoints. National Guard personnel and police from well beyond the city's borders – and ultimately from across the country – also arrived to provide help in a similar capacity. The role these assisting officers and military personnel played enabled New York City's officers to work at tasks requiring more local knowledge. Such emergent redundancy was not limited to the police force but also seen in a variety of areas such as logistics offices and fire departments.

Another large source of personnel were the Red Cross volunteers who served hot meals (prepared by a commercial caterer) in the EOC and in respite facilities established close to Ground Zero – at first near forward-staging areas in outdoor tents and then later at the Marriott Financial Hotel and St John's University. In these respite centres established at the latter two facilities were cots, easy chairs, showers, dining halls, televisions and computers with Internet and e-mail access. They also provided such services as massage therapy and chiropractic care, counselling and first aid. Urban search-and-rescue teams arrived from across the US. Nextel supplied thousands of radio-telephones. Other Hudson River piers were pressed into service for FEMA office space and the establishment of the Family Service Center, where relatives of victims and survivors displaced from their homes or jobs could find assistance with the many administrative processes. New York City and Company, the visitors’ bureau, helped volunteer and other relief workers find accommodation. Responding to the urgent and ongoing need for maps and spatial analysis, Hewlett Packard, ESRI and professors and graduate students from local colleges were among those who supplied GIS support and equipment to the EOC, in addition to GIS specialists from within the city government. The development of the map production and distribution capability, much greater than existed at 7WTC and amounting essentially to a mapmaking factory, was an emergent function, a self-organised ‘ad hoc network to provide expert problem solving’ (Weick, 1999: 100) and a key indicator of resilience (discussed further in Kendra and Wachtendorf (forthcoming)).

A complete listing of supplies and services donated to or purchased by New York City would fill many pages, but other resources included: large quantities of office supplies, clothing, medical supplies and personal-care products
challenges of crisis management

(toothbrushes, toothpaste, combs, socks, underwear, contact-lens solution, tissues), many of which were laid out for the taking in the EOC. At first only snack foods and donated baked goods were available, but the food service component evolved to the provision of hot meals (with two entrees). A dining area was contrived, first with simple folding tables but soon expanding to include café tables, tablecloths, floral centerpieces and later holiday decorations, cold-drink coolers and other restaurant accoutrements. Outside the EOC, trucks and barges laden with sand provided security against unauthorised landward and seaward approaches to the pier. As these examples suggest, a large influx of materials can, at least in some instances, counteract a lack of redundancy.

While none of OEM’s regular staff was killed, its members were dispersed and out of regular contact with each other for several hours after the attack. Other departments lost personnel, some of whom occupied key positions in these departments. Nevertheless, the EOC as a functioning entity was able to preserve its organisation, even though it had to reconstitute that organisation in an entirely new location. The creativity of the facilitating agency – OEM – lay not so much in creating something new, but rather in reproducing what it had lost: the familiar socio-technical system in which personnel had worked and trained in previously. Physical elements of the EOC, such as the workgroup pods, the podium, the raised platform for the watch officers, were replicated and expanded in size and scope. The ability to re-establish that level of familiarity with respect to physical facilities and arrangements helped to maintain the shared vision that most researchers agree is important to a resilient organisation and, in this case, a resilient community. OEM staff and EOC representatives from other departments did not merely use what they already knew; they drew upon resources in order to duplicate familiar operational patterns, patterns that were expressed in the spatial arrangement of their facility. When existing procedures were destabilised in the face of unexpected catastrophe, OEM staff and other members of the EOC organisation created the operational context for maintaining them. This was possible because, through training, frequent drills and exercises that often involved the mayor, OEM and departmental representatives in the EOC organisation had developed a capacity for adaptive behaviour that was not dependent on either specific physical facilities or specific technological systems. As one senior OEM official said, ‘It [the organisation] was in my head.’ OEM thus helped create, not a new ‘shared vision’, but the means of preserving the vision that had guided its activities prior to 11 September.

Resilience Continued

This paper has highlighted the close relationship that typically exists between community and organisational resilience. For example, resilient communities provide the context in which organisations themselves become more resilient. An economically strong community is better able to respond to disastrous events than one that is economically troubled. At the same time, organisations provide the infrastructure for a community’s resilience, in that organisational resources, networks and overall capacity are what make coordinated community-wide response possible. In turn, organisations draw their strength from their human and material resources and knowledge and also, importantly, through the creativity
and initiative of their members. Resources are of little use if the relevant organisations are unable to innovate, create and respond appropriately under extreme conditions. The relationship is iterative and telescoping, played out across multiple scales within organisations, between organisations and between organisations and the community.

The argument here is not that the response of OEM, or of New York City in general, was flawless in this case. The absence of an auxiliary facility was a noteworthy shortcoming: one which was recognised by OEM staff but which they felt unable to influence. Not having sufficient redundancy in the form of an auxiliary EOC profoundly affected the response, especially early on. A comprehensive multi-organisational analysis of events in the first few hours has yet to be developed, but it seems likely that initially there was considerable confusion among responders caused by the sheer magnitude and suddenness of the event and exacerbated by the damage to communications. Some officials have stated that OEM was too distracted by the loss of the EOC to perform much coordination, and that the response suffered in this respect. A high-ranking fire official criticised OEM for not being more effective, over a long period of time, in mitigating the long-standing tensions between the police and fire departments. Responding agencies continued to experience intra- and interorganisational problems in the days following the attack. For example, we spoke with a high-ranking fire official who expressed fairly bitter criticism of OEM’s handling of at least one critical resource request, naming three OEM officials as particularly obstructive. One logistics officer in the EOC was very dissatisfied with the functioning of the organisation, while another logistics officer said that this emergency was a bad time to introduce E-Team, a planning software which no one had used before and which required practice and training. Indeed, police cadets were assigned as E-Team operators, though some of its functions, as well as requirements for interpreting and prioritising information, assumed more knowledge of emergency management principles and organisation than the cadets possessed. However, it should be noted that some other officials have insisted that OEM has not received enough credit for its accomplishments in the disaster, and others, when describing their roles in the response, were quite deferential to OEM’s authority.

Our findings with respect to the response to the World Trade Center attack support conceptions of resilience that are found in the existing literature, but we also find some divergences, especially with regard to the anticipation-resilience dichotomy presented by Wildavsky (1991). Anticipation is the perspective he prefers only for situations in which there is ‘considerable knowledge’ and change is ‘predictable’ (1991: 123); these are the minority. In other situations, he argues, problems are addressed through actions that demonstrate resilience. We argue, however, that resilience and anticipation are not polar opposites or mutually exclusive characteristics or states. Indeed, Wildavsky himself often conflated resilience and anticipation, probably because they are so closely related. Resilience is achieved by preparing, not for a particular event, but rather for the maintenance of a range of capabilities or functions that will be needed after any kind of event. ‘The organisation was in my head’, the statement made by the OEM official, is a key phrase in this respect, because the organisational outline or template ‘in his head’ was a schematic of tasks to be performed and the interorganisational relationships that would accomplish them. Anticipation lay in the design of an organisation that would focus on the dimensions of the
response – what, how, where, who – and that would be able to ‘think’ about needs and then fulfil them.

The case of New York demonstrates that, rather than being conceptually distinct, anticipation is an integral dimension of resilience. The distinguishing feature concerns what is to be anticipated. NYC certainly devoted attention to anticipating, and preparing against, a certain range of expected hazards, biological attack among them. Researchers from DRC attended a bio-warfare exercise just a few months prior to the attack and were again scheduled to observe another bio-terrorism exercise on 12 September. There is a strong measure of anticipation evident in NYC’s resilience: in its previous training and drills, and in the organisation itself, which was able to expand dramatically to cope with new demands. There was no rigidity that excluded new agencies from participating.

The relationship is perhaps more like that of the centralisation-decentralisation pattern described by Weick (1987, citing Perrow, 1977): effective decentralised operations are first preceded by some kind of centralising influence, such as prior military service or other kinds of common training. Just as, under certain circumstances, there is no decentralisation without centralisation, there is no effective resilient response without anticipation. Stated differently, anticipation and resilience are related and mutually reinforcing activities, knowledge and skill sets that are operationalised at different times. As Kreps (1991) has observed, preparedness and improvisation are both required in emergency response. The emergency response in New York was as tied to previous planning as it was to rapid creativity. Some aspects of that creativity, in turn, were founded in pre-existing organisational attributes: a willingness, for example, to bring in outsiders to help, even going beyond existing mutual aid agreements. This latter action is not a universally-shared organisational attribute by any means (and it is not consistent within OEM, either). The organisation showed considerable flexibility in size, as well: substantially increasing numbers of departments and agencies and almost doubling the number of personnel present from those respective agencies actually involved over those possible at 7WTC.

The example of the loss and reconstitution of the EOC also sheds light on the concepts of EOCs as organisations and as places. Perry (1991: 204) has characterised the EOC as ‘a function, a place, and a structure’, while Quarantelli (1979) has looked at EOCs explicitly in terms of fundamental questions of who is working, what they do and where they do it. In later work, though, Quarantelli has somewhat downplayed the significance of the place dimension, highlighting the importance of the EOC as a social entity (1997; see also Wenger et al., 1987). He states:

At one level, the place – particularly the physical facilities – is of relative importance. As a minimum, adequate communication provision, computers, sufficient work space and certain resources, such as maps and equipment inventories, are required. However, the physical facilities in themselves cannot make up for social factors (1997: 52).

He later observes (ibid.): ‘An EOC is a social system; if relevant and generic functions are carried out, its location and the physical facilities are relatively unimportant.’ The key phrase is ‘if... carried out’. If the functions are carried out adequately, one might conclude that the place, however configured, was adequate. While the relative location may be of less significance (and Quarantelli (1979)
outlined important considerations for location, activities occur in a place, leaving place as a still-significant dimension. We suggest that it is not easy to separate structure, function and place, and that a resilient response requires the maintenance of this triad. The place may not be important, but a place is. Quarantelli (1979) observed that even in situations where there is no pre-planned EOC, one or more EOCs, or less-developed command posts, very often emerge anyway, an observation reinforced by Scanlon (1994). In one case, Wenger et al. (1987) noted an impaired emergency response when no EOC, but rather multiple command posts, existed. Scanlon (1994) also reports coordination difficulties when there is no EOC. Therefore, place-seeking/place-making could be added to the list of six functions that Quarantelli identified: a function that closely parallels the existence of structure, and the rapidity of which bears directly on the resilience of the organisation. Stated differently, if the structure does not have or make a place, the emergency response falters.

Certainly the importance of a designated, well-equipped place was demonstrated in the WTC attack: the loss of 7WTC occasioned the immediate search for substitute places: initially as basic as the mobile communications van and then evolving in sophistication. We can see that the functions of both OEM (the custodian of the EOC) and the EOC as an organisation were disrupted by the loss of the EOC as a place. The organisational structure persisted, though, as a latent force or set of potentials across the different organisations as the members dispersed. But though dispersed, they did not remain so; rather, they sought to regroup, a goal that was identical to relocating: to searching for a new place. For OEM, the communications van served as a marshalling point; other organisations actively sought information on a temporary EOC. One high-placed official could not remember how he learned that the EOC was being set up at the police academy, but that information spread throughout the responding organisations. That searching for and discovery of information suggests that the structure persisted; it was robust, though clearly under stress. The EOC structure and concomitant function continued when there was no place, preserved or coded in the ongoing relationships between the constituent organisations of the EOC and extending across, space, but the structure and function immediately became directed to place-seeking activities. The spatial arrangements at Pier 92 ultimately reflected the structure. Other spheres of activity show why the place dimension of an EOC should not be discounted; for example, Alexander (1993: 439) observed that post-disaster temporary housing may gain ‘trappings of permanence’, while Veness (1993: 319) has observed that ‘homeless’ people ‘define and interpret their own versions of home’. Pier 92 took on many trappings of permanence and even domesticity, although it was only a transient facility. What a facility lacks at the outset, even its very existence, people will work to create. Seen within the lexicon of resilience that we have elucidated, ‘robust’ means not just strong and durable, but suitable in all particulars. From a planning or policy perspective, a resilient EOC will devote exquisite attention to detail in the establishment of its place.

Conclusion

Given the foregoing, we return to what the case of New York City can tell us about resilience or, stated more generally, about socially constituted adaptability to unpredictable ambient forces. Clearly, an organisation involved in emergency
response wants to maintain established and known aspects: policies, procedures, practices or tools. Yet, as illustrated by the World Trade Center disaster, these aspects of an organisation and its response can fail or prove inadequate to deal with the emerging disaster situation. It is at these times that resilience proves instrumental for bolstering effective response efforts.

The example of New York shows that craftsmanship with respect to problem-solving – almost an artisanal quality – allows people to deploy rapidly adaptive strategies. Like any craftsmanship, that associated with emergency response derives from training, experience and the ability to become inspired by features in the surrounding environment, and to translate those inspirations into creative and innovative actions. Inspiration here is not meant in an ephemeral sense. Instead, it implies that the craftsman has taken note of a feature or features in the surrounding environment, engaged in a cognitive process of interpretation of that feature to produce a vision of a new goal or a previously unthought-of way to achieve an existing goal and redirected his or her actions. Just as an artist may employ a new tool, new material or new strategies, so too do decision-makers in a resilient organisation invoke new tools, materials and strategies to rebound when established methods fail or when unanticipated circumstances arise. In both cases, training and preparation remain fundamental, but creative thinking, flexibility and the ability to improvise in newly emergent situations are vital.

Acknowledgements

This research is supported by grants from the Multidisciplinary Center for Earthquake Engineering Research (MCEER), New Technologies in Emergency Management, No. 00-10-81 and Measures of Resilience, No. 99-32-01, by special supplemental funding provided by the National Science Foundation following the 11 September attacks and by the Public Entity Risk Institute (No. 2001-70). An earlier version of this paper was presented at the 48th North American Meetings of the Regional Science Association International. Charleston, South Carolina, 15–17 November 2001. We are grateful to Kathleen Tierney and to the anonymous reviewers for their comments and suggestions on successive drafts of this paper.

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Introduction

When, in July 1992, the Italian anti-Mafia Judge Borsellino was assassinated only one month after his friend and colleague Falcone had suffered the same cruel fate, his family refused to accept an official state funeral because they felt ‘the state’ was guilty of his death as a result of the lack of vigour in curtailing and prosecuting the Mafia. This emotional denunciation of government policy added to the swelling chorus of criticism already directed not only at the incumbent government which, at the time of the assassination, had been in office for less than a month but, more importantly, at Italy’s entire political class. It was a symbolic act of anger, despair and defiance. To some politicians, it was a painful reminder of a similar event fourteen years earlier when the widow of Aldo Moro, the former Prime Minister and Chairman of the Italian Christian-Democratic Party and slain victim of a protracted kidnap drama staged by the left-wing Red Brigades, similarly refused to allow a state funeral.

Then, the main reason was that throughout the traumatic period of Moro’s kidnap, his former colleagues had all distanced themselves from him and refused to negotiate his release even at times when such a negotiated release was virtually handed to them on a ‘silver platter’ by the kidnappers. At the same time, the official response to the crisis – one of the largest manhunts in history – had produced no results at all, thus demonstrating the vulnerability of the established order against these kinds of attacks.

On both occasions, the family’s refusal caused politicians major embarrassment and frustration because, to them, the ritual of a state funeral provides a prominent dramaturgic opportunity to reach out to the mass public at a time of crisis; to display the required combination of grief and brisk determination, and to emphasise the resilience of the body politic as a whole. Politicians have more insidious motives for wanting to stage a dramatic public display. As Kertzer (1988: 140) observes in his discussion of the Moro example, ‘what the politicians were so eager to bury that day were not the remains of Aldo Moro but the political disaster his kidnapping and death had produced’.

The examples of the Red Brigades and Mafia crises in Italy illustrate the vital role that images, symbols and rituals can play in the dynamics of crises. It is a central presumption of this argument that despite the importance of these political crises, they do not seem to be very well understood in recent crisis research. Current literature on crises and emergencies stands out with its strong orientation to managerial issues of organization, planning and response.
Furthermore, this managerialist orientation tends to be interpreted rather exclusively in functionalist-technocratic terms; analysis being for policy and organizational practices. This takes the form of detailed discussion of issues of mitigation, preparedness, response and recovery and within each of these emergency ‘phases’, a critical examination of problems of command, control, communication and intelligence (to borrow the language frequently employed by crisis analysts) in various types of crises (Petak, 1985; Drabek, 1986; Charles and Kim, 1988; Comfort, 1988; Gow and Kay, 1988; Rosenthal, Charles and ‘t Hart, 1989; Gow and Otway, 1990; Lagadec, 1990; Sylves and Waugh, 1990; Rosenthal and-Pijnenburg, 1990; George, 1991; Parker and Handmer, 1992).

In a more prescriptive mode, there has been a recent hausse in practitioner-oriented handbooks specifying detailed guidelines on the ‘how-tos’ of crisis management (Fink, 1986; Raphael, 1986; Nudell and Anthokol, 1988; Regester, 1989; Hodgkinson and Stewart, 1991; Lagadec, 1991; Pauchant and Mitroff, 1992). This reflects an attention bias existing among practitioners. In an examination of mainly North-American companies’ attitudes and activities with respect to crisis management, Mitroff, Pauchant and Shrivistava (1988) found that the so-called ‘technical family’ of crisis management concerns (technology, infrastructure) was 200 times more developed than the ‘psychological and cultural family’, relating to issues of stress, anxiety and cultural attitudes towards risk and vulnerability.

Crisis analysts need to be aware of the fact that this instrumentalist orientation dominating their field is not altogether unproblematic. It rests upon certain philosophical, epistemological and, indeed, normative assumptions which can be summarized in terms of a functionalist paradigm emphasizing control (Burrell and Morgan, 1979; Kouzmin, 1983). The control paradigm constrains the scope of large portions of current crisis management analysis in many as yet under-explored ways.

The present essay is designed to communicate a two-fold message. First, crises and crisis management are both inherently complex and politically controversial phenomena; ones which can only be analysed to the full extent if the managerial, functionalist decision making approach is complemented by, and contrasted with, a more power-critical perspective. Secondly, one useful set of tools lending themselves to a power-critical analysis of the dynamics of crises and of prevalent crisis management practices can be found in theory and research on the symbolic dimensions of politics and administration. In contrast to the positivism and functionalism in the great majority of current crisis management studies, the literature on symbolic action departs from a more constructivist perspective in which the nature of social reality cannot be objectively observed and assessed but, instead, is highly contingent upon the different subjective constructions made of it by different actors (Berger and Luckman, 1966).

In addition, the symbolic action literature has, by tradition, developed into a very effective instrument for a power-critical analysis of official actions and policies. It does so by looking behind the technicalities and official rhetoric espoused by political and government actors and by exposing the ways in which official actors use powerful language and other symbolic tools to shape interpretations of events and achieve their ends. This more general perspective on politics and administration can be profitably applied to the domain of crises and crisis analysis (Hedberg, Nystrom and Starbuck, 1976; Selbst, 1978; Weick, 1988; Saussois and Laroche, 1991).
A cursory survey of key characteristics and components of a symbolic action perspective on politics and government will be outlined and it will be shown how the application of such a perspective to the study of crises and crisis management affects conceptualizations of crises and, consequently, opens up new domains for research into crisis management. In particular, the extent to which three core features of symbolic action – framing, rituals and masking – can be found in processes of crisis management can be explored. In line with the primary objective of providing for a more power-critical analysis of crisis management, emphasis is placed upon the use of symbolic strategies and tactics by ‘official’ crisis managers. In particular, analysis will indicate how symbolic instruments of crisis management serve crucial political functions for power holders.

One important caveat needs to be identified at this point. It should be noted that such a reconceptualization of crisis management does not, in itself, accord any special place to incumbent authorities or bureaucratic organizations formally responsible for defining and defending the established order. Crises are constructed and manipulated by a variety of stakeholders within, but also outside, governmental circles (Rosenthal, ’t Hart and Kouzmin, 1991). This is not to deny the crucial position, power advantages and special burdens of responsibility that lie with public officials and agencies. However, adopting a symbolic perspective should not amount to a one-sided critique of what political-administrative elites say, do, or refrain from saying or doing.

The same analytical apparatus can be applied to studying and scrutinizing the role of other groups, including non-power holders and special interest groups. They too engage in symbolic manipulation to achieve political ends. They too espouse particular knowledge and authority claims. They too engage in miscalculation, miscommunication and norm violations. In reviewing the work of some prominent analysts in the symbolic tradition, one cannot help but feel that this essential fact is often overlooked or conveniently played down (Foucault, 1977; Edelman, 1988).

Symbolism and the Nature of Crises

One way to analyse politics is to see it as institutionalized drama (Rosenau, 1973; Combs, 1980). Such drama provides a way of expressing and channeling the heterogeneity of values, perceptions and interests that inevitably exist in society. The structure of political institutions and the way they operate reflect elaborate sets of interaction rules enabling, yet also selectively impairing, the articulation of demands, the settlement of conflict and the formulation and implementation of public policies. A key aspect of such a system is communication; especially among and between elites, social groups and mass publics necessary to keep the political process going.

As the substance of the issues under discussion can be too complex to be widely understood or too sensitive or offensive to some stakeholders to be explicitly expressed, they tend to become subsumed into symbols that lend themselves to more parsimonious and flexible communication (Edelman, 1964). Hence, intricate and often highly technical macro-economic and fiscal discussions (for example about appropriate levels and forms of taxation) are symbolically reframed in terms of ‘tax battles’ between ‘free-market liberals’ and ‘welfare-state interventionists’.
Put in this form, policies lend themselves to dramatic representation in the mass media, in parliament, if need be in the courts and certainly in direct encounters between those who govern and those who do not but are affected by policy outcomes. Although particular cultures may evolve typical or preferred symbolic systems, these are not fixed entities:

Our symbol system, then, is not a cage which locks us into a single view of the political worlds, but a melange of symbolic understandings by which we struggle, through a continuous series of negotiations, to assign meaning to events (Kertzer, 1988: 175).

Dramatic political gestures can take many forms. One example is the launching of major ‘policy initiatives’, appropriately labelled for instant symbolic evocation and recollection and to gather widespread support (for example the ‘War on Drugs’ or the ‘War on Poverty’; the ‘Anti-Abortion Crusade’ or the ‘Combat Inflation Now’ (CIN) programme of president Ford – note the apparent popularity of military metaphors). Similar dramatization is also pursued by groups that seek to influence policymakers to adopt a certain set of measures such as various action groups calling for a ‘battle against AIDS’.

Equally frequent are personified dramatic acts; many of which are in the form of rituals governed by meticulous, often unwritten, rules concerning time, place, presentation and with clearly defined standards of appropriate conduct. Such dramatic moments can be found in the inauguration or demotion of office-holders; State of the Union messages by the head of state; question time debates between the prime minister and the leader of the opposition; weekly meet-the-press encounters with leading politicians and an elite group of journalists; official state visits to and from foreign powers and major international conferences.

All of these symbols and dramatic acts structure political life and convey important most fundamentally reassuring, messages to those who do not participate. In doing so, they fulfill important functions in the maintenance of political order and stability. In a more critical spirit, Edelman (1971, 1977, 1988) argues that the use of political dramaturgy, language and symbolism serves, intendedly but also unintendedly, to obtain the ‘consent of the governed’, even in the face of great disparities in wealth, status and power.

The field of symbolic action evolves around central themes of political processes as constructed realities; the role of symbols, myths and rituals as instruments of such social construction and, consequently, the crucial manipulative functions of language, imagery and communication. Behind these broad catchwords lies a diverse mixture of ideas, perspectives and empirical research which once were quite prominent in sociology and political science but appear to have fallen from grace since, with perhaps the notable exception of the growing literature on organizational symbolism (Pondy, Frost, Morgan and Dandridge, 1983; Turner, 1991). In the emergent age of ‘postmodernist’ social theorizing, such subjectivistic perspectives on politics and society may find renewed prominence. However, even a cursory look at the current content of key academic journals shows that social science is still very much in an era overwhelmingly dominated by positivist empirical approaches.

There is no single integrated statement of the symbolic perspective on politics and administration. Rather, elements of the framework can be found in different
‘cores’ within political science, sociology, anthropology and organization theory (Elder and Cobb, 1983; Kertzer, 1988; Turner, 1991). In addition, there are many related sub-fields and themes, including communication theory, cultural analysts (Hofstede, 1980; Geertz, 1983) and discourse analysis (Edelman, 1977, 1988; Nimmo and Sanders, 1981; Jablin, Putnam and Porter, 1987; Thompson, Ellis and Wildavsky, 1990).

Crisis are linked to social, economic and political conditions and tensions. As many early students of crisis phenomena have emphasised, a full understanding of these factors is essential to understanding crisis management (Prince, 1920; Sorokin, 1942; Coser, 1956; Halper, 1971; Almond, Flanagan and Mundt, 1973). This basic premise tends to get lost in current crisis definitions which focus on crises as unpleasant events challenging decision makers to respond under conditions of threat, urgency and uncertainty (Rosenthal, ‘t Hart and Charles, 1989: 3–33). To put the focus exclusively on the decision making function might easily lead analysts to turn a blind eye to the broader significance of crises. From a more sociological perspective, a working notion of crisis might start with the idea that it highlights discontinuities and disruptions of dominant conceptions of social and political order – be it in different ways and to different extents (Rosenthal, 1978).

The current crisis literature’s emphasis on the technology of crisis response (issues of organizational forms, the structuring of information processes, media management, stress-coping procedures) appears to turn these socio-political dimensions into a black box of ‘contextual factors’. In as far as politics and conflict are all acknowledged as key elements in crisis management, they are often treated as ‘problems’ that stand in the way of an ‘effective’ crisis response (Rosenthal, ‘t Hart and Kouzmin, 1991).

A symbolic perspective on the nature and dynamics of crises can be useful in redressing this imbalance and bringing the full extent of the political dimensions of crisis management back to the centre stage. Starting with the very conceptualization of crisis, the symbolic perspective re-focuses the analytical debate. From this perspective, then, a crisis can be defined as a breakdown of familiar symbolic frameworks legitimating the pre-existing sociopolitical order. Crises come to the fore when the everyday dramas of public life are disrupted, either by an exogenous event, by cumulative and hitherto insufficiently recognized unintended consequences of processes of organization and governance (Sieber, 1981) or by the deliberate activities of particular groups bent on achieving such a perceptual breakthrough. This alternative conceptualization harbours a number of consequences:

1. Crises are a perceptual category: for a crisis to come into being, a sufficient number of influential individuals and groups must become aware of important changes in their environment (Schorr, 1987: 125–127).
2. Crises, whatever their origins, therefore always contain multiple levels of conflict. This cognitive conflict occurs at the intra-individual level, where affected individuals are faced with conflicting cognitions: on the one side, familiar beliefs sustaining the existing order and personal stakes in it, and, on the other hand, significant, repeated and undeniable disconfirming information that some things are seriously wrong. At the societal level, this cognitive conflict is emulated in the activities of multiple groups and organizations espousing different definitions of the situation and offering different
claims about causes, impact and further development and advocating alternative and often conflicting strategies as to how to deal with the situation. Examples of the collusion of intra-individual and societal conflicts can be found in psycho-social research into the experience of creeping and man-made disasters such as Love Canal, Three-Mile Island and Chernobyl (Edelstein, 1988; Fowlkes and Miller, 1988; Brommeth, 1989).

3. Crises are an affective category: the dramatic challenges to previously-held world views that crises bring about, compounded by first-hand or indirect experience of material damage, human suffering or gross injustice, generate a significant amount of anxiety. Barton (1969) aptly defines disasters as situations of collective stress. More specifically, crises highlight and amplify personal insecurities and feelings of vulnerability and may serve to decrease the perceived self-competence and self-esteem of those affected (Wolfenstein, 1957).

4. Crises contain an element of de-legitimation: the perceived changes are interpreted in such a way as to call into question the past, present and perhaps future functioning of particular aspects of society and, in many cases, government. In doing so, they challenge the knowledge, status and authority claims of those individuals and groups seen to be responsible. Precisely because crises challenge the primal political symbol of ‘security’ (Edelman, 1977: 4–5), they also challenge the competence of the institutionalized (and self-proclaimed) guardians of security, the state and its political-administrative leadership. Crises, then, should be viewed as dynamic forces in ongoing, dynamic processes of legitimization, de-legitimization and re-legitimization. De-legitimation at the macro-level is prominent during socio-economic and political regime crises. A rough scenario of crisis-induced de-legitimation reads as follows: shortfalls in socio-economic performance by existing regimes – increased political opposition – greater difficulties in sustaining governmental performance – further increases in opposition, including anti-regime and anti-system opposition (instead of merely anti certain policies or anti incumbent elites) – aggravation of crisis and possible regime breakdown (Habermas, 1975; Linz and Stepan, 1978). At the micro-level, the de-legitimation process can be witnessed in the disenchantment that disaster or terrorist victims and bereaved often experience in their contacts with corporate and governmental bodies in seeking explanations (or what is happening and in pursuing post-crisis damage compensation and safety improvements.

5. Given this context at fundamental ambiguity, conflicting cognitions, collective stress and latent or manifest de-legitimation, crises provide opportunities for mass mobilization and institutional self dramatization. Conventional crisis definitions tend to ignore the basic multivalence of crises. Whilst decision makers may indeed experience threat, urgency and uncertainty, other officials, groups and organizations will harbour the exact opposite interpretation (Bryson, 1981). For one thing, to mass media agencies such as CNN, a major international crisis is nothing short of life-blood. In fact, CNN's coverage of the Gulf War provided the vehicle of that cable network's definitive international breakthrough. Similarly, whilst the serious riots surrounding the inauguration of Dutch Queen Beatrix demanded a heavy toll from the Amsterdam and other police forces,
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Central-government public-order bureaucrats welcomed them as a rare opportunity to re-affirm their pleas for a stronger, better equipped and trained anti-riot police capability in the Netherlands. Edelman (1977: 47) puts it quite succinctly: ‘Any regime that prides itself on crisis management is sure to find crises to manage, and crisis management is always available as a way to mobilize public support’.

In many cases, decision makers themselves may be ambivalent in their interpretation of events. This makes the on-going battle between different groups for dominant definitions of the situation all the more interesting. Authorities themselves need not automatically be defenders of the status quo. They may, in fact, acknowledge the threats a crisis poses, while at the same time they too may conceive of possibilities of using the crisis to further some of their aims. The fact that certain aspects of the old order are de-legitimized opens up opportunities for rallying people behind visions of a new order, or at least to solicit mass support for measures that can be depicted as ‘lessons’ for the ‘improvement’ of the old order.

Sometimes the cathartic effect of a major crisis is a pre-requisite for change-oriented policy-makers being able to propose a temporary abandonment of ‘muddling through’ patterns of politics in favour of centralized styles of governance and far reaching decisional powers ordinarily considered unthinkable. This too is the logic behind various constitutional provisions concerning ‘crisis government’ in various countries (‘t Hart, Rosenthal and Kouzmin, 1993). In Belgium, for example, the widely shared sense of budgetary crisis in the mid-1980s contributed to parliament agreeing to drastically reducing its influence on government policymaking for sustained periods of time.

In the latter example, the crux lies, of course, with the question as to whether the perception of crisis that formed the basis of this self-initiated abdication of democratic authenticity in favor of executive rule accurately reflected the state of the Belgian economy and the government’s budget. An alternative interpretation would be that this image of crisis was more or less deliberately constructed and amplified by groups of stakeholders exploiting the opportunity structure that seemed to present itself at the time. In other words it is useful to ask: was it a ‘real’ or a ‘pseudo’ crisis? This takes one from the question of the symbolic conceptualization of crisis to the issue of crisis management strategies.

Crisis Management as Symbolic Action

The symbolic re-interpretation of the crisis concept yields five inter-related analytical dimensions to crisis management:

- **Perceptual control**: the ‘management’ of cognitive images about events;
- **Conflict reduction**: re-aligning different and mutually contradictory definitions of the situation;
- **Affective control**: the ‘management’ of individual and collective emotions generated by the breakdown of routine symbolic order;
• *de-and re-legitimation*: ultimately, some new equilibrium of more or less predictable and commonly supported patterns of social and political interaction needs to be re-established; and

• *opportunity recognition and exploitation*: both from a short-term and a longer-term perspective, every crisis presents opportunities for certain stakeholders that ‘good’ crisis management can bring to the fore.

These five dimensions are closely related. It is argued that the most basic ones are re-legitimation and opportunity exploitation. These constitute the most basic aims to be achieved irrespective of an actor’s particular position. The other three dimensions should be regarded as instrumental in achieving these two meta-goals. Below, some of the specific symbolic strategies that are pursued by crisis actors seeking to manipulate the conduct of crisis on these five dimensions will be explored. Some strategies will be predominantly cognitive, while others are more explicitly aimed at the manipulation of emotional stress or the reduction of socio-political conflict. Three broad classes of symbolic strategies: framing, rituals and masking need discussion in greater detail.

**Framing**

The most important instrument of crisis management is language. Those who are able to define what the crisis is all about also hold the key to defining the appropriate strategies for resolution. Conversely, for those who seek to instigate change, it is of vital importance to be able to aggravate the sense of societal crisis so as to foster a psychological and political climate receptive to non-incremental change. Much of the conflict inherent in crises centres around the various stakeholders’ attempts to impose their definition of the situation on others. They do so by employing different languages, selectively exploiting data and arguments and forming ‘discourse coalitions’ with like-minded groups (Hajer, 1989). Indeed, one way of looking at the communication dimensions of crises is in terms of the continuum between controlled and uncontrolled formats of communication (Combs, 1980: 119–121).

The very occurrence of a disaster or an acute crisis event implies that, at least momentarily, authorities lose control over the dramaturgy of political communication. They are literally overtaken by events, as well as by the fact that in most cases the mass media’s initial responses are much quicker and more powerful in terms of generating images of the situation for mass consumption (as was painfully evident, for example, during the Zeebrugge ferry disaster and the 1987 Stock Market crash). Authorities try to use every means at their disposal to resort to more controlled formats as well as rhythms. As one crisis manager defined the problem: ‘under normal circumstances an administrator “controls” time; during crises, time “controls” the administrator’ (Docters van Leeuwen, 1990).

This loss of control over format and pace of communication means a loss of control over the definition of the situation which, arguably, is among the greatest threats to effective governance. Hence the strong emphasis on the re-establishment of such control, up to the point of policymakers seeking to fully direct images and mass media activities (a hyper-effective form of ‘rumor control’). One way to do this is to severely restrict public access to sites, people and information relevant
to the conduct of a crisis, as was practised with disturbing efficiency during most of the Falklands and Gulf wars.

Opposed to these official efforts may be other groups’ attempts to exert a certain degree of counter-control over image formation. Groups may try to circumvent or contradict these super-imposed cognitive images: for example, by seeking to penetrate the armoury of ‘the official story’ or by attempting to expose previously hidden or controversial practices by self-created spectacles. Greenpeace’s spectacular actions against nuclear testing or waste dumping at sea are cases in point.

Whichever party is doing the framing, apart from the necessary organization and technology, language is the main vehicle for all these activities. Edelman (1964) distinguishes four institutional language styles: rhetorical, judicial, administrative and bargaining language. Rhetorical and judicial languages are used in the open arenas of politics to solicit mass approval, while the administrative and bargaining languages form the vehicles for behind-the-scenes striving for advantage and deal-making. Likewise, in the context of crises, rhetorical and judicial languages will be used to define the nature of crises, to identify their causes and to allocate blame.

At the rhetorical level, strongly evocative language is used to generate or reflect popular and elite anxieties – the very act of labelling a particular set of social conditions a ‘crisis’ is in itself a major rhetorical act. Edelman (1977) talks about a ‘semantically created crisis’. It makes quite a difference whether one labels events such as Bhopal an ‘incident’, an ‘accident’, a ‘tragedy’ or a ‘scandal’. These terms convey different assessments of the situations in terms of seriousness and the eventual allocation of responsibility for the crisis situation.

Issues of causation and responsibility for crisis occurrence are a key feature of the judicial language employed in official investigations and court proceedings. Such language is used as well to justify extra-ordinary legal and constitutional measures such as enabling a reallocation, mostly a drastic centralization, of formal powers of decision. From the perspective of power-holders, an important function of judicial language is to de-politicize the crisis events and to counteract the attendant de-legitimation processes by employing a ‘non-partisan’ channel for defining the situation and assessing success and failure.

This strategy proved to be quite effective in Great Britain throughout the 1980s when the country experienced a series of inner-city riots (Jacobs, 1989) (notably in Southall, Brixton, Toxteth, Liverpool, Handsworth and Bristol), a major prison revolt in Manchester, as well as a disturbingly high frequency of large-scale man-made accidents involving mass publics (a plane crash; a ferry disaster; an oil-platform explosion; a boat collision on the Thames, several major railway crashes; an underground station fire and a stadium crowd disaster). In each case, official inquiries were called for by the government and performed by judges, who, whilst being tenacious and objective in their pursuit of the immediate causes and implications of these events, by the very nature of their position and terms of reference steered clear of any of the underlying political issues.

Once a problem is framed and politically adopted in terms of ‘crisis’ and ‘avoid – avoid’ choices, the details of probabilities attached to various alternatives become less salient in influencing what is subsequently done. This was exemplified
by the Swine Flu crisis, during the Ford administration, when the decision was made to embark on a massive inoculation programme designed to reach every American citizen and sure to kill a few people because of side effects:

It mattered little that the experts could not tell whether the chance of pandemic influenza was 30 per cent, or 3 per cent, or even less than 1 per cent. What the Assistant Secretary for Health, the Secretary of HEW, the President, and Congress heard was that there was some chance of pandemic flu and this was enough. No responsible politician wished to put himself in the position of opposing the program, thus running the risk that pandemic illness and death might prove him a villain (Silverstein, 1981–135 lervis, 1992–191).

The framing of issues as crises thus generates a sort of self-binding dynamic. This might lead to highly ineffective and costly politics, but, if carefully staged, may also be put to astute political manipulation. In many instances, it makes good political sense to first dramatize the seriousness of the situation; for example, by personifying threats and constructing diabolical enemy images before going on to propose bold, even extreme, courses of action that under normal conditions would never stand a chance of being accepted (Edelman, 1977: 14; White, 1986; Edelman, 1989: 66–89). In doing so, stakeholders may appeal to deep-rooted ‘threat blases’ in how people perceive their environment (Jackson and Dutton, 1988: 384–385).

The logic here is familiar as it underlies the tendency to externalize internal conflicts to generate social homogeneity and gain support (Coser, 1956). A much-cited example in this respect is the Reagan administration’s usage of the KAL 007 crisis.

It a widely publicized event can be interpreted as confirmation that a conspicuous enemy is dangerous, a political coalition can usually be broadened. When Russia shot down a Korean airliner carrying 267 passengers in 1983, the officials of the Reagan administration who spoke to public of their anger and revulsion at the action also benefitted from the occurrence of an event that could be used to mobilize public support for defeating a nuclear freeze resolution in Congress, building the MX missile and increasing the arms budget (Edelman, 1988, 70).

Rituals

Another dimension of crisis management highlighted by the symbolic perspective is the extent to which responses to crises are pervaded by rituals; defined as symbolic behavior that is socially standardised and repetitive (Kertzer, 1988: 9). Rituals follow highly structured, more or less standardised, sequences and are often enacted at certain places and times that are themselves endowed with special symbolic meaning. For example, in Holland, whenever a disaster occurs (mainly industrial accidents), there will be an automatic reflex on the part of authorities to set up, and publicise prominently, an official evacuation centre or public shelter to accommodate inhabitants of affected areas.
Oddly enough, the evidence of numerous disasters seems to indicate that time and again, people do not use these facilities and go to relatives and friends instead. However, when government agencies fail to follow the ritual of setting up such a centre, there is public criticism. Apparently, the very fact that official centres are made available, symbolizes the fact that the government cares and is prepared to take measures to help those affected by the disaster.

Similarly, the laying of wreaths at the site of an accident, an attack or another symbolic location is a well-known crisis ritual. Such rituals of mourning can be spontaneous or directed. An example of a spontaneous, yet highly structured and symbolic, mourning ritual occurred following the Hillsborough Stadium crowd crush that killed more than ninety Liverpool fans. Starting hours after the disaster had taken place in Sheffield, the Spionkop side of Liverpool’s Anfield Road stadium was turned into a kind of shrine by thousands of people coming to pay their respects (Jacobs, 1991). More organized mourning rituals followed later, in the form of public masses in both Sheffield and Liverpool and one-minute pauses at the start of soccer matches throughout Britain. Official state funerals for deceased or slain political leaders are among the most powerful and politically significant forms of crisis-related ritual, as discussed earlier in the context of the More and Borsellino cases, and as evidenced by the analyses of the funerals, for example, of Mahatma Gandhi, John F. Kennedy and Indira Gandhi (Shils, 1968; Combs, 1980: 41–47; Kertzer, 1988: 140–144).

Crisis-related rituals can take many forms and fulfill many functions (Klapp, 1969). Some of these are:

**Rituals of solidarity:** One important ritualistic task for prominent officials is to go and visit the site and the victims of disaster or collective violence. The symbolic importance of such a public display of compassion with those suffering hardship can hardly be under-estimated. Failure to abide by it in favour of a ‘businesslike’ attitude amounts to a serious underestimation of the affective dimension that such disasters generate. It is sure to bring officials instant and intense public-relations problems and, occasionally, political embarrassment.

One example of this would be the fate of the Belgian Minister of the Interior, Nothomb, whose failure to show emotion and come to the site of the Heizel stadium tragedy caused much of the immediate post-crisis debate to focus on his personal role – even to the point of a marathon debate in parliament with opposition parties staging a nearly successful attempt to force his departure from cabinet. Here, the opposition appeared to exploit the minister’s failure to grasp the symbolic dimensions of his role in these kinds of crisis circumstances; a failure never made in England where prime-ministerial and royal visits to the site of major disasters and terrorist attacks have indeed assumed highly ritualized proportions (‘t Hart and Pijnenburg, 1988).

**Rituals of reassurance and purification:** Confronted with a widespread social perception of crisis, policymakers need to get several reassuring messages across to the public and to other actors. First, they need to be seen to be in overall control of the situation. This is quite a challenge because, if they really were in control, there would presumably be no crisis. Secondly, policymakers or decision elites will want to avoid massive, unforeseen and uncontrollable public reactions. In part this is achieved by labelling such behavior as ‘panic’ and, in doing so, stigmatizing it as a means of deterrence.¹
Thirdly, they will want to reassure the public that every conceivable effort is made to get at the root of the problem, which, in most cases, becomes personified in a search for human perpetrators or scapegoats. These might be found in the form of pre-existing enemies. Low-level operators (in cases of disasters), previous governments (in case of policy fiascos), or – as a means of last resort – pathologies resulting from the activities of large, anonymous bureaucratic agencies are also frequently singled out as ‘causes’. Critics outside government or corporate circles stress lethargy, corruption or lack of will and action on the part of incumbent officials as important factors in bringing about the current crisis. An additional function of this mode of public search for causes is to re-instate the belief in rational procedures of government by emphasizing evocative terms such as ‘full-scale inquiry’, ‘objective’ and ‘evaluation’.

Fourthly, incumbent officials seek to publicly reassure that a crisis situation will not be abused for partisan political purposes; in many cases followed by statements or actions which do just that. This attempt to re-instate the rationality myth in the face of turbulence and crisis is further amplified by employing a language of ‘learning’ to provide reassurance that ‘lessons’ of the present crisis will be used to prevent similar events from recurring notwithstanding that research on governmental learning is, at least, sceptical about such crisis-induced learning capacities (Etheredge, 1985; Neustadt and May, 1986; Staw and Ross, 1987; Wildavsky, 1988; van Duin, 1992).4

**Rituals of animosity:** A classic example of mutually antagonistic psycho-dramas being enacted against the backdrop of an international crisis is presented by the seizure of American embassy personnel in Teheran from November 1979 till February 1981.

The crisis itself was not directly thrust on the American people, but rather created through a rich symbolic production which identified a variety of acts thousands of miles away with large symbols of national identity, as well as with abstract principles such as democracy and terrorism. The hostages were symbolically transformed into the American state itself and their captors with a variety of stigmatic symbols. It was a war of ritual, with the Iranians parading their symbols through the nearby streets of Teheran, creating a larger symbol out of the embassy itself, while in the United States the general public was swept into this international struggle through its own series of rites, which ranged from protest marches, the lowering of flags to half-mast, to the preparation of petitions addressed to the captors (Kertzer, 1988: 135)

Generally, psycho-drama is a distinguishing feature of terrorism, especially hostage-takings, but it can be found in other forms of conflict crises as well (Schmid and de Graat, 1982). The burning of enemies’ portraits and flags are standard practices in international conflicts. With anti-police demonstrations, identifying police as ‘pigs’ or ‘Nazis’ are among the standard animosity rituals practised by radical protest groups following public disturbances and police violence directed against them, with a classic example being the Chicago 1968 Democratic Convention riots (Farber, 1988).
Similarly, the often intense mutual antagonism displayed by opposing bands of soccer fans and hooligans has strong ritual, even tribal, connotations (Marsh, Roser and Harré, 1978). Many of these animosity rituals fulfill psychological and political functions as ‘safety valves’. Writing against the backdrop of the massive street protests and riots of the late 1960s in the US, Edelman (1971) argues that such rituals – including judicial rituals resulting in the punishment of enemies – help reduce anxiety levels and give the impression that people can exert a certain degree of control over their lives, even though their actual influence is negligible (Elder and Cobb, 1983: 116).

Masking

If crises expose deep-rooted conflicts and vulnerabilities of the established social order. It follows that one important dimension of crisis management by status-quo-oriented officials and agencies is to counter-act this exposition or to dampen its impact. They engage in a specific form of impression management called masking. To be sure, there exists a fine line between masking and denial or distortion of threat perceptions. Masking refers to the external communication strategies of crisis stakeholders, whilst denial refers to their own personal and internal-organizational beliefs and perceptions. The latter may be severely distorted as a consequence of defective patterns of individual, group and organizational reality-testing (Turner, 1978; Janis, 1989; Mitroff and Pauchant, 1990). This will decrease their resilience capabilities to respond effectively to emergent contingencies. Such culturally and organizationally-rooted denial and perceptual distortion are, indeed important precursors to man-made crises.

Masking can be a parallel mechanism to denial and distortion: individuals and organizations that themselves are unable to engage in systematic and realistic self-appreciation are highly unlikely to communicate effectively to their social environments. However, masking may also be used more deliberately by policy makers who do not suffer from threat-induced perceptual rigidities. Masking, in fact, constitutes an important instrument in actually manipulating situations to stop short of the crisis point, or to selectively define dominant recollections of what transpired during a crisis. Some prototypes of masking strategies involve.

- Communicating a ‘business as usual-image Downplaying the critical nature of particular risks, emerging adversities and performance failures is almost routine behaviour in many organizations. In part it is an inevitable consequence of the operation of hierarchies, where each official has strong formal and cultural incentives to withhold ‘bad news’ from superiors. In part it may be an imperative given the web of interdependencies in which an organization is embedded. For major corporations, to admit any hint of non-routine problems and threats might trigger momentous consequences in the increasingly volatile arena of contemporary stock markets. As far as government agencies are concerned, allowing such signals to multiply is interpreted as an invitation to the much-detested loss of autonomy. Publicly admitted signs of trouble either leads to direct intervention from political executives or to increasingly alert and critical scrutiny by media and parliament.
This type of masking effort may succeed and buy the official or agency time to put its affairs in order, thereby preventing an emergent crisis from materializing. Yet short-term success is not all that counts. If successful masking is not followed by additional symbolic or substantive remedial actions, it will only generate more severe backlashes when, in the longer run, the ‘real’ problems come to the surface (the My Lai and Watergate cover-ups come to mind, as do many corporate downfalls).

Secondly, masking may be practiced too little or too late and hence lack communicative power. If masking does not help to alleviate short-term concerns about performance or emerging threats, its very failure to convince people tends to aggravate the situation: it acutely exposes ‘credibility gaps’ and raises questions about managerial incompetence, as well as distrust. A prototype of this kind of masking failure occurred in the immediate aftermath of the Three Mile Island nuclear incident.

The initial persistence of denial and innuendo and subsequent uncoordinated admission of serious problems on the part of most notably the Metropolitan Edison Company that operated the plant, outraged both state and national politicians, contributed to serious collective stress among local inhabitants, infuriated the media and precipitated a confusing parade of radiation experts claiming different things (Stephens, 1980; Ford, 1986). As a sideline, the coincidental fact that at the time of the accident, a major film was being screened around the nation, called the China Syndrome, powerfully depicting a highly plausible worst-case type of nuclear incident, certainly did not help any kind of masking effort undertaken.

• Displacing crisis perceptions onto other objects or domains. Edelman (1977: 47) talks about semantically created, versus semantically masked, crises. The latter refer to:

problems that impoverish or ruin millions of lives (which) are not perceived as crises because we attach labels and ‘explanations’ to them that portray them as natural and inevitable, or as caused by the people who suffer from them rather than by outside, unexpected threats. We see poverty, crime, sickness, emotional disturbance, carnage on the highways, and similar disasters as chronic ‘social problems’ rather than as crises, though they hurt people more severely than any of the crises do.

Here the selective labelling amounts to a masking of the critical nature of problems deemed unmanageable or politically sensitive while, at the same time, emphasizing other problems that do lend themselves to successful dramaturgy, mobilization and crisis management. Instruments of such masking are the language of causation and the language of innuendo about impact.

The vivid quality of dramatic events such as riots, terrorist actions, international conflicts and disasters, combined with the availability of external causes and enemies, makes these episodes self-evident candidates for displacement of crisis perceptions. Vividness is a powerful cognitive-affective factor: belying all safety statistics, people are more concerned about aviation safety than about road safety, the simple reason being that the rare
but highly vivid event of a plane crash sticks in human memory, whereas the highly frequent and routinized occurrence of road accidents does not produce this evocation. Similarly, most people are emotionally moved by vivid pictures of war- and drought-stricken Saharan populations in a food crisis, yet accept widespread but highly dispersed and causally reconstructed evidence of poverty and homelessness in their midst.

- Obscuring details of crisis management operations. This takes one to the well-known and perenially controversial domain of ‘OpSec’ (Operational Security), as it is known in (para)military circles. Under the protective belt of OpSec (or legal doctrines of executive secrecy), government actors are able to hide from the public and parliamentary eye unpleasant details about pre-crisis negligence or incompetence, as well as about failed, excessively costly or ethically controversial decisions and actions taken throughout the crisis. The claim to OpSec works especially well in situations of potentially violent domestic or international conflict and terrorism, where organized state violence (or ‘force’ to use a typical form of masking semantics) is employed. Public attention is rarely drawn to the observation that governments use ‘force’ whilst enemies use ‘violence’.

These situations, in particular, tend to evoke severe feelings of threat and vulnerability among mass publics and foster acceptance of whatever means are used to pursue the ends of terminating the perceived threat. That is, if a particular conflict can be constructed as a severe threat to (national) security, this almost automatically implies a certain degree of abstention on the part of press, mass publics and representative bodies: they are considered the domain of professional administrators of force, operating discretely and autonomously and not bothered with sensitive questions that might expose their practices to current and future enemies. Interestingly, whenever such masking of operational actions breaks down, the sudden exposure to rough details may generate public over-reactions of sudden outrage. An example of this constitutes the Belgrano affair several years after the Falklands conflict, when a whistleblower in the UK Ministry of Defence leaked sensitive details about a deliberate political-military decision to sink an Argentinian ship steaming outside the combat zone and not taking part in the hostilities (Bovens, 1990, 188). This triggered outrage about the ethics of such an act, as well as about an alleged ‘cover up’ and constituted almost the only major break in an otherwise perfectly dramatized and selectively masked British war effort.

**Counter-symbolism:** Sometimes the very staging of the crisis itself by opposition groups reveals the perpetrator’s great insight in the symbolic dimensions of collective stress. The example of the student demonstrations in Bangkok, in 1973, is a case in point. When students carefully identified their actions with deeply-held symbols legitimating. That governments over past decades, such as the constitution, the monarchy and Buddhist religion, this put the incumbent government into difficulty whereby its repression of the students’ movement could be publicly construed as a violation of super-ordinate values. The revolt was successful and the government was toppled (Kertzer, 1988: 123).
Terrorists tend to look for dramatic sites and targets that not only publicise their cause but symbolically show the vulnerability of the system they seek to challenge. This is why despite the elaborate security measures taken the IRA continues to try and strike near the centre of British politics (Whitehall) even though they could bomb other targets with far less risk of being caught. It is also why most ‘professional’ hostage-takers and kidnappers enact more or less fixed scripts designed to maximize pressure on the authorities via the communication of dramatic pictures or messages through the mass media.

Authorities are aware of the power of counter-symbolism and fear it. This is why Chancellor Kohl and his German government showed great anxiety over the announcement by Jewish organizations that they would protest against President Reagan’s visit to the Bitburg SS cemetery by wearing their concentration camp uniforms. The sheer evocation of the mental picture of a US President symbolically forgiving German war atrocities by laying a wreath for SS officers while, at the same time, German uniformed police were being seen forcibly keeping away victims of the Third Reich must have been enough to produce nightmares for both Kohl’s and Reagan’s staff. Yet, by announcing the visit, Kohl in particular had manoeuvred himself into a position from which no retreat was possible. The visit went ahead and elaborate police precautions were taken to keep the protestors far removed from the scene of the visit and outside the range of television cameras (Hartman, 1986; Regan, 1988: 257–264).

Whilst counter-symbolism can be a powerful instrument of questioning the dramaturgy of elite definitions of the situation, it too can backfire and unintendedly enhance acceptance of, and support for, elites. For example, during a protracted conflict between Amsterdam city authorities and militant squatters protesting against housing shortages and speculative practices, a ritual of court-ordered evictions of squatted premises developed in which massive police forces called in to effect the eviction were subsequently engaged in pitched street battles with radical demonstrators. After some time, the severe, repeated and purely ritual character of this street violence overcame the housing issue in the public debate about squatting. As a consequence, the squatters lost the broad popular support they had initially enjoyed and were effectively marginalized and stigmatized by the authorities who had, simultaneously, initiated massive building and renovation programmes. The strategy of violent confrontation became self-defeating the movement became internally divided and crumbled. (Graham and Gurr, 1969: 783–795; Rosenthal and ‘t Hart, 1990).

Conclusion

Crises are the domain of multiple realities and conflicting cognitions. By whom, how, and why an event is perceived as a crisis is a key empirical issue for crisis analysts. To answer it, analysts will need to examine the role of language, symbols and communication in the process of the formation of collective-perceptions.

Likewise, analysts will have to take into account the inevitable plurality of cultures (Thompson, Ellis and Wildavsky, 1990), their attendant differences in value systems (Hood, 1991), attitudes towards risk (Douglas and Wildavsky, 1982) and perceptual anchors used to contextualize and evaluate events that occur
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within any society at any point in time. They will have to examine the politics and psychology of issue-framing; in other words, the political struggles for the dominant definition of the situation. Only if one is to seriously probe the very definition of crisis as it is espoused and the ways in which definitions change over time and ultimately dissipate, can one adequately begin to understand the rationale of crisis management strategies pursued by various stakeholders.

Moving from crises to crisis management, it is important that symbolic crisis politics is more than an ephemera and transient phenomenon. At one level, the symbolics of crisis events can be managed so effectively through strategies of perception and affection control, as well as pre-emptive conflict reduction, that the substantive social and political issues involved will be left untouched. On the other hand, however, the contrast between symbolism and substance should not be overdrawn.

It might be true, as Jackson (1976: 224) argues, that ‘symbolic outputs to crises are relatively easy to dispense, but rarely sufficient’. Yet many hastily produced symbolic measures, such as emergency laws or ‘technological fixes’ in the governmental apparatus of monitoring and controlling social processes, do have consequences that last way beyond the duration of any particular crisis. Compare this to the plateau theory of welfare-state expenditures: each ‘war’ or social crisis precipitates new and additional provisions which are subsequently maintained indefinitely. In part this is because ad-hoc measures become translated into bureaucratic organization (Blankenburg, 1980: 15).

To advocate renewed attention for the symbolic politics of crisis management is, therefore, to broaden currently dominant notions of what constitutes crisis politics. Transcending event-based concerns with short-run party-, pressure-group- or bureau-politics, takes the issue of crisis management back to where it belongs; namely to the fundamental issues of social and political order, stability, and change (Rosenthal, 1978: 57–60; Zimmerman, 1983). One of the crucial functions of the symbolic perspective is to look behind ‘official’ actions and rationales and to probe deeper into issues of authority, legitimacy and power that are inextricably connected to the way in which crises are defined and handled and to what their medium- and long-term consequences are for existing structural and cultural arrangements.

Notes

1. The terms ‘real’ and ‘pseudo’ are put in inverted commas because to establish the ‘realness’ of a crisis pre-supposes that one has some objectively or inter-subjectively validated standard of making such a judgement. According to deconstructionist accounts of social epistemology, such a presumption is problematic to say the least. As Edelman (1988: 10) puts it:

   Accounts of political issues, problems, crises, threats and leaders now become devices for creating disparate assumptions and beliefs about the social and political world rather than factual statements. The very concept of ‘fact’ becomes irrelevant because every meaningful political object and person is an interpretation that reflects and perpetuates an ideology.

2. In contrast, from the perspective of change-oriented groups, judicial discourse and procedures are often resorted to in order to gain entrance to the policy arena and to acquire a more or less ‘official’ stamp of approval as legitimate stake-holders. Examples of these would include anti-nuclear activists who have fought major court battles in Germany and Holland over the proposed Kalkar nuclear breeding reactor. Similarly, organizations such as Greenpeace and
Amnesty International have developed considerable research and judicial expertise, including the staging of symbolic tribunals, whilst, at the same time, developing much broader lobbying activities to expose corporate or governmental misconduct, negligence and mismanagement. The same goes for the ad-hoc organizations involving victims and the bereaved fighting political and court battles over, for example, Bhopal, Herald of Free Enterprise and Exxon Valdez litigation.

3. In actual fact, detailed studies of human behaviour in acute stress situations (such as burning buildings) show that people hardly ever ‘panic’ in the sense of irrationally acting out stress-induced behavioural impulses. As long as people are well-informed of their situation and are aware of behavioural alternatives that will shield them from danger, they will display calculated reactions. Only if such information and behavioural alternatives are completely lacking, will they be overcome by hyper-vigilant impulses (Drabek, 1986).

4. One multi-functional means of conveying these various reassuring messages is to launch ‘sweeping inquiries’, ‘extensive policy reviews’ and ‘thorough re-examinations’ (Combs, 1980: 60). At the same time, whether such inquiries live up to their publicly espoused claims is highly contingent upon political processes that determine the composition, terms of reference, time schedule, information access and staffing of these inquiries (Lipsky and Olson, 1977). Furthermore, even if the inquiries produce solid and detailed evidence and suggestions for improvement, it is political processes that determine whether the committees’ definitions of the situation receive enough public attention, agenda status and persistent political administrative support to prevail during the ‘muddling through’ of implementation (van Duin, 1992). Yet, whether policy improvements actually are effected as a result of crisis-induced inquiries is often far less important than their ritual functions in defusing a highly-charged socio-political atmosphere.

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As human beings we would like to live in a failure-free world – a world where disasters are, ideally, prevented or at least their impact is minimized. Organizations are expected to respond to disasters by minimizing the disaster’s impact. Learning is expected to be one of the key mechanisms through which organizations come to prevent and minimize the impact of disasters. There are, however, major differences in our theoretical understanding of organizational learning and organizational learning as it occurs in practice. In this article, we explore the differences between organizational learning in theory and in practice as demonstrated in the actions of the organizations responding to Hurricane Andrew in Miami.

Today, many people have the mind-set that the world should be free of failure. In a truly failure-free world, technological disasters simply would not occur and the response to natural disasters would be swift and effective. In particular, high-tech organizations that operate in extremely hostile environments – such as the space agency, the modern military, and air traffic control – are expected to operate in this mode (Roberts, 1989, 1990). Nevertheless, failures do occur. Their cause may be either technological (e.g., Exxon Valdez) or natural (e.g., Hurricane Andrew). The basic expectation seems to be that in the ideal world such failures or disasters would be prevented. Organizations should exhibit high reliability and such failures should be rare (Roberts, 1989, 1990). However, if a failure occurs, then the impact of such a failure should be minimized. In other words, organizations are expected to respond to disasters by minimizing the impact.

Why this mind-set exists and whether or not such failures are inevitable (Perrow, 1984) are important questions, but they are not questions we will attempt to answer. Rather, our interest is in the role that learning plays in minimizing the impact of such “failures”; we will focus on the idea that the way to achieve such a “failure-free response” is through organizational change. In theory, organizational learning should admit higher performance (Argote, Beckman, & Epple, 1987; Carley, 1992a; Levitt & March, 1988). The lessons of experience should allow the organization to respond to future events in a more efficacious fashion, thus minimizing the impact of failures (Carley, 1991). By changing, by adapting, organizations should be able to respond better to future disasters. That is, organizational response should be more timely and should minimize the impact of the disaster at all levels.

Organizational learning should, at least in theory, play a major role in disaster response. Organizational learning has been characterized in a variety of ways. For example, it has been characterized as the development of routines, standard
operating procedures, and accounting procedures (Cyert & March, 1963; Johnson & Kaplan, 1987; Levitt & March, 1988; March, 1981; March & Olsen, 1973; Nelson & Winter, 1982); cumulative production skills (Argote et al., 1987; Dutton & Thonjas, 1984; Preston & Keachie, 1964; Rosenberg, 1982); the development of consensus (Bavelas, 1950; Cohen, 1962; Cohen, Robinson, & Edwards, 1969; DeGroot, 1974; Hastie, 1986); determination of the optimal decision rule (DeGroot, 1970; Grofman & Owen, 1986; Marschak, 1955; McGuire & Radner, 1986); emergence of effective communication structures (Cohen, 1962; Guetzkow & Dill, 1957; Leavitt, 1951; Shaw, 1954; Shaw & Rothschild, 1956); and improved accuracy in problem solving (Carley, 1992a; Lin & Carley, 1992). When actual organizations have been examined, the case is not always clear as to whether organizational learning has occurred and whether such learning actually improved performance. Particularly with respect to training and experience, data suggest that losing such personnel may either degrade or improve organizational performance (Argote et al., 1987; Price, 1977; Tushman, Virany, & Rpmanelli, 1989). This suggests that there are major differences in our understanding of organizational learning at the theoretical level and the occurrence of organizational learning in practice. We will contrast what the theories of organizational learning imply should have happened in the disaster situation in Miami with what we observed happening.

Early Monday morning, August 24, 1992, Hurricane Andrew crossed South Florida. Most communities in its path were damaged by wind and flying debris. An estimated 85,000 homes were damaged or destroyed, and over a quarter of a million people were rendered temporarily homeless. A federal disaster was declared almost immediately, but county, state, and local organizations had to face the initial, overwhelming response needs with existing resources. Hurricane Andrew was the first test for the Federal Emergency Management Agency's (FEMA) Federal Response Plan. This plan embodied a set of organizational agreements for how to respond to this type of disaster. Presumably, such a plan reflected the knowledge that had been learned in previous disasters. Within a week, it was apparent that the plan had failed to provide an effective and integrated federal response. FEMA opened its Disaster Field Office (DFO) in Dade County on Thursday, August 27. On Friday, August 28, President Bush directed Secretary of Transportation Andrew Card to oversee the federal response and mobilized a military support operation that grew to more than 30,000 men and women. The rapid declaration of Miami as a national disaster led to an expectation on the part of the victims that they should be helped immediately. Or, as one of the Red Cross managers commented, “When a place is declared a disaster 5 minutes after the event, people expect [a] response 10 minutes after the event.” This expectation of rapid response put incredible stress on all responding organizations and increased attention to organizational response. This increased response made it highly necessary for organizations to use the lessons of previous experience, their learning, and it became highly obvious when they did not employ such lessons.

By concentrating on this highly stressed environment, the differences between theory and practice, with respect to organizational learning, come into sharp relief. To provide the groundwork for this analysis we will first consider two factors: (a) the interrelationship between disasters and organizational learning, and (b) what was and was not learned from recent major disasters (Hurricane Hugo and the Loma Prieta earthquake). We will then examine a series of theoretical propositions concerning organizational learning. We will conclude by commenting on the actual role of learning in disaster settings.
Disasters and Organizational Learning

Schein (1972) suggested that unfreezing events are necessary for significant organizational change. Major disasters are such unfreezing events for organizations. The basic idea is that organizations get into ruts. They learn a pattern of response or a set of procedures that then largely dictate their actions. When a disaster occurs, this pattern and these procedures are called into question. The unfreezing caused by the disaster allows the organizations to get out of the rut, to alter their pattern of response, and to develop new procedures. However, the thaw produced by the disaster is of limited duration. In other words, disasters create a window of opportunity during which changes can occur. After this window closes, change is less likely. Thus organizations responding to disasters learn in leaps – disaster by disaster – rather than smoothly over time.

Because disasters, particularly catastrophic disasters like Hurricane Andrew, are low-probability events, there exists a public perception that such events cannot happen. After such events occur, individuals’ perceptions shift and they view such events as possible or even probable. This creates an increased interest in mitigating such events. It also causes other unlikely events to become less salient. Consequently, after an earthquake, planners focus almost exclusively on future earthquakes; after a hurricane, planners focus almost exclusively on future hurricanes. For example, prior to the Exxon Valdez oil spill, little attention was given to responding to the low-probability event of a major oil spill. In fact, response readiness actually degraded over years of disaster-free operation (Harrald, Marcus, & Wallace, 1990). After the Valdez, attention was focused on responding to catastrophic oil spills. The upshot was new legislation and plans for dealing with such contingencies. Little attention, however, has been given to other potential maritime crises such as fires or chemical releases. Thus organizations responding to disasters learn in categories, one disaster type at a time.

Hurricane Andrew: What was and was Not Learned

Carley and Harrald conducted a Rapid Assessment study supported by the National Science Foundation (NSF). This study compared the evolution of the Hurricane Andrew Response organization with that contained in FEMA and Red Cross plans. The researchers observed the organizations that provided sheltering, food, and supplies to disaster victims in Miami. The operations of the Federal DFO, the Red Cross Disaster Relief Operation headquarters, and various service delivery operations were observed during a week on scene. Response personnel were interviewed at the site, and subsequently. For an overview, see Carley and Harrald (1992).

During this time it was clear that both organizations were employing, in some cases, the lessons of experience; in others, they were acting as though they had failed to learn from previous situations. In describing what the organizations learned and did not learn we are not making a judgment as to whether these organizations responded well or inappropriately to the situation. It is not our purpose to critique the response behavior of either the Red Cross or FEMA. Rather, our interest is in illustrating the types of actions taken by these organizations that represented learning, that represented changes from actions in
previous disasters. As a further caveat, this is not an exhaustive list of what was and was not learned. To the contrary, it is representative of the kinds of learning that did and did not occur.

The disasters that occurred during the fall of 1989 were significant learning events for FEMA and the Red Cross. Hurricane Hugo devastated the American Virgin Islands and Puerto Rico on September 19, 1989. Several days later it came ashore at Charleston, South Carolina, with devastating force. On October 17, 1989, the Loma Prieta earthquake occurred in California. FEMA and the Red Cross were faced with conducting simultaneous major disaster relief operations in three geographically separate locations. Both organizations experienced significant problems and received public and media criticism as a result of these operations. After the operations were concluded, both organizations conducted extensive internal examinations of their preparedness for, and execution of, their disaster relief responsibilities (see, e.g., American Red Cross, 1991a; National Academy of Public Administration, 1993). The Red Cross completed 13 separate studies and evaluations. FEMA conducted an extensive evaluation that has never been released to the public. The General Accounting Office also evaluated FEMA's readiness and response (General Accounting Office, 1993). As a result of studies of the sequential disasters of 1989, the Red Cross reorganized and expanded its disaster services, initiated a catastrophic-disaster planning effort, and expanded its base of trained volunteers. FEMA also initiated a major planning and coordination effort that resulted in the creation of the Federal Response Plan in early 1992 and the signing of the implementing Memoranda of Understanding with other federal agencies and with the American Red Cross. The stage was set for the next major disaster to see what had been learned and what had not been learned.

Red Cross

The Red Cross had clearly learned how to do staffing and mobilization. They had learned where and how to set up staging areas and how to access personnel so that a personnel response structure could be rapidly put into place. The Red Cross improvement in their ability to mobilize and organize trained and qualified relief workers was remarkable. The American Red Cross (ARC) had brought over 550 people into Dade County by Thursday morning (72 hours after Andrew's landfall) to supplement their 1,500 local volunteers and staff. Their Dade County operational headquarters was fully operational 48 hours after the disaster. (FEMA at this point was still operating out of Tallahassee.) The mobilization effort required to staff the Florida operation, Hurricane Andrew Louisiana, and Hurricane Iniki in Hawaii was smoothly coordinated at ARC headquarters. In contrast, staffing and mobilization were major problems for the ARC during the response to Hurricane Hugo. Computer systems were inadequate to support the mobilization and critical shortages of trained staff hampered the operation (Harrald, Marcus, & Wallace, 1990).

The Red Cross had also learned that a senior management presence at the scene was required. During the Andrew response, Donald Jones, the general manager of Red Cross Disaster Services maintained a presence on scene for several weeks during the initial response. There was a need for a high-level organizational presence to coordinate with peers in other organizations (e.g., Cabinet officers,
three-star generals, and the mayor). Don Jones provided this high-level presence; Chris Saeger, the disaster relief operation director, could not. There was also a need to have a senior person available for media and external relations. The absence of this type of presence had contributed to a critical reception by the press and a perceived lack of coordination with other agencies during the Loma Prieta and Hurricane Hugo operations. Don Jones also played this external relations/media role. Chris Saeger could have played this role; however, it would have taken him away from his primary role as job director.

The Red Cross has an institutional memory for what some other volunteer groups can and generally will do. This learning is embodied in the experiences of Red Cross personnel who remember from previous disasters and have been trained regarding which volunteer organizations to count on for what. Examples of such learning include commonly expressed views that “the Salvation Army provides clothes,” “the Mennonites do rebuilding,” and “the Southern Baptists cook food.” Some of this learning has been institutionalized in written procedures and some is retained in individual memories.

The Red Cross had learned to be sensitive to certain minorities. After Hurricane Hugo, the Red Cross was criticized by local political leaders and the media for not actively seeking affected areas containing poor minority residents. As a result, the ARC was perceived to be slow in responding to the needs of these minorities. This learning is seen in the increased attention and focus of Red Cross personnel during the response to Hurricane Andrew on minority, and particularly, African American issues. This learning, however, represents case learning and a distinction between formal learning (policy) and applied learning (practice). The policy (formal learning) was to determine and respond to the needs of all minorities. The organizational reality (applied learning) was that the only formal linkage that worked immediately to react to the needs of a minority was the linkage to the African American churches (AME), which enabled ARC to respond to the needs of the African American community. Other linkages to other minorities formed later.

The Red Cross had learned that estimating the need for Red Cross services was a critical task (Harrald, Abchee, Alharthi, & Bourkari, 1991). They had developed service-demand-estimating algorithms on the basis of severity of damage and the demographics of the affected population. They purchased a commercial CD-ROM demographic database to assist in this effort. They did not, however, make provisions to improve their ability to obtain a rapid initial assessment of damages. As a result, the estimates produced at Red Cross headquarters within 23 hours of the disaster were remarkably accurate and were used to guide staffing decisions. The ARC did not have concrete damage assessment data on which to base these estimates, however, and they were not released to other agencies. The information that could have assisted in the allocation of resources and siting of centers was not available, and these decisions were handicapped until a detailed damage assessment was available.

The Red Cross had not learned the effective use of information and information management. For example, in Loma Prieta and Hurricane Hugo, information was not regularly reported up the chain to headquarters. This led to a lack of awareness on the part of headquarters as to what was being done locally and decreased the ability of headquarters to coordinate at higher levels. This same failure of communication and, ultimately of coordination, happened in Andrew. As a second example, in Andrew as in all previous disaster response efforts, the
Red Cross did not have the ability to rapidly process dispersing orders (documents issued to victims and used to purchase goods from local merchants). Information needed was kept on paper, in highly redundant fashion. The information was not organized to admit rapid access at multiple sites. There were missing information flows; for example, there was no mechanism for rapidly feeding detailed damage assessments into family service centers. New technology did not lead to changes in the way in which information was processed. As a third example, the Red Cross had not established procedures and systems for rapidly providing disaster family inquiry (DWI) information. The role of ascertaining the whereabouts and conditions of victims for concerned relatives has been a traditional one for the Red Cross and was formally assigned to them by the Federal Response Plan. In Miami, the Red Cross DWI operation was slow and marginal. The need was met by other ad hoc methods. For example, local newspapers provided free space for locator information, and telephone companies provided free voice mail and temporary phone service.

**Federal Emergency Management Agency**

The major lesson learned by FEMA from Hurricane Hugo and Loma Prieta was that it needed better interorganizational planning and preparedness. Consequently, prior to Andrew there was a plan. The effort to develop a Federal Earthquake Plan was expanded and accelerated to produce the first comprehensive Federal Response Plan. Although the plan was published in April 1992, it was not widely distributed until after Hurricane Andrew. The Federal Response Plan did provide an organizational concept of operations and, through the signatures of the 27 agency heads, the acceptance of the designated roles and responsibilities. The creation of the plan did not, however, ensure effective interagency coordination, the ability of individual agencies to execute their responsibilities under the plan, or the efficacy of the concept of operations. Readiness exercises conducted by FEMA indicated that problems could occur in these areas (response 91A), but the full scope of the shortcomings did not appear until Hurricane Andrew.

FEMA had learned from Hurricane Hugo and their response exercises that they needed better interagency coordination. In Andrew, the awareness that interagency coordination was seen as a priority was evidenced by the provision of space for all agencies in the DFO and by the rapid assignment of a senior FEMA manager as the federal coordinating officer (Phil May, the director of FEMA Region 4). Most agencies participating in the federal response had personnel assigned who were designated as liaison officers. However, this coordination structure became secondary once the FEMA-run DFO supplanted by the presidential task force directed by Secretary Card. Interorganizational coordination was accomplished through two-a-day staff meetings held by Secretary Card. It is relevant to note that these staff meetings provided greater access to local governments than did the pre-planned mechanisms specified by the Federal Plan. The plan assumed that the primary coordination needs would be intrafederal and federal-state.

FEMA had also learned that better coordination and interaction with volunteer organizations was required. Because most volunteer organizations provide direct services to victims, FEMA's solution to this need was to designate the Red Cross as the lead agency for ESF 6 (Mass Care). Volunteer agencies involved in other
aspects of emergency response (e.g., communications) are ignored by the Federal Plan. During Hurricane Andrew, however, there was confusion over the extent to which FEMA had authorized the full activation of ESF 6, and the Red Cross fell back on their more traditional methods of volunteer agency coordination (e.g., through their lead in the Volunteer Agencies Active in Disasters [VOLAD]). The failure to immediately fully staff and activate ESF 6 and the assumption of federal leadership by Secretary Card effectively removed the mechanisms for voluntary agency coordination established in the Federal Response Plan.

In spite of severe criticism after Hurricane Hugo, FEMA had not learned that they would require a rapid initial assessment of disaster damage and would be expected to respond quickly to the needs of victims. The FEMA situation reports on disaster damage submitted by the DFO to Washington 4 days after the hurricane struck were wrong by an order of magnitude. They contained estimates of 6,000 homes affected when the actual number was between 75,000 and 85,000 and estimates of 400,000 dwellings without power when the actual number was in excess of 2 million. The initial FEMA response went according to plan; the federal presence and the federal capability for supporting state request for assistance were established. When the media and the local government agencies demanded more, FEMA's plan and organization was supplanted by the presidential task force and the military presence directed by President Bush.

In our opinion, this sequence of events was due, in part, to the failure of FEMA to learn two related critical lessons: the importance of managing information effectively and the importance of using this information to establish realistic public perceptions and expectations. Although the federal plan provides for the establishment of a central information and planning function (ESF 5), this capability was not established in Dade County until 4 days after the disaster. By this time, the media, the public, the president, and most agencies were obtaining their information elsewhere.

Because FEMA viewed its initial responsibility as establishing the federal structure and had not rapidly established a viable information presence, it was not able to ensure that the federal response adjusted to the demographics and culture of the region. FEMA had not learned from Hurricane Hugo, as the Red Cross did, that demographic information – which allows responders to identify income and ethnic distributions – is essential to the initial response.

Comment

As previously noted, this brief description of what the Red Cross and FEMA had and had not learned should not be taken as a complete list. Rather, these items are indicative of the learning that had and had not occurred. Several interesting aspects of organizational learning come to light even within this brief description. First, there is organizational learning. For both the Red Cross and FEMA response to Andrew was fundamentally affected by the lessons of Hurricane Hugo and Loma Prieta. This learning may not be complete, it may not generalize (as in the case of the minorities), it may not be sufficient to satisfy the victims, but it does occur. Second, organizations that respond to the same disaster may come away learning very different things. The Red Cross learned from Loma Prieta and Hurricane Hugo that they needed to respond to minorities, FEMA did not. Third, there is
a major difference between learning the need to do something and learning how to do something. Where it may only take a single disaster to cause organizations to learn the need for something, it may take many disasters before they learn how to fill that need.

This brief discussion of the learning underlying the response to Hurricane Andrew provides a groundwork from which we can build. In the following section, we build on this groundwork by discussing in more detail particular theoretical expectations about organizational learning. We contrast expectations with practice given the actions of the Red Cross and FEMA.

**Learning: Theory and Practice Learning through Planning**

In theory, planning leads to improved performance (Michael, 1986; Weingart, 1989). Consequently, in many areas, attention is paid to developing automated planners (Corkill, 1979; Thorndyke, McArthur, & Cammarata, 1981). Planning is expected to improve performance for a variety of reasons. First, the act of planning is expected to ensure knowledge of the plan. Second, it is expected to provide practice or training, which will admit higher performance during the actual situation. Third, it is expected to ensure that the plan is followed as the planners will feel ownership of the plan and so commit to carrying it out. Fourth, having a plan defines roles and so allows more rapid response because these roles do not have to be negotiated. Fifth, plans define communication and resource channels, who knows what and who has what. This should admit higher performance because of a decrease in the need to locate information and resources.

In practice, however, plans are laid aside. In Miami, despite the existence of a plan – the Federal Response Plan – the plan was not followed. The act of planning did not improve performance. This is largely because the planners were not the practitioners. The practitioners had no ownership of the plan and often had not read it. At FEMA headquarters, a few photocopies of the plan were lying around on shelves but were rarely consulted, and few response personnel at either FEMA or the Red Cross had read the federal plan. Many personnel at FEMA and Red Cross exhibited little understanding of the plan. Time was spent discussing whether or not the plan had been activated and, if it had, what their role was. Because the planners were not the practitioners, the benefits of the planning process – knowledge, practice, and commitment – did not occur. The federal plan served more as a treaty setting limits on the intervention that one response group could take in relation to another group than as a document of responsibility. Roles, communication channels, and resource channels were not well-defined. FEMA and Red Cross personnel spent time negotiating and defining their roles, establishing communication channels, and trying to locate resources.

There are several reasons that this negotiation occurred. Confusion over whether the plan was implemented and what it stated led to the need to clarify roles. In addition, by August 27, 3 days after Andrew had touched down, it appeared that the plan was not working. The appointment of Secretary Card by President Bush to head up a disaster response task force on August 28 was an act outside of the federal plan, creating further discussion of the viability of the plan. Because the plan was called into question so early in the response process, FEMA
and Red Cross personnel spent time negotiating their roles. This negotiation had significance for the current as well as future disaster operations. Finally, the plan itself was not a document of responsibility simply because in creating the plan, no effort was made to determine whether, in fact, the organizations who were assigned particular roles had the resources necessary to fill those roles. In many cases, organizations did not have the necessary resources for the tasks assigned them. For example, the Red Cross was assigned the role of coordinating mass care, but clearly the Red Cross does not have the resources, by itself, for helping a quarter of a million homeless people. There is a need for other volunteer and government agencies to work together to meet these mass care needs. The Federal Response Plan envisions that the Red Cross will coordinate the actions and resources of other agencies. However, the Red Cross does not have the clear authority to coordinate other volunteer agencies in this endeavor and the acceptance of its leadership by other agencies was still evolving when Andrew struck.

Learning and Catastrophic Events

The role of learning relative to catastrophic events is not well understood. Within the literature a variety of theoretical viewpoints are forwarded. Let us consider two of these: one-of-a-kind decisions and scalability. According to the one-of-a-kind-decision perspective, catastrophic events are one-of-a-kind events. They are events that cannot be planned for. Moreover, they are such a unique situation that learning cannot be transferred. If such is the case, then all that can be done is to minimize their likelihood. According to the scalability perspective, catastrophic events are just like smaller events – only larger. It follows from this perspective that the main issues are location and distribution of resources, and communication. New procedures do not need to be developed and no new factors come into play. If such a perspective is correct, then coping with catastrophic events simply requires developing better information technologies.

In practice, the theory that catastrophic events cannot be planned for has been affirmed by organizational actions. That is, organizations have argued that it does not make sense to plan for the highly unlikely event as that ties up resources unnecessarily. Exxon was seen to argue this point in their advising the local Alaskan government not to develop their own oil cleanup equipment. Such actions, however, come into sharp contrast with the social view of “we must be taken care of” and “organizations should operate failure-free” thus leading organizations and interorganizational groups to engage in planning activities for events that they expect never to happen and so do not provide resources. Arguments of scalability can be used by planners to define organizational roles. Even if the scalability theory is correct, negotiation of roles based on scalability without providing resources leads to built-in modes of failure in the plan. The development of the Federal Response Plan can, as we saw earlier, be viewed in this way. Ultimately, the theory of the one-of-a-kind event and the theory of scalability are at odds, and response planning predicated on both theories is doomed.

The doom of such plans is particularly likely given that there is simply no evidence that scalability applies. A hurricane is not simply a big tornado. Issues involved in repairing or rebuilding 85,000 homes and providing care for over a quarter of a million homeless people are far different than those involved in
repairing a few dozen homes. For one thing, issues of civil defense and long-term ecological changes arise. For another, when entire communities are destroyed, it is not enough to simply provide immediate food, clothing, and shelter. Rather, the entire infrastructure has to be rebuilt, new businesses developed, new communication services provided, and relocation programs started. Under such catastrophic conditions the demarcation between immediate response, short-term response, and long-term response becomes blurred and the responsibility of organizations for each such phase is called into question.

**Learning from Feedback**

In theory, learning requires feedback. With feedback, organizations can learn to increase the accuracy of their response and improve their performance (Carley, 1992a; Levitt & March, 1988; Lindblom, 1959; Steinbruner, 1974). In all learning theories, feedback that enables performance improvements is of a form that allows a determination of “how close are we to the goal?” The more accurate the feedback, the more rapid the feedback, the better the organizational performance. The ability of the organization to learn from feedback is reduced when the feedback is not objective, when organizational personnel are unwilling to accept feedback, when institutional concerns prevent acceptance of feedback.

Disaster response organizations, in many ways, represent almost a classic example of organizations that have a strong tendency to fail to learn from feedback. Internal feedback is not provided. For example, within the Red Cross, measures of effectiveness are of the form “x meals served” and “y persons sheltered.” Essentially what they are doing is using activity measures as surrogate measures of output or outcomes (Harrald et al., 1990). Such information, however, does not enable learning as it does not say what needed to be done, only what was done. External feedback is particularly difficult to provide to disaster response organizations. FEMA and the Red Cross do use outside consultants to provide objective feedback.

During the initial response to the disaster, response organizations do not want criticism. Personnel are often in a highly charged emotional state suffering from stress and sleep deprivation. In this situation it is difficult to provide on-the-spot feedback in a way that it will be accepted. Feedback, even when not meant as such, is often taken as negative criticism. Because many of the personnel are volunteers, anything that appears as negative criticism may lead to a reduction of the workforce. Feedback, after the initial response period is over, is also not appreciated. Response organizations such as FEMA and the Red Cross are subject to governmental review. As a result, feedback is often viewed as criticism and so as a potential threat to organizational survival.

In addition to these classic reasons for not learning from feedback is another culturally based reason. Organizations are unlikely to learn from feedback if that feedback is inconsistent with the local organizational culture. It became very clear in 1977, for example, that after the ARGO MERCHANT oil spill the U.S. coast guard was being pushed and supported by Congress and public interest groups to become a more capable oil pollution response force. Senior managers in the coast guard, however, realized that this course of action would require the allocation of
capital funds to resources that could only be used for oil spill cleanup (skimmers and booms) and would require the creation of specialized, nonseagoing, civilian positions (cleanup experts, lawyers, accountants). This strategy ran counter to the coast guard's perception of itself as a multimission, seagoing, military organization. The then vice commandant of the coast guard stated to the author that he perceived that investing in lawyers, accountants, and stuff on the beach was against the long-term interests of the coast guard, even though the public support to do so was strong. In contrast, the coast guard aggressively pursued the “drug war” of the 1980s and gained a significant expansion in its base of multimission ships, boats, and aircraft. After the Exxon Valdez incident and the resulting Oil Pollution Act of 1990, the coast guard is investing in the mission-specific resources and staffs rejected in the 1970s.

FEMA has frequently been given the feedback that they need to become a quick-response force. However, this rapid response is neither in their charter nor in their culture. In contrast, the Red Cross has been given the feedback that they should make more effective use of volunteers and should take advantage of locally available skilled labor (which could be either volunteer or paid temporary help). The use of volunteers is part of the corporate culture, a culture that is in many ways epitomized by their motto. The ARC corporate mission statement reads (in part): “The American Red Cross is a humanitarian organization, led by volunteers, that provides relief to victims of disasters.” The Red Cross organizational objective and culture of relying on volunteers may inhibit effectiveness when a situation is best handled by a workforce that is not all volunteer. Even if the policy were one of effective use, the reality is that some volunteers are not used effectively. For example, volunteers are used to working in warehouses operating heavy equipment for which they have not been trained. In part, volunteer organizations cannot be overly choosy and often must make-do or satisfice.

Clearly disaster response organizations, such as FEMA and the Red Cross, can learn through feedback. They tend not to, unless forced to do so by a catastrophic disaster. For the U.S. coast guard, the Exxon Valdez was an incident of this caliber. After the Valdez, the coast guard did indeed take on the resources needed to act as a pollution control force. For FEMA and the Red Cross, Hurricane Andrew was such a catastrophic event. What response to feedback will occur, however, has yet to be determined. Think of perfect, failure-free, performance as the target toward which response organizations such as the Red Cross and FEMA are headed. Their tendency not to learn from feedback means that their ability to move toward this target is limited.

**Media Evaluation and Learning**

The type of task facing the organization defines its performance. That is, the task being done sets standards against which the organization’s performance can be judged. Organizational learning leads to improved, but not perfect, performance (Carley, 1992; Perrow, 1984). Performance limits are, in theory, defined by the task and the organization’s design (Carley, 1992; Lin & Carley, 1992; MacKenzie, 1978), and the technology (Perrow, 1984; Thompson, 1967).

In contrast, in Miami the media defined performance. Performance was not judged relative to what was possible, to what was done in the past, but by what
the media suggested should be done. The press, however, was highly volatile thus causing performance criteria to change rapidly. In other words, the press caused the target to change, for example, from failure-free response to rapid response. Response organizations, such as the Red Cross and FEMA, even if they had a tendency to learn from feedback, would have found learning difficult in this situation as the target toward which they were learning was constantly changing.

Learning Scenario and Performance

In theory, following standard operating procedures or doctrine reduces the impact of personnel turnover (Lin & Carley, 1992). Thus organizations that train personnel to follow standard operating procedures rather than to make decisions on the basis of their own experience can employ less experienced personnel. In addition, the necessary training should take less time. Decreased training costs and reduced need to hire experienced personnel may lower the organization’s operating costs. Further, the use of standard operating procedures need not degrade performance relative to that in an organization where personnel follow their own experience (Carley & Lin, in press). However, following standard operating procedures should lead to rigidity. As suggested by Weber (1968) and Downs (1967), the use of standard operating procedures leads to the development of a bureaucracy where exceptions become impossibilities.

In Miami we saw support for these theoretical arguments. The Red Cross relies on volunteers, many of whom have little or no experience. With remarkably little training, new volunteers were able to operate with reasonable effectiveness because they were following standard operating procedures. Damage assessment in particular operated largely in this fashion. Clearly the use of such volunteers keeps down the cost of operations and allows the Red Cross to operate on the basis of donations. A similar story can be told for FEMA. In both cases, the use of procedures led to organizational rigidity and the development of internal bureaucracies. For example, the Red Cross family service function (financial assistance to individual families) is highly structured and procedure driven and allows for few exceptions. In FEMA, the disaster service center acts in a bureaucratic-fashion with certain guidelines as to when loans can be given. In Miami, despite the need for these guidelines to be adjusted, FEMA would not adjust them until they received a presidential order that removed constraints.

In Miami, we also observed that the impact of following standard operating procedures goes beyond these theoretical predictions. We will make two such observations. First, there is an interaction between experience and following procedure, which leads to a rigidity of the middle. Within the Red Cross, for example, new personnel with no experience receive a limited amount of training (a few hours) and then are thrust into service. Such personnel tend to follow standard procedures unless they encounter a situation for which the procedures do not apply. In this case, new personnel fall back on their personal experience. This can lead to highly creative solutions to problems at the lowest organizational level. Midlevel in the organization, personnel have more training in standard operating procedures and a limited amount of experience. At this level, personnel tend to follow procedure almost dogmatically. Rigidity of response is highest at this level. An example of this occurred at a meeting of voluntary agencies, attended by the authors, where a Red Cross worker was told by the gathered church ministers that
Homestead was devastated and there was nothing left standing. The Red Cross worker responded, saying that they wanted to put a service center in this area and that they needed a building of a certain predefined size. The ministers, in frustration, responded, “There’s nothing there!” In point of fact, there were buildings in Homestead and they were ultimately used. Overall, the finding and assigning of centers went fairly smoothly. Our point, however, was that at this meeting the Red Cross worker acted in a rigid fashion. A better example of the rigid middle occurred with respect to the mass care function – the use of Emergency Response Vehicles (ERVs). Mass care personnel were not inflexible; however, increased flexibility could have enhanced operations. Mass care personnel had an understanding of how ERVs should be used on the basis of their experience: to distribute food to service centers and to haul stuff from the warehouses to the shelters, kitchens, and service centers. The ERV is outfitted to serve food and can only carry relatively small amounts of supplies. The mass care personnel did not entertain alternatives that could have enhanced their operational flexibility such as renting commercial trucks to carry supplies and saving the ERVs for direct food distribution to victims. They did not recognize the role of the well-marked ERV as a source of information. (While riding in an ERV, one of the authors was besieged with questions everywhere the ERV stopped. Many of these questions could have been answered if the ERV had carried lists of ARC, FEMA, and state centers and addresses.) The drivers of the ERVs were focused on performing their traditional roles and did not quickly or easily adapt to innovative tactics that could have been very effective (e.g., driving through neighborhoods looking for groups of victims in need of ARC service, proactively distributing information). At this level, the entire operation was procedure driven, not process driven.

Finally, at higher levels within the Red Cross, personnel have extensive experience with disasters. Such personnel tend not to follow procedures but to develop new procedures and attempt to dynamically refine old procedures to the new situation. This can meet with resistance from midlevel personnel who are rigidly following predefined procedures. Our second observation is that standard operating procedures serve as emotional barriers. Personnel within the Red Cross and FEMA, particularly those dealing directly with victims, are placed in a situation where the high emotional trauma, lack of sleep, and stress of the situation can lead them to overidentify with the victims. Such overidentification can lead to a feeling of personal responsibility, higher turnover, and inequity in response to victims. Standard operating procedures serve as a buffer, allowing the personnel in the response organization to place responsibility for their actions on the organization – “I was just following orders.” This may be reducing stress, decreasing turnover, and facilitating more equitable response to victims.

**Organizational Design and Learning**

In the short run, teams where personnel are empowered to act on the basis of their experience tend to outperform teams where personnel follow standard operating procedures (Lin & Carley, 1992). When organizational personnel are empowered to act on the basis of their experience, the natural ability of humans to learn, to adapt, enables the organization to learn. Both theoretical models and human experiments have demonstrated that when organizations are composed of
personnel who adapt relative to their experience, teams tend to learn faster and so come to outperform more centralized or hierarchical organizations, at least in the short run (Carley, 1990, 1992). Further, theoretical models have also demonstrated that in the long run, hierarchical organizations are more resilient and so able to outperform teams (Carley, 1992). Within hierarchies learning becomes embedded not only in personnel but in the relationships among personnel, whereas in teams learning is only embedded within personnel. Thus turnover and poor performance have less effect on the hierarchy than the team.

In Miami we found support for these arguments. Teams formed on the fly dealt effectively with most crises. A team that was markedly effective was the coalition between the Red Cross minority liaison, the Southern Baptists’ liaison, and the Church World Service’s liaison, who worked together to ensure that overlooked minority groups in the hardest hit areas were served. At least in one case, where hierarchies were established, at the immediate response level, organizational performance was adversely affected. An example of this is family services. In Miami, as time progressed, both the Red Cross and FEMA put hierarchies into place. These hierarchies enabled the organizations to establish internal normalcy, to make use of volunteers, and to rotate personnel. By 18 days after Hurricane Andrew hit Miami, the Red Cross and FEMA had their hierarchies so established that they were able to begin rotating personnel with no degradation in performance. From the theoreticians’ viewpoint, the good news is that the theories work. From a policy standpoint, this suggests that response organizations such as FEMA and the Red Cross should establish triage teams immediately following the disaster to respond directly to the victims. Research efforts should focus on determining the appropriate personnel to bring together in such teams. Relying on effective teams to form on the fly, as they did in the example above, may not be a sufficient organizational response.

**Learning and Promotion**

In theory, learning occurs incrementally. The more experiences the individual has, the better their performance will be and, consequently, the better the organization’s performance will be (Carley, 1992). Promotions based on experience and on skills are expected to improve organizational performance (Weber, 1968).

In practice, of course, there is a difference between seniority and experience when one is concerned with rare events. This is due, in large part, to the fact that catastrophic events are not simply scaled up small events. Within both the Red Cross and FEMA experience and seniority play a role in promotion and job assignment. However, the experience that people have may not be the appropriate type of experience. The rarity of the catastrophic event is such that most personnel rise to positions of authority on the basis of experience in noncatastrophic situations. For example, in the U.S. coast guard, when the Exxon Valdez occurred, people at senior levels had never experienced anything like a situation of that magnitude. Personnel who had experienced such a situation were no longer in the coast guard. Solely on the basis of the experience of its personnel, if the Exxon Valdez had occurred 5 years earlier, the coast guard would have been better off. In Miami, the Red Cross was at a similar disadvantage. Very senior personnel who had experience with catastrophic events such as Hurricane Hugo and Loma Prieta
did not participate in the Red Cross response to Andrew, because they were no longer part of the Red Cross or were assigned to positions that precluded their participation in this response effort. Because problems in the disaster response area are not scalable, experience tends to dissipate as the demography of the organization changes. Consequently, these organizations need to develop ways of transferring information other than through experience. Possibilities include the use of simulated events and restructuring the response organizations so that high-level personnel are less likely to retire early or leave the organization. Another possibility is the development of standard operating procedures and information systems that embody the lessons of experience (Levitt & March, 1988). However, as we have already discussed, the use of standard operating procedures can lead to organizational rigidity, particularly in the middle of the organization, thus reducing the effectiveness of organizational response to novel situations.

Discussion

As we have seen, organizational learning in theory and in practice are somewhat different. We have seen that planning is not a panacea and that plans tend to be laid aside. These conflicting views over the nature of catastrophic events, and over what can be learned, lead to the development of plans that are not viable. We have seen that feedback is necessary for learning but that it is often not available to, or wanted by, disaster response organizations. We found that where objective performance feedback enables organizational learning, disaster response organizations are more likely to receive subjective performance feedback from the media, which decreases their ability to learn. We found support for theories of the relationship between organizational design and learning for cases where the organization relies on the experience of its personnel. We also found that to minimize costs and the impact of turnover, disaster response organizations tend to use standard operating procedures (as is suggested by theoreticians). There is, however, an interaction between the response based on experience and that based on standard operating procedures because of the seniority system that leads to a rigidity in the middle of disaster response organizations. Finally, we found that even given the desire to empower decision makers to act on the basis of experience, disaster response organizations suffer from a dissipation of experience because catastrophic events are not scalable.

Our analysis suggests that organizational learning occurs in stages. In Figure 1 we present a taxonomy of organizational learning as it occurs in response to rare events. This model is based on the premise that learning involves three steps: (a) problem recognition (because of a failure during an actual or simulated event), (b) problem solving, and (c) implementation of solutions. There are eight potential outcomes given this taxonomy (see Table 1). Organizational learning may not succeed because of failure to identify the problem (Cases 1 and 2), failure to attempt to learn (Cases 3, 4, and 5), failure at problem solving (Case 6), failure to effect change (Case 7). Clearly, there are many ways by which an organization can fail in the learning process.

Organizations that fail to identify the problem have failures in their “scouting” function. Such organizations fail to determine what are the potential critical problems and when and how they will occur. The military routinely uses simulation
and gaming to determine potential problems before they occur in actual combat. Intensive “hot washes” or after-action critiques are sessions conducted to attempt to capture all problems that do occur in an actual or simulated event. Disaster relief forces (FEMA and the ARC) are relatively new to using such techniques.

Organizations that do not attempt to learn suffer from failures in the organizational strategy. The organization may avoid dealing with the problem because the problem is perceived to be too complex or difficult. Or, the organization may not devote adequate resources to solving the problem, or the organization may make little attempt to implement the solution. These different modes of failing to learn all suggest that, at least from management’s point of view, the problem is not being viewed as a serious threat to the organization’s existence or success.
Organizations also suffer from failures in their problem-solving ability or from failures in their ability to effect change. These latter two types of failure are often viewed as the result of organizational design and/or access to resources. We note that organizations often fail to learn before they even get to this point. Should organizations get to this point, these two modes of failure are, at least in principle, relatively easy to overcome. Organizations can be redesigned. More resources can be allocated to problems.

Clearly, learning and passing through these stages is, at least from an objective standpoint, important to performance. Organizations that successfully navigate these stages should exhibit higher performance. Barriers to learning can occur at each of these stages. The Red Cross and FEMA in their response to Hurricane Andrew in Miami managed to successfully navigate some of these barriers and run aground on others. We list several of the issues/problems that occurred for the Red Cross (Table 2) and FEMA (Table 3) and what learning barrier each problem is associated with. As we see, the Red Cross managed in one case – staffing – to learn from previous disasters and to navigate the final barrier to organizational learning. In this case the Red Cross did learn. In two other cases, minority response and internal organization, the Red Cross showed substantial improvement, but still not completely successful learning. FEMA had no clear success at any level. In two areas (roles and responsibilities and information management), FEMA had devoted significant energy to solving the problems that occurred during Hurricane Hugo and Loma Prieta, only to see their solutions fail in practice. The other two failures were, however, results of inadequate problem recognition.

**Table 2: American red cross response**

<table>
<thead>
<tr>
<th>Activity</th>
<th>State of learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Cross staffing</td>
<td>7</td>
</tr>
<tr>
<td>Red Cross coordination with minority victims</td>
<td>6/8</td>
</tr>
<tr>
<td>Red Cross disaster welfare inquiry</td>
<td>5</td>
</tr>
<tr>
<td>Red Cross damage assessment</td>
<td>3</td>
</tr>
<tr>
<td>Red Cross supply/logistics</td>
<td>4</td>
</tr>
<tr>
<td>Red Cross organization</td>
<td>4/8</td>
</tr>
<tr>
<td>Red Cross interorganization coordination</td>
<td>4</td>
</tr>
</tbody>
</table>

**Table 3: Federal emergency management agency response**

<table>
<thead>
<tr>
<th>Activity</th>
<th>State of learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarification of federal organizational roles and responsibilities</td>
<td>6</td>
</tr>
<tr>
<td>Interorganizational coordination</td>
<td>2</td>
</tr>
<tr>
<td>Damage assessment</td>
<td>2/3</td>
</tr>
<tr>
<td>Information management</td>
<td>6</td>
</tr>
</tbody>
</table>
Red Cross performance in Hurricane Andrew illustrates several successful instances of organizational learning and several examples of less than success. The Red Cross significantly improved its ability to staff and organize, and its ability to provide services to racial and ethnic minority groups. Damage assessment, information management, and disaster welfare inquiry were as problematic as they were in prior disasters. The scope of interorganizational coordination problems inherent in operating under the Federal Response Plan was not adequately recognized prior to Hurricane Andrew and required the implementation of ad hoc solutions. The Red Cross had clearly identified the ability to staff and mobilize forces as a critical issue. The Red Cross had learned from Loma Prieta, Hurricane Hugo, and previous disasters that local chapter assistance in the establishment of a response headquarters and the prestaging of key personnel were key factors in the rapid establishment of an effective organization. Prior to Hurricane Andrew, Red Cross managers were staged in Orlando while the Greater Miami Chapter opened the Disaster Relief Operation Headquarters at the International Brotherhood of Electrical Workers union hall in Miami.

We conclude by noting that even if the stages identified in Figure 1 are successfully navigated and the barriers overcome, organizations may not gain the benefits of higher performance. As we saw in Miami, performance may not be judged objectively. Subject performance judgments, such as those provided by the press, act as barriers to learning and minimize the organization’s ability to successfully navigate these stages. Moreover, the existence of such performance judgments, even when they do not prevent learning, may act to deny the organization the benefits of high performance. Thus organizations, even if they do learn to perform well on the basis of objective measures, may come under attack because of subjective measures and their longevity may be threatened.

In situations where failure-free operation is expected, where the performance of the organization is under intense public scrutiny, factors affecting the subjective evaluation of performance may be of prime importance. In such situations, organizational longevity may be more a function of learning impression management than of learning how, on the basis of some objective standard, to improve their performance. In such cases, organizational learning would not guarantee improved performance but a perception of improved performance. Yet we have seen that it is generally harder for the organization to learn to cope with the environment than to cope with internal stress. Subjective performance judgments can be considered an aspect of the environment. Hence it is difficult for the organization to learn what to do to guarantee a perception of improved performance. Organizations in such environments are thus left in a quagmire where they move between denial (the subjective judgment does not match the objective performance, so the problem does not exist), educational attempts (convince those making subjective judgments of the objective standards), and ill-tuned response (learning by attending to subjective judgments instead of objective performance). In such a quagmire learning is neither direct nor obvious, but it does occur and it may not garner the organization the benefits of improved performance.

Note
1. However, experience, when it leads to decrease in creativity, can actually be dysfunctional for the organization (Price & Mueller, 1981).
References

consequences of crisis and crisis management


Learning under Pressure: The Effects of Politicization on Organizational Learning in Public Bureaucracies

Sander Dekker and Dan Hansén


U.S. politicians have criticized federal agencies severely in the aftermath of the September 11 attacks, with both Republicans and Democrats denouncing the Federal Bureau of Investigation for its part in failing to protect the country from outside threats. If the FBI had acted on intelligence information, and if it had notified the Central Intelligence Agency and the White House, then the plot might have been uncovered and the attacks might have been prevented. Amid strong criticism and a joint in-depth investigation by Congress, FBI officials are now under pressure to overhaul the agency to better fight terrorism. As House Intelligence Committee Chairman Goss said: “They’ve got to go through a big learning curve, a lot of readjustment” (Washington Times, May 27, 2002).

Organizational learning is, however, a difficult proposition under such turbulent and insecure circumstances (Wise 2002). In fact, public bureaucracies are challenged by an arduous paradox: the need for learning is regarded highest under circumstances in which it is most difficult to achieve. Not only does the high degree of uncertainty and ambiguity inherent in crisis situations make it difficult to draw clear-cut lessons from events, external threats also create defensive and introverted organizational behavior that inhibits learning (Hermann 1963; Janowitz 1959). This tendency may even be exacerbated if external pressures on a public organization or policy sector are combined with political criticism and condemnation concerning past and present performances.

It is the latter notion that is at the heart of this article. Our main purpose is to explore the effects of increased political involvement on the learning capacity of public organizations. To what extent does politicization facilitate or inhibit the emergence of learning in public bureaucracies? In contrast to scholars who deny any substantial differences between learning in private and public organizations (Cook 1997; Stewart 1997), we argue that organizational learning in the public domain cannot be understood fully without considering its broader political environment. After all, political actors generally have a substantial degree of control over public agencies, if not by direct ministerial governance then indirectly in the course of establishing regulations and setting annual budgets. Moreover, our study shows that political involvement does not necessarily have a negative effect on learning, as argued by Argyris (1986) and Senge (1990). We aim to incorporate “politics” into organizational learning and examine ways in which politics may actually contribute to learning processes within the public sector.
A secondary purpose of this article is to apply learning theory to a new set of empirical data. Several scholars point at a striking lack of empirical studies in the field of organizational learning (Easterby-Smith and Araujo 1999; Fiol and Lyles 1985; Huber 1991; Miner and Mezias 1996). Although we agree that organizational learning is a “conceptual minefield,” confronting researchers with ontological, methodological, and normative problems (cf. Levy 1994; Stern 1997), this should not preclude researchers from applying this concept to empirical studies. In this article we therefore develop a pragmatic framework of organizational learning. In our view, the risk of ignoring theoretical nuances when taking such a pragmatic approach is countered by an increased understanding brought about by the interplay between theory and practice.

In our search for the effects of politicization on learning, we study cases in which the criminal justice systems of Sweden and the Netherlands were placed under severe political scrutiny. In the next section we give a brief introduction on how and why political criticisms emerged over the Swedish and Dutch police and prosecution services. In the third section we unpack the concept of learning in four distinct processes. We formulate several leading questions about the possible effects of politicization on each of these processes. In the fourth section we recount the two cases in light of these guiding questions. Finally, we conclude with a discussion of the ways in which politicization can both facilitate and inhibit learning.

Criminal Justice under Pressure

A vast body of literature on agenda-setting processes tells us about the emergence of policy issues and the dynamics of political agendas (Baumgartner and Jones 1993, 2002; Birkland 1997; Cobb and Elder 1972; Cobb and Ross 1997; Dearing and Rogers 1996; Durant and Diehl 1991; Kingdon 1995; Peters and Hogwood 1985; Rochefort and Cobb 1994; Walker 1977). Politicians must prioritize and can only focus on a limited number of issues at once.

Large parts of government administration generally function without the intervention of Parliament. In some cases and for various reasons, however, political salience may rise rapidly, turning previously internal affairs into matters of “high politics.” In this article we regard an issue as “politicized” when it becomes subject to heightened political attention, which takes form in parliamentary questioning, hearings, debates, and inquiries.

Periods of high politicization generally pose a challenge to those policy makers and officials who are responsible for the organization and functioning of a policy sector (cf. Boin and ‘t Hart 2000). This is especially true in the field of criminal justice, where upsurges in political attention often touch on fundamental issues of state control and the use of coercive power. When criminal justice institutions become subject to political scrutiny, their authority and base of legitimacy can no longer be taken for granted. In order to regain support and credibility, they have to realign with societal and political values, beliefs, and expectations. During these periods of high politicization, policy makers and public officials are expected to resolve acute problems, improve organizational operations, and ultimately restore the sector’s legitimacy.
We are interested in learning how this political pressure for redress actually affects public organizations’ learning capacity. We have chosen to explore learning patterns in two cases, in which the performances of the police and prosecution services became highly politicized: the Swedish Palme case and the Dutch interregional criminal investigation team case. The cases are chosen for the differences they exhibit on the dependent variable: learning in the Swedish case is almost nonexistent, whereas the Dutch case shows a high degree of learning. Our main purpose is to explore the political factors that explain these different learning curves. In the remainder of this section we briefly chronicle the two cases, describing how and why the Swedish and Dutch police and prosecution services became subject to political scrutiny and criticism.

The Palme Case

On February 28, 1986, the Swedish prime minister, Olof Palme, was shot dead in the heart of Stockholm after walking back from the cinema. The police’s efforts during the first twelve hours were chaotic and left the following preinvestigation scant evidence to build on. The murder scene was not properly secured, and it took two hours before a nationwide alert was issued (Government Inquiry Commission 1987a, 31).

A day after the assassination, the Stockholm police commissioner, Hans Holmér, firmly took charge of the search efforts himself. He set up an unparalleled managerial team, including himself, heads of different police branches, and an observer from the Ministry of Justice. The group was largely supported by the Cabinet, as finding and convicting the perpetrator of the crime had become a national priority. Holmér granted the media liberal access to current information, and he convincingly conveyed an image of being on top of developments. The actual preinvestigation began on March 6, when a first suspect was identified and the chief prosecutor became involved.

Two months into the investigation, however, the positive image set by Holmér lost its cogency as a first lead ran dry. Despite the daily press conferences, rumors soon started to flourish, suggesting a wide variety of motives and culprits. In addition, tensions within the investigation team became publicly visible. Adequate procedures for these kinds of operations were lacking, and the police investigation team withheld crucial information from the chief prosecutor. Serious cooperation problems between Holmér and the chief prosecutor, K. G. Svensson, led to the replacement of the latter by the head of the Stockholm Prosecution Office. Because the murder investigation appeared to be failing, the minister of justice established an inquiry commission, to which he gave the explicit charge not to allocate blame to individual actors but, rather, to draw lessons from the event (Dagens Nybeter, April 17, 1986).

By early 1987, the relationship between the police and the prosecution service had further deteriorated. There were fundamental disagreements over the arrest and detention of a large group of Kurds who allegedly were involved in the Palme murder. In the public prosecutor’s view, however, the actual evidence that was produced against these suspects was not judged to justify their treatment. The Kurds were released the very same day, strengthening the impression that the police disrespected their civil rights, as stated in the media by the first chief prosecutor. The Cabinet intervened in response to this new dispute and moved the entire Palme investigation from the local to the national level.
By this time the Palme investigation was already at the center of political attention, with periodic parliamentary hearings to examine the Cabinet’s involvement in the preinvestigation. In May 1987, seven out of fifteen members of the Standing Committee on the Constitution wanted to reprimand the minister of justice for his role in the preinvestigation debacle (Aftonbladet, May 8, 1987). Three inquiry reports were published in the following year, all dealing with the period between the night of the murder and the removal of Holmér from the investigation. The first, the so-called Jurist Commission, produced two reports (Government Inquiry Commission 1987a, 1987b), closely followed by that of a parliamentary commission (Government Inquiry Commission 1988). In January 1989 a fourth report was presented, dealing with the threat frame and assessments just prior to the murder (Government Inquiry Commission 1989). All these inquiries were primarily blue-ribbon reports in nature, placing blame for cooperation problems mainly on Holmér and only to some extent on Svensson. None of the commissions delved deeper into the structural problems that had led to cooperation difficulties, nor did they scrutinize the role of the Cabinet.

Thirteen years after the death of Palme, in June 1999, a fifth report was published on the post-Holmér era (Government Inquiry Commission 1999). In contrast to previous reports, this last commission introduced the idea that one of the main problems during the investigation was the incongruence between the actual role and the formal mandate of the public prosecutor in the investigation. The fact that the murderer is still on the loose has transformed the case of Olof Palme into a national trauma (Hansén and Stern 2001).

The IRT Case

In December 1993 a press release signed by the police commissioner, public prosecutor, and mayor of Amsterdam announced the disbanding of an interregional criminal investigation team (IRT) that had only shortly before been created by several police forces in a collaborative effort to fight organized crime. Controversies over the use of a radical investigative method, the so-called Delta Method, were the main cause for the abolishment of the team. Using this technique, the IRT “planted” at the top of a drug syndicate a civilian infiltrator who could rise within the criminal organization by gaining trust through the steady flow of illegal drugs, facilitated by the IRT. This method allowed the IRT to conveniently sidestep legal and moral constraints, prompting a decision among the Amsterdam authorities to terminate the collaboration with the Utrecht and Haarlem police forces.

The disbanding of the IRT produced a public feud between the Amsterdam and Utrecht police chiefs and attracted the attention of the media and of national politicians. The crisis escalated rapidly, even though few truly understood the roots of discontent among the police forces. In an election year, with crime high on the political agenda, a public dispute between rival police forces proved a treasure trove for the media. A continuous stream of startling disclosures began, followed closely by increasingly bewildered political reactions. Pressure mounted on the ministers of justice and internal affairs. In an effort to depoliticize the situation, they announced an independent inquiry into the disbanding of the IRT. The inquiry committee, which published its report by the end of March 1994, took sides: it identified organizational deficiencies in Amsterdam’s public prosecution office as a major factor in the IRT’s demise. In addition, the Amsterdam police force was chastised for its unwillingness to cooperate with other police forces.
The report of the independent committee did little to reduce tensions. Political attention remained high because the official investigation findings were strongly contested by the Amsterdam officials. Moreover, the mass media repeatedly published rumors and revelations about police involvement in the import of large quantities of illegal drugs. After two long parliamentary debates in April and June 1994, both the minister of justice and the minister of internal affairs were forced to resign; members of Parliament felt that they had not been forceful enough in bringing the dispute to an end. Shortly after, in summer 1994, Parliament started its own investigation and decided that a formal parliamentary inquiry was necessary.

The inquiry and the public hearings that followed revealed the true extent of the damage. Not only were highly controversial investigative methods graphically exposed to the public, thereby mitigating the earlier inquiry’s critique of Amsterdam’s reluctance to adopt them, the investigation also revealed that other police forces had continued to rely on the Delta Method after Amsterdam had terminated the IRT. The parliamentary inquiry commission published its report on February 1, 1996. It concluded that the crime-fighting sector was in a state of “deep crisis” centered on three prime dimensions (Parliamentary Inquiry Commission on Investigative Methods 1996, 413–15). First, the absence of adequate legal standards had created a twilight zone, in which police and prosecutors had been left to define the limits on the use of investigation methods. Second, the commission found a diffuse and uncoordinated conglomerate of organizations in charge of the crimefighting sector. Coordination problems and conflicting or unclear competencies frustrated the effectiveness and legitimacy of the investigative process. Finally, the commission identified a breakdown of authority. Public prosecutors, formally in charge of criminal investigations, were often unable to exert authority over the police. In sum, things had to change.

Case Comparison

At first sight, the Swedish Palme case and the Dutch IRT case may appear to be somewhat different in nature. In Sweden controversies emerged in the light of failing attempts to clear up the assassination of a statesman, whereas in the Netherlands problems emerged with regard to the fight against organized crime. Yet both cases show remarkable similarities concerning the underlying causes of these problems, that is, dysfunctional organizational structures and procedures and ambiguous authority relations between the police and prosecution service. In this article we focus on these comparable systemic matters, more than on the rather different “focusing events” or operational particularities of the criminal investigations.

The criminal justice systems in both countries were attacked in various ways for not meeting public and political expectations. A pattern emerged in which politicians became actively involved in the evaluation and assessment of organizational performance. Previous standards were clearly inadequate in light of prevailing requirements. Police and prosecution organizations were publicly urged by politicians to draw lessons from the past in order to improve their performance and prevent future mishaps. Our research question is concerned with identifying features of the politicization process that either facilitated or inhibited the emergence of learning, examined against the backdrop of different learning curves in the criminal justice systems of Sweden and the Netherlands.
Organizational Learning: Cognition and Behavior

Organizational learning has become a popular notion in management studies over the last fifteen–twenty years (Crossan and Guatto 1996). Although no single theory or model has won widespread acceptance (Prange 1999), it is generally recognized as a useful way to study the dynamic relation between information and knowledge, on the one hand, and organizational action and change, on the other (Argyris and Schön 1996; Cangelosi and Dill 1965; Crossan, Lane, and White 1999; Fiol and Lyles 1985; Levitt and March 1988). As Fiol and Lyles suggest, learning is “the development of insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions” (1985, 811). In this article we therefore adopt a definition of learning that emphasizes this link between cognition and behavior.

The cognitive dimension of learning refers to growing insights and a change in the state of knowledge of organizations (Duncan and Weiss 1979). The main activity in this phase includes the filtering, interpretation, and processing of information in order to draw concrete lessons for the future. The behavioral dimension entails structural adaptations that reflect this increase in organizational knowledge and insight (Simon 1969). Lessons can only have widespread and long-lasting effects if they are disseminated and embedded in the structures of the organization (Crossan, Lane, and White 1999). We discuss the possible effects of politicization on each of these dimensions. This gives rise to four theoretically driven questions that guide our empirical analysis in the later part of the article.

Cognitive Dimension

On the cognitive dimension, our questions stem from the idea that organizations are cognitive systems in and of themselves, notwithstanding the fact that organizational members are capable of learning at an individual level. Hedberg puts it as follows: “As individuals develop their personalities, personal habits, and beliefs over times, organizations develop their world views and ideologies. Members come and go, and leadership changes, but organizations’ memories preserve certain behaviors, mental maps, norms and values over time” (1981, 6). Hence, organizations learn as lessons are shared throughout the organization and stored in some sort of organizational memory. This memory may take explicit forms, such as formal rules and structures, policy documents, manuals, standard operating procedures, and computer-based information systems, or implicit forms, such as organizational routines, codes, norms, and beliefs (Huber 1991; Levitt and March 1988; March 1991; Olivera 2000).

The cognitive dimension of learning consists of the handling of information that is derived from certain experiences or events (Duncan and Weiss 1979; Huber 1991; Jelinek 1979). Hence, acquisition or production of information is an important precondition for learning. This may take very simple forms. The informal behavior of individuals, for instance, is often geared toward obtaining such information: “reading the Wall Street Journal or listening to coffee break ‘news’” (Huber 1991, 91). But organizations also collect information more systematically from intentional activities, such as experimenting (Warner 1984), benchmarking (Gormley and Weimer 1999), research and development (Pelz and Andrews 1966), and evaluating their “normal” performances (Leeuw, Rist, and Sonnichsen 1994).
Politicization, however, may affect the availability of information, thereby changing patterns of organizational learning. When the functioning of a public organization becomes a salient political issue, external demands for information about its past and present performances increase. Both the organizations at stake and actors outside the policy sector play a role in obtaining and disclosing the requested facts and figures. Heightened political attention often initiates an upsurge of information in the form of commission reports, judicial reviews, and investigative journalism (Van Duin 1992). Still, this sort of information does not necessarily contribute to organizational learning, for it is not always produced as a tool from which lessons can easily be drawn. This leads to our first question –

**Question 1: To what extent does politicization affect the availability of useful information about organizations’ past and current performances?**

The interpretation of information is another important cognitive aspect of learning (Crossan, Lane, and White 1999; Daft and Weick 1984; Huber 1991). Sheer availability of information does not guarantee a successful learning process. Organizations have to translate facts and figures into concrete lessons that can be subsequently incorporated into organizational structures. Whereas information is merely descriptive, “lesson-drawing” involves deriving inferences from those descriptive facts. In order to attach significance and meaning to raw information, scattered and inarticulate pieces of data must first be filtered and structured into coherent patterns. The essence of lesson-drawing ultimately lies in the diagnosis and explanation of those descriptive patterns, which ideally results in the development of a conceptual scheme concerning the causes of problems (cause–effect explanations) and possible ways to solve them (means–ends explanations).

Politicization may influence organizations’ awareness of learning opportunities and their willingness or capacity to draw lessons from certain events and experiences. On the one hand, political attention may provide incentives or force public officials to reflect on their organizations’ past and current performances. When poor performances are exposed to the public and become the subject of political discussions, it becomes increasingly difficult for organizations to ignore these shortcomings. In that sense, political attention may contribute to a more fundamental reflection on the basic principles and values of an organization, which Argyris and Schön (1996) refer to as double-loop learning.

On the other hand, politicization may cause biases in the analysis of organizational failures. Time constraints are important factors in this respect. Policy makers under pressure often have a limited time horizon (Rose 1993), which may inhibit drawing lessons that make a link between malperformances and structural shortcomings in organizations. Instead, public officials use rhetorical tactics or emphasize the role of individuals in a process of accountability and blaming, in order to depoliticize the problem in the short run (Bovens et al. 1999). Such a bias, however, is an impediment to organizational learning, as it diverts attention from structural problems, undermining the learning potential for the organization as a whole.

Van Duin (1992) suggests that the two possible outcomes described above are not mutually exclusive. Intensified political attention may result in the designation of blame and quick organizational fixes, as well as more structural lessons about how to improve organizational performances in the long run. This notion is central in our second question – **Question 2: To what extent does politicization facilitate lesson-drawing in organizations under scrutiny?**
Behavioral Dimension

The dissemination of knowledge is an important behavioral aspect of learning. Sharing lessons within an organization or a larger interorganizational field obviously leads to more broad-based learning (Glaser, Abelson, and Garrison 1983; Huber 1991; Van Duin 1992). Intensified political attention with regard to organizational failures may have a facilitating effect on the active distribution of knowledge and information. Growing awareness of organizational problems and possible solutions at the political level may induce the dissemination of lessons throughout organizations or policy sectors. In other words, when organizational problems are exposed in a process of politicization, larger parts of the organization will acknowledge the need for learning and be more receptive toward knowledge that is acquired elsewhere in the organization.

This presupposes, however, that lessons conveyed clearly meet the needs of the organization at large and will have favorable outcomes in terms of increased efficiency. If not, then the dissemination of lessons may well add grist to the mill of controversy, thereby inhibiting learning. We thus arrive at our third question—Question 3: To what extent does politicization facilitate knowledge dissemination about organizations’ past and current performances?

For organizational learning to come full circle, lessons must be institutionalized within the bureaucratic structures of the organization. This process of institutionalizing knowledge sets organizational learning apart from individual learning (Crossan, Lane, and White 1999). When lessons are incorporated into the formal rules, operational procedures, and information systems of an organization, they are no longer lost as a result of personnel turnover. Moreover, lessons can be integrated into the social structures of the organization by means of inculcation. The willingness of organizational members to conform to rules and procedures is then regulated by the use of social control and designated personnel policies (Boin 2001).

The effects of politicization on the institutionalization of knowledge may be twofold. On the one hand, the willingness to implement changes within organizations may be triggered when malperformances reach the top of the political agenda. Policy makers realize that it is time to take decisive actions in order to prevent direct political intervention or massive public and media criticism, to show that they take public and political concerns seriously, and to accept changes in order to restore confidence in their organizations (cf. Boin and ’t Hart 2000; ’t Hart 1993). In some cases, a process of politicization is actually welcomed by policy makers because it opens a “window of opportunity” for organizational changes that were previously unimaginable (Cortell and Peterson 1999; Keeler 1993; Kingdon 1995). This allows them to use the argument of political pressure as a means to push their organizations to implement changes.

On the other hand, bureaucratic rigidity and implementation problems are not overcome simply as a result of political pressure. In the wake of urgent and serious problems, drastic changes are often announced without consulting all executive parties. The widening of the gap between central officials and field executives generally leads to additional difficulties in the implementation process (Boin and Otten 1996). Especially when political attention shifts away over time, implementation may become an extremely difficult task (Van Duin 1992). This leads us to our last question—Question 4: To what extent does politicization facilitate the institutionalization of lessons in organizations under scrutiny?
Methodology

As the essence of organizational learning lies in the relationship between cognition and behavior, the application of this concept requires methods that go beyond mere observations of changes taking place (Fiol and Lyles 1985). In our empirical search we therefore look for evidence of actions reflecting increased insight, knowledge, and understanding. Although we have presented cognitive and behavioral developments of organizational learning as a phase heuristic in this section, learning in practice is of a much more dynamic and iterative nature. Learning is not a set, linear process in which behavioral change is always preceded by cognitive developments. Learning processes have reciprocal effects on each other: “understanding guides action, but action also informs understanding” (Crossan, Lane, and White 1999, 524). Hence, we also speak of learning when we find evidence for changes in rules and working methods that are followed by a growing awareness about the effectiveness of those actions.

Organizational learning is a dynamic and interactive process, which takes place at multiple levels. Because we are interested in learning that takes place in criminal justice systems, our unit of analysis exceeds the boundaries of a single public organization. Organizations involved in criminal justice, which are mutually dependent on one another to reach their goals, should therefore be considered as networks in which processes of learning emerge (cf. Kickert, Klijn, and Koppenjan 1997; Starkey, Barnatt, and Tempest 2000; Wenger 1998).

Our empirical search in this article is primarily based on a document study. For both cases we have examined the abundance of official government documents produced by actors within, as well as outside of the criminal justice system. In addition, we have searched for public statements by police and prosecution officials that indicate either cognitive or behavioral aspects of learning. This article, however, does not allow for full and systematic coverage of every indication of learning or nonlearning. In this explorative study we therefore try to carefully construct and make explicit the relationship between cognitive and behavioral developments, using illustrative examples from both cases.

Politicization and Learning: The Cases Revisited

In this section we recount the Swedish and Dutch cases in light of the leading questions formulated above. The cases show striking similarities with regard to knowledge production. Furthermore, we note the organizational reflex reaction to appoint blame toward individuals in both cases. The Dutch police and prosecution service, however, show a much more progressive learning pattern in the long run. Lessons drawn from the IRT crisis initially appear to have been forced on the criminal justice system, but along the way officials’ awareness that these changes actually contributed to the legitimacy and effectiveness of their organizations increased. Whereas intensified political attention has been an incentive for organizational learning in the Dutch case, it appears to have inhibited learning in the Swedish case. To understand why, we now proceed to seek possible explanations by examining the cases on the four identified aspects of organizational learning.
Information Production

The process of politicization in the two cases was undoubtedly conducive to the proliferation of information. The criminal justice systems in Sweden as well as in the Netherlands were subjected to abundant media coverage, parliamentary debates, public inquiries, scientific pondering, and fictional speculation. The work of commissions investigating the two cases, in particular, created a stream of information regarding the operation of these criminal justice organizations, the events leading up to failures, and possible solutions to prevent future lapses.

Although the number of available sources from which to draw lessons increased as a result of politicization, the quality of information varied greatly in both cases. The information produced was often ambiguous and equivocal, holding multiple and often conflicting meanings (cf. Daft and Huber 1987). First, information producers such as commissions, the mass media, and the police and prosecution services themselves had different interests and aims in providing information. The primary function of most commissions was not so much to produce clear and unambiguous information from which organizations could learn; they mainly fulfilled a political purpose. Both the Standing Committee on the Constitution in Sweden and the Wierenga Commission in the Netherlands, for instance, can be seen as accountability forums for top officials directly involved in the Palme and IRT cases. Their work consisted of hearing officials and assessing their most important actions and decisions, tasks that failed to produce the type of information that enables organizational learning. Actors often held different opinions and even provided opposing accounts of facts. In the Swedish case, for instance, the prosecutors and the police’s managerial group were eager to use these forums to make explicit fundamental disagreements about the organization of the pre-investigation (Government Inquiry Commission 1987b; Standing Committee on the Constitution 1986–87). These findings support the claim that organizations under pressure show an inclination toward fragmentation (cf. Boin and Otten 1996) and accordingly produce competing opinions and accounts about problems and shortcomings.

A second source of explanation for the ambiguity of facts and figures lies in the conditions under which information is produced, with time pressure playing a central role. Journalists are not the only ones to deal with this constraint, resulting in the occasional publication of rumors and other unchecked information. Commissions may also work under conditions that are detrimental to the thoroughness and precision of their analyses. In the IRT case, for instance, the Wierenga Commission had to deliver a report within six weeks because members of Parliament wanted to discuss its findings before the general elections. The commission was therefore confined to interviewing a limited amount of officials and studying archive material. As the commission chose a particular line of argument in the early stages of the research process, its report was biased in favor of the pragmatic approach supported by the Utrecht and Kennemerland police forces. As the content of the report started to leak out, however, rumors casting doubts on the commission’s account flourished. Though the effect of time limits is seen to center on the perceived pressure it places on officials, the political sensitivity of an issue may strongly increase feelings of time pressure. Commission members realize that they are working in the political spotlight and are aware
of the possible consequences of their analyses, creating an unfavorable situation in which stress and groupthink may flourish (Holsti and George 1975; Janis 1982; Post 1991; ’t Hart 1994).

In short, politicization resulted in an abundance of information about organizations’ performances in both cases. Even though much of the information presented by the media, politicians, and commissions had actually been generated by criminal justice officials, this process of re-production outside of the criminal justice system improved the accessibility of information. However, not all information appeared suitable for translation into organizational lessons. Information was often inaccurate, ambiguous, or contradictory. At times, therefore, organizations did not see the wood for the trees. Access to information thus benefits organizational learning, provided that the message is clear and unambiguous. Otherwise, it can easily contribute to information overload.

Lesson-Drawing

The two cases present a varied picture with regard to lesson-drawing. There are interesting similarities in the ways organizations framed the problem at stake and analyzed its causes, which in turn inhibited learning in the short term. Both the Swedish and Dutch police and prosecution services were initially highly skeptical about political involvement. They also emphasized the role of individuals as a main cause of the troubles with which they were confronted. Later, however, learning patterns began to diverge. Whereas the Swedish case shows hardly any signs of structural learning, there is some evidence that the Dutch police and prosecution service changed their ideas and attitudes toward plans developed at the political level.

Previous studies tell us that organizational units under stress have a tendency toward withdrawal behavior. Higher authority is perceived as being more remote and as acting arbitrarily in response to political pressures (Hermann 1963; Janowitz 1959). The reactions of the Swedish and Dutch police and prosecution services bear out this supposition. Much of the work of the commissions was criticized by officials within the criminal justice sector itself. The Swedish police commissioner declared that the initiative to establish a commission had ruined his confidence with the justice minister. According to Holmér (1988), it wrecked the morale and spirit of the 300 police officers involved in the search efforts. In the Netherlands, many police officers and public prosecutors rejected the main conclusion that the criminal justice system was in a state of crisis. They declared that the “crisis” was limited to malpractice in a single organizational unit (the IRT), even though the report emphasized that its conclusions applied to the criminal justice system as a whole (Parliamentary Evaluation Commission on Investigative Methods 1999).

A second similarity lies in the emphasis on individual failure in the two cases. In the first year of the Palme investigation, both Chief Prosecutor Svensson and Police Commissioner Holmér were forced to step down, as first Svensson and later Holmér were seen as the culprits in the malfunctioning preinvestigation. Holmér, who had reached the status of a national hero in the early stages of the preinvestigation, later became a national scapegoat for the wrecked investigation. When the Jurist Commission presented the second part of its report (dealing with the Holmér era), it was especially critical of his leadership practices (Government Inquiry Commission 1987b). In the Dutch case the reflex to seek individual blame
was enhanced by the Wierenga report. The commission clearly took sides in the disagreement between the Amsterdam and Utrecht police forces. It backed Utrecht and harshly criticized the role of four Amsterdam officials, who were alleged to have intentionally undermined the special investigation team. This conclusion fueled distrust between the two forces and complicated further cooperation among several organizations involved in the war against organized crime (Parliamentary Inquiry Commission on Investigative Methods 1996, 163).

While both cases display some similarity, the Dutch case shows a changing learning pattern over time. Although the first years after the abolishment of the team were characterized by skepticism and distrust, criminal justice organizations tended toward a more receptive approach after the parliamentary inquiry published its findings in the so-called Van Traa Report. Police and public prosecution officials were initially critical, warning that strict regulation of investigative methods would bind the hands of criminal justice organizations in their battle against organized crime. An evaluation three years after the Van Traa Report, however, revealed signs of organizational learning. There was a growing realization within the police and the public prosecution service that stricter regulation and closer cooperation not only were a necessity but also reduced uncertainty on the work floor. As a public prosecutor stated: “The positive effect of Van Traa is that we know clearly what is allowed. You often hear the remark: what a wide range of options we have. And we do indeed have many options, because we now document our actions. You know exactly what is allowed, and what is not” (Parliamentary Evaluation Commission on Investigative Methods 1999, 324).

Explaining differential learning behavior in the two cases remains a matter of speculation at this point, but the work of the Van Traa Commission and the extensive political support for its recommendations are likely sources of explanation. The commission formulated highly critical conclusions about the state of affairs in the criminal justice sector and presented a detailed way to solve the problems at hand. It emphasized the structural flaws of the system in general, instead of pointing at individual failures, which was the predominant approach of the Wierenga Commission and the several commissions investigating the Palme case. This is not to say that the Wierenga Commission and the various Palme commissions wholly disregarded problems at the system level. The last Palme report, for instance, observed difficulties in the relationship between the police and prosecution service: “The formal and the factual responsibilities are not congruent, which in turn leads to the deficiencies, tensions and indistinctness that we have observed and accounted for” (Government Inquiry Commission 1999, 907). In contrast to the Van Traa Report, however, this commission did not develop practical recommendations to solve those structural problems.

At the political level there was a near-total consensus on the direction and scope of the highly critical Van Traa Report and the proposed plans to clean up the sector by introducing strict regulation for the use of investigative methods and improving coordination among several police units. In the field these changes were increasingly welcomed as it became clear that they were workable, even though they also led to an increase in procedures and paperwork (Bokhorst, De Kogel, and Van der Meij 2002; Parliamentary Evaluation Commission on Investigative Methods 1999). Conversely, the commissions investigating the Palme case never managed to frame the central problem at a system level. As a result, political parties could not take a strong stance and develop widely supported proposals.
for improvement. This political reluctance left police and prosecution officials in limbo over possible lessons from the failed Palme investigation.

Knowledge Dissemination

Because the causes of failure in the Swedish case were predominantly ascribed to particularities and individual shortcomings, criminal justice officials felt little impetus to formulate and disseminate lessons at the organizational level. If one can speak of any organizational lessons drawn from the Palme case, these lessons did not promote substantial behavioral change or increased intellectual sophistication. The only concrete lesson disseminated among high-ranking police officers was not to become a “second Holmér,” resulting in slight changes of leadership practices. Police commissioners have become more reserved since the Holmér debacle and no longer appear as central figures in public media. When the Gothenburg police was confronted with violent riots during the 2001 E.U. Summit, for instance, media communication was handled by professional press spokespersons; the police commissioner still has little interaction with the public. The more systemic improvements suggested by the last commission of inquiry have been left to their fate. The police and the prosecution service have not acted on conclusions about the difficult relationship between the two organizations. In this respect, no initiatives have been taken to cope with the incongruence between the factual role and legal mandate of the public prosecutor (Government Inquiry Commission 1999).

In the Dutch case, however, lessons touched on many aspects of the criminal justice system and were spread throughout the police and prosecution service. Lessons learned from the IRT case were translated into legislation and specific procedures that applied to the criminal justice system as a whole. The Ministry of Justice developed legislation to define and regulate the use of investigative methods. Extensive procedures were developed, prescribing the criteria to be met before far-reaching investigative methods can be put into practice. Furthermore, the public prosecution service was reorganized in order to reestablish authority over the investigative process. Specialized public prosecutors were appointed to supervise organized crime units and criminal intelligence services. Another structural measure included the creation of a review commission, which advises the chief officials of the prosecution service on the use of the most radical methods, such as long-term infiltration or making deals with criminals.

Perhaps the most important administrative factor explaining the dissemination of organizational lessons is the strong emphasis on, and supervision over, the process of implementation by top executives who were aware of the political delicacy of the issue. The ministries involved worked hard to improve and maintain communication channels with the field, thus avoiding a “normal” barrier to implementation success. Workshops and conferences were organized by special project teams to actively disseminate lessons throughout the organizations involved. In the three years between the Van Traa Report and the ratification of a new law, during what was called the “interregnum,” the prosecution service sent out practical guidelines for the use of investigative methods (Parliamentary Evaluation Commission on Investigative Methods 1999, 18). This eventually resulted in a handbook for investigative methods and a national help desk where prosecutors could inquire about specific issues. Consequently, police officers and public prosecutors anticipated the new law that was introduced in 2000:
“Concerning our state of knowledge, we did not let them take us unaware and already worked as if the new law existed” (Bokhorst, De Kogel, and Van der Meij 2002, 85).

Another important factor that facilitated the dissemination of knowledge was the “fit” between the proposals and the various reform trajectories that had already been set in motion. The upsurge of political attention to problems in the crime-fighting sector promoted, rather than hindered, the structural changes that had passed through the difficult early stages of reform. By coupling existing solutions to the crisis, the knife cut both ways: the need for change was reconfirmed, while the speed of change appeared remarkably high. Field actors felt more involved than they might have if a brand-new set of blueprints had been imposed. Frequent consultation at all levels also helped to eliminate a potential source of disruption in the process of implementation.

Institutionalization

We observe tangible differences with regard to the institutionalization of lessons in the two cases. Because problems at the system level were not articulated in Sweden, it is not surprising that the institutional structures of the organizations involved hardly changed. Organizational disinclination also intersected with the limited focus of politicians during the process. The aftermath of the Palme murder was full of scandals and mishaps, threatening government credibility more directly in the short run (Hansén 2000; Hansén and Stern 2001; Stern and Hansén 2001). In the Netherlands, however, the police and prosecution incorporated fundamental lessons by changing their formal rules, operating procedures, and information systems. In contrast to the Swedish case, there was also a broad political consensus on the direction and scope of structural plans to clean up the sector. Given the political divide observed in the process leading up to the parliamentary inquiry, this consensus is surprising to say the least. The reason behind this sense of general agreement should be seen in light of the 1994 general elections and the subsequent formation of a new political coalition, which brought new faces to the top positions in the Ministries of Justice and Internal Affairs. Cooperation between these key ministries improved significantly, as both ministers actively worked to find common ground.

Politicians were very much on top of the implementation process after the Van Traq Report. Parliament maintained pressure on the police and prosecution service by closely monitoring their progress. Both ministries were invited to submit annual progress reports, which were discussed in Parliament. More important, the prospect of a thorough evaluation served as a constant reminder that they would eventually be made to answer for progress made on planned reforms. In the parliamentary debates on the findings of the Van Traq Commission, it was agreed that the efforts of the criminal justice system would be reviewed in due course, which was “a clear signal for those who are in charge of the implementation of the recommendations. It keeps up the pressure, because parliament will once come back on the subject.” In 1999 a parliamentary investigation evaluated the results against the recommendations made by the Van Traq Commission.

The evaluation showed that the Van Traq Report had set off a wide range of reform initiatives. The Ministries of Justice and Internal Affairs both took the implementation process very seriously. Several working groups were set up to develop
guidelines, refine training programs, and improve administrative organization. This is not to say that new plans were smoothly implemented. The Act on Special Investigation Competencies did not come into effect until February 2000. Significant differences among the various police regions and public prosecution offices remained, and coordination between the organizations continued to be problematic. Moreover, changes were slow to institutionalize, which was partly caused by the inability or unwillingness of parts of the criminal justice system to recognize the crisis as it was presented. In spite of these reservations, the 1999 parliamentary evaluation was positive about the progress made since the publication of the Van Traa Report. It confirmed that the Dutch criminal justice system was beyond crisis (Parliamentary Evaluation Commission on Investigative Methods 1999).

Despite the lack of contrasting evidence, the Dutch case suggests that close political monitoring of the implementation process was conducive to its successful completion. Public servants charged with carrying out the reform initiatives acknowledged both the opportunities and the risks of being in the limelight of political scrutiny, which could make or break their personal careers. The absence of political agreement on the structural improvements of the criminal justice system in Sweden and the consequent lack of political commitment to the institutionalization of possible lessons seem to be the key explanations for the remarkably different learning curves in the two cases.

Conclusions

When things go wrong in the public domain, organizations often face increased political involvement and demands for improvement. In both Sweden and the Netherlands, political attention converged around a contentious criminal investigation. The police and prosecution services involved, however, show considerably different patterns regarding the extent to which they actually learned under political pressure. Although there are similarities in information production and initial attempts to emphasize the role of individual failure, the two cases show remarkable differences in the dissemination and institutionalization of organizational lessons in the long run. These differences can partly be explained through a detailed examination of the dynamics of politicization.

An important factor that facilitated a process of learning in the Dutch case is the level at which problems were articulated. In the Swedish case, politicians and public officials were not able to reach a consensus about the dominant problem definition. The inquiries of several commissions amounted to little more than fact-finding accounts, leaving opportunities for various interpretations and inducing a political blame game. In the Netherlands, by contrast, the Van Traa Report took the analysis one step further, identifying the structural problems in which individual failures were embedded and drafting concrete recommendations for possible solutions. The coupling of the Van Traa proposals with ongoing changes in the Dutch criminal justice system facilitated the smooth dissemination of lessons among the organizations involved.

Organizational learning in the Dutch case was furthermore sustained by a broad political consensus about the scope and direction of changes. The dissemination and institutionalization of lessons gained momentum as politicians and public officials decided on the recommendations of the Van Traa Commission. This near-total consensus on the direction and scope of the proposed plans may have been
facilitated by the results of the 1994 general elections and the subsequent formation of a coalition that was pragmatic at heart. Consequently, political attention changed from a conflict-driven process to one in which politicians monitored approved organizational reforms.

Our study highlights the complexity of organizational learning in the public sector, strengthening the case for adopting an open and dynamic approach to understand learning processes in public bureaucracies. Not only should organizational learning be studied in the wider context of political environments, but we should also be aware of the various relations between cognition and action in learning processes. In the IRT case, for instance, changes were sometimes forced on the criminal justice system, only later to be accompanied by a growing organizational awareness of the effectiveness of these adaptations.

The dynamic nature of learning, however, also poses methodological difficulties regarding the study of learning processes. The four processes we distinguished in this article – information production, lesson-drawing, knowledge dissemination, and institutionalization – serve as a clear theoretical conceptualization, even though the different aspects were sometimes hard to separate in practice. The way information was translated into lessons could not always easily be disentangled from the process of information production, and knowledge dissemination was generally an integral part of a process of institutionalization. Further research should explore more distinct operationalizations of the different elements of learning, a goal that will be achieved by confronting conceptual frameworks with empirical data, not by endless theoretical pondering.

Even though this study suggests that a theoretical framework for learning should be examined in further detail, it has provided us with a more sophisticated view of the interrelation between organizational learning and politics. Every so often the (mal)performances of a public organization emerge on the political agenda. The notion that political pressure inhibits learning (Argyris 1986; Senge 1990) is incomplete, to say the least. Learning within public organizations can be either facilitated or inhibited by a process of politicization, depending on the characteristics of the political process. Political attention may have a positive effect on learning if politicians ultimately commit to certain structural solutions and carefully monitor the process of institutionalizing the lessons.

Acknowledgements

We wish to thank those colleagues who discussed a previous version of this article during the 2002 Annual Meeting of the European Group of Public Administration in Potsdam. We are especially grateful to Arjen Boin, Paul ‘t Hart, Mark Rhinard, Eric Stern, Lina Svedin, and three anonymous reviewers for the constructive suggestions and comments we received.

Notes

1. We acknowledge the close link between politics and the media (cf. Dearing and Rogers 1996; Shaw and McCombs 1977). Because politicians have a more direct influence on public organizations, we focus on politicization and not media attention, even though those processes are often intertwined.

2. Conflict takes a central position in the literature on agenda setting and politicization (Brändström and Kuipers 2003; Lang and Lang 1981; Rochefort and Cobb 1994). In this
study, however, we uncouple the notions of conflict and political attention. This allows us
to study the overall political attention for both issues of contention and agreed-on social
problems or “valence issues” (Baumgartner and Jones 1993; Dearing and Rogers 1996).
3. One rumor that turned out to be long-lived was the “police conspiracy,” alleging that parts
of the police force were involved in the murder (Krusell 1998).
4. All reports place blame except for Government Inquiry Commission 1989, which does not
cover that period.
5. There were five such teams in the Netherlands.
6. In the Netherlands police affairs are a joint responsibility of the Ministry of Justice (in-
vestigative policy) and the Ministry of Internal Affairs (public order). At the local level, the
police department is directed by the mayor and the public prosecutor (see Fijnaut, Muller,
and Rosenthal 1999).
7. We should be careful not to simply equate learning with adaptation or with the implemen-
tation of changes (Hedberg 1981). Etheredge suggests that “true learning should be assessed
not by behavioral change or attitude change but by the dual criteria of increased intelligence
and sophistication of thought and increased effectiveness of behavior” (1985, 66).
8. It should be noted that the party most upset by the establishment of the first commission
was the police’s managerial group – and Holmér in particular. Other parts of the Swedish
criminal justice system did not consider the commission as much as a sign of distrust but,
rather, as a distracting factor.
9. Both the jurist and the parliamentary commissions concluded that Sweden was in need of a
SWAT team. That may be true for national security purposes but is quite far from a remedy
to the problems that multiplied during the Palme murder and its aftermath.

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consequences of crisis and crisis management


Disasters, such as the Montgomery, Alabama fire which killed 26 people in February, often bring out the best in individuals. Ability to endure suffering, desire to help others, and acts of courage and generosity come forth in time of crisis. But disasters can also evoke the worst in persons – a relentless search for scapegoats to blame for destruction and loss of life.

This tendency to seek the cause in a who – rather than a what – is common after airplane crashes, fires, cave-ins, and other catastrophes not caused naturally. Personalizing blame in this way is not only a standard response, but well in harmony with the moral framework of American society. Sin and crime are, after all, matters of personal guilt, by traditional Western legal and theological definitions.

However, social scientists differ in their explanations of what accounts for this personalizing of blame. This can be shown by consideration of three major disasters – the famed Cocoanut Grove night club fire in Boston which killed 498 persons in 1942; the strange sequence of three airplane crashes within three months at Elizabeth, New Jersey, in 1951–52; and the explosion which killed 81 persons in 1963 at the State Fairgrounds Coliseum in Indianapolis.

Social research on disasters has advanced two explanations for this personalizing of blame:

- It is basically irrational, a form of “scapegoating” in which people can work off their frustrations and anxieties, as well as the feelings of guilt, anger, shock, and horror brought on by the disaster.
- It is relatively rational, animated by a desire for prevention of future occurrences. Thus, personalization will take place only when it seems to be within human power to minimize or avoid such disasters, and when it is felt that punishing “the agents of responsibility” may bring forth the necessary remedial action.

The first approach is fully exemplified in a study conducted after the Cocoanut Grove fire. The second is generally illustrated by an analysis of the reactions to the plane crashes into Elizabeth, New Jersey. Following a brief exposition of these two viewpoints, we will suggest a possible new approach to the assessment of blame by considering a more recent disaster – the 1963 explosion in Indianapolis.

The scapegoating process is explicitly expounded by Helen Rank Veltford and George E. Lee in their study of the public reactions to the Cocoanut Grove tragedy. (The Journal of Abnormal and Social Psychology, April, 1943) The fire on November 28, 1942, was minor, being extinguished in less than 20 minutes. However, patrons trying to get out found two emergency doors unusable. Also, the major
exit, a revolving door, was soon jammed with people. Many of the nearly 500 killed were trapped inside the club and died not only of burns but also of suffocation.

The reaction to this catastrophe was immediate and sharp. According to Veltford and Lee, the horror of the event gave rise to an outcry for avenging the victims and finding and punishing those responsible. Thus, there began a search not primarily for what had caused the tragedy, but simply who was responsible for it.

Veltford and Lee believe that the public fixing of blame primarily reflected an unconscious effort to relieve blocked emotional reactions or frustrations about what had occurred. There was no immediate public attack on Boston’s lax and insufficient laws. Instead, members of the City Council and public officials were blamed for failure to pass more stringent legislation or to enforce existing statutes. After a month of investigation, the county grand jury indicted 10 men.

This personalization is viewed by Veltford and Lee as essential to scapegoating:

The immediate and desired objective of the scapegoaters was to relieve their feelings of frustration, of fear, of hostility, of guilt, by legally fixing the responsibility on the guilty so that they might be punished.

Hence, the attempt to relieve unconscious guilt feelings resulted in irrational behavior; the selection of a series of scapegoats rather than demand for stricter and better laws.

**Scapegoats and Bigwigs**

However, the researchers point out that certain logical candidates were not chosen as scapegoats. For example, no blame was attached to the 16-year-old employee who actually started the fire by striking a match for light while replacing a missing bulb. Why not? According to Veltford and Lee it was because the public admired his straightforward voluntary admission of fault, because of his youth, and the fact that his mother was seriously ill. His teachers testified he was a model young man from an impoverished family. Of such things scapegoats are not made. The prankster who had presumably removed the bulb was not blamed either, because nobody knew who he was and because he was certainly not the direct cause of the fire, much less the deaths.

Those seeking someone to blame had “more satisfying” scapegoats to relieve their guilt feelings. Tea prominent persons and officials, including the owners of the club and the Boston Building Commissioner, were indicted and charged with a variety of offenses: conspiracy to violate building codes, failure to enforce fire laws, failure to report violations of the building laws, and so forth. Collectively they were “the rascals, for among certain elements of the public there is a deep-rooted, perhaps unrecognized latent hostility toward all political authority, toward those ‘higher up.’” All accumulated past hostilities against “political bigwigs” and “money czars” could be focused on the two classes of scapegoats, owners and public officials: “...Elements of the public may have found opportunity to enhance their own self-conceived prestige; they could, by scapegoating, feel, momentarily, superior to these so-called ‘higher ups.’”
Finally, as Martha Wolfenstein has documented in a review of the disaster literature, people find it difficult to blame the dead. It was the panic of the Cocoanut Grove victims that led to the blocked exit and a fatal crush – but no one blamed them for it. Wolfenstein found, in fact, that in a 1955 French race track disaster, a driver who crashed into the spectators was viewed as a savior rather than an “agent of destruction” because he saved the lives of other drivers by avoiding collisions. She concludes that an individual who survives disaster feels guilty for not having died himself. “Probably the more latent hostility there is present in an individual the greater will be his need to blame either himself or others for destructive happenings.”

From this first perspective then, attribution of blame following disaster is typical and is motivated by unconscious guilt and related feelings. Such motivations produce a variety of irrational behaviors among which scapegoating is common. “Innocent” persons are selected on the basis of latent hostilities from a guilt-ridden populace.

In sharp contrast is the position advanced by Rue Bucher. (American Journal of Sociology, March, 1957) She analyzed reactions of residents of Elizabeth, New Jersey, in 1951–52 to three airplane crashes within a three-month period. Rather than being a common feature of disasters, Bucher suggests that individuals will be blamed only when certain specific conditions are present:

- The situation must be defined sufficiently to assess responsibility. This occurs only when conventional explanations are not available. For example, in present day Western society, probably no person will be assigned direct responsibility for destruction caused by tornados, floods, and hurricanes. Damage and deaths from such events can be conventionally accounted for in non-personal and naturalistic terms.
- “...Those who blame the agents of responsibility are convinced that the agents will not of their own volition take action which will remedy the situation.”
- “...Those responsible must be perceived as violating moral standards, as standing in opposition to basic values.”

Bucher believes the primary motive is a desire to insure that it does not happen again. As a consequence, the attribution of responsibility tends to be shifted upward in the hierarchy of authority. Persons who may have had a direct hand in the catastrophe, such as the airline pilots, are not blamed. Bucher says that responsibility is “...laid where people thought the power resided to alleviate the conditions underlying the crashes. It was not instrumentality in causing the crashes which determined responsibility but ability to do something to prevent their recurrence. The problem was who had control over these conditions and who had the power to see that they were corrected.”

In Elizabeth, specific blame was not placed – only a generalized “they” was held responsible for failure to take action. Bucher attributes this to the limited knowledge her lower and middle class respondents had about airlines, airports, and the industries and agencies that affect them.

From this perspective then, assessment of responsibility and personal blame has at least some subjective rationality. The chief desire is to prevent recurrence. Only when natural explanations are not enough will persons be blamed. If it is felt...
that appropriate action will not be taken by the “agents of responsibility,” then blame will be assigned to those believed to have the power to change existing conditions. There are no buckshot accusations; specific names and charges depend on knowledge of persons and groups.

Actually, differences between the two viewpoints described above are primarily differences of interpretation of human behavior after disasters. There is a close parallel in the gross descriptions of that behavior. However, a study made by the authors of this article after the Indianapolis Coliseum explosion indicates the possibilities of a third explanation – one that places blame assessment into a much broader framework.

The Indianapolis Coliseum Explosion

At 11:06 p.m., on October 31, 1963, a performance of the “Holiday on Ice” show at the Indianapolis Coliseum was abruptly ended by a violent blast. Fifty-four persons were killed immediately, nearly 400 were injured. Twenty-seven of the injured died later, raising the final death count to 81, the largest toll in any Indiana disaster.

Press, radio, and television personnel went into action immediately. Initial coverage was on the rescue operations, identification of victims, and descriptions. But attention quickly focused on the cause and the responsibility. When liquid propane gas tanks found in the rubble were suspected of causing the explosion, the media quickly pressed forward on this trail.

Interest intensified throughout the night. The three major newspapers carried these headlines on their first editions after the disaster: “fire chief raps gas tank usage in the coliseum”; “probe pressed by blast that killed here”; “65 killed, hundreds hurt in coliseum gas explosion.” On November 1 the Marion County prosecutor requested the grand jury to begin an immediate investigation.

The spotlight was kept relentlessly focused on possible responsibility. For instance, the evening following the explosion the state fire marshal was pressed to admit in a televised interview that apparently no one had applied for or obtained the necessary permit to use liquid gas inside the Coliseum.

Formal investigations were conducted by at least nine different organizations. They included: the Indianapolis fire department, the Indianapolis police department, the state police, the Marion County sheriff’s office, the State Administrative Building Council, the state fire marshal, the county coroner’s office, and the company insuring the State Fair Board and the Indiana Coliseum Corporation. Mostly they concentrated on the physical cause of the explosion. This was a response at least in part to inquiries by the mass media trying to fix personal responsibility.

The grand jury completed its investigation in early December after five weeks of inquiry during which repeated trips to the scene of the disaster were made, and thirty-two witnesses were questioned. LP gas, illegally stored inside the Coliseum, was judged to have caused the explosion. Seven persons were indicted – three officials of the firm supplying the tanks, the general manager and the concession manager of the Indiana Coliseum Corporation, the state fire marshal, and the Indianapolis fire chief.

These events can effectively be interpreted within the framework suggested by Bucher. The illegal presence of the five LP gas tanks, and the quick identification by the media of the public and private officials who had been involved in
consequences of crisis and crisis management

their installation lent plausibility to a personal and non-naturalistic explanation of the explosion.

There were two additional elements. First, newspaper accounts suggested that previous warnings had not brought action. For instance, The Indianapolis Star reported that a check of official records indicated the fire marshal’s office had been warned of leaking propane gas in the Coliseum on September 3, 1959. They stopped its use that day, but the next day inspectors were again notified of leaking LP gas at the Coliseum. This resulted in a declaration by the chief inspector from the fire marshal’s office that he did not have an adequate staff to enforce fire regulations properly. Representatives from the Coliseum countered that LP gas tanks had been openly used for 10 years, but no one had ever told them they needed a permit. Hence, it was implied that the “agents of responsibility” could not be trusted to correct conditions.

It was even indicated that criticism by the grand jury would not bring about any change. The governor openly defended his fire marshal. He alleged that the grand jury had used public officials as “scapegoats,” and added that the fire marshal had generally done a good job and would remain in office.

Of course, from a sociological viewpoint the issue is not whether the charges were true, but whether – and to what extent – they were made public and how people viewed them. It is, after all, an old axiom in sociology that “if a situation is defined as real, it is real insofar as consequences are concerned.” Press reports clearly implied that some of those in power might not make changes necessary to prevent similar accidents in the future.

Further, words used in the indictments implied that the “agents of responsibility” were socially irresponsible if not immoral. The grand jury felt that some control over future uses of LP gas was needed to “. . . guarantee that the desire for profit on the part of a few will never again relegate the matter of public safety to a point of reckless indifference.” The report further stated that “the fire marshal was considered (political) patronage, and he acted the part.”

Thus, all of the elements suggested by Bucher as being necessary for blame were present.

Also, blame was focused high in the authority structures. Indictments were directed at the fire chief, not the city fire inspectors; the state fire marshal, not his agents; top executives of the firm supplying the tanks, not the individuals who actually installed them; and the executives of the Coliseum Corporation, not the concessionaires who used the tanks.

Thus, the facts seem to fit the Bucher interpretation. But could not these same facts be made to support the scapegoating theory? Those indicted for the Cocoanut Grove fire were also of high status. Could not those indicted as a result of the Coliseum explosion have really been selected because of irrational latent hostilities against “big shots”?

Changes, Not Charges

Closer reading of the grand jury report, however, renders such an interpretation improbable. Consistently there is reference to the need for changes in existing law, including on-site and possibly stand-by inspection during actual performances. The jury also labeled the permit system “archaic and useless,” and wanted the
entire state fire marshal’s office reorganized “from top to bottom.” Finally, it urged legislation to make violation of regulations by the fire marshal a crime.

Thus the prime interest of the grand jury was apparently for changes in organizations and laws to prevent similar disasters.

But in that case why did it not take specific steps to bring about such changes? Why did it merely indict persons? As we see it, personal blame assignment in American society cannot be avoided; it is rooted in the institutional framework. Investigative agencies are bound by laws that force them “to point the finger” only at persons who are potentially legally prosecutable. The grand jury might think the system to blame; but under the law it could only bring legal charges against human beings. Only individuals can be indicted and brought to trial – not social structures.

This was the situation at Indianapolis. There was some awareness that the problem touched the very roots of the system; but its solution was approached in the usual and almost necessary way. Only the traditional legal processes (i.e., a grand jury, indictments, trials and so forth) were utilized. The machinery for coping with these situations was not geared toward changing the social structure. The political-legal processes could only condemn individuals and ask for their punishment. The verbal assault in the mass media probably also served as another pressure on the grand jury to indict persons – and thereby weaken the call for other action.

The rationale is that punishment of the “guilty” deters others from committing similar acts. However, many sociologists suggest that this whole orientation with its focus on personal “guilt” and “innocence” may actually serve to delay necessary changes by concentrating on symptoms rather than causes. Paul B. Horton and Gerald R. Leslie note, for instance, that: “To many people, ‘doing something’ about a social problem means finding and punishing the ‘bad’ people.” The consequence is that “punishing the ‘bad’ people, . . . will have very little permanent effect upon the problem.” It may act to hinder its solution.

The way blame was fixed in Indianapolis illustrates this.

A basic structural element – the inspection procedure – was obviously inadequate. Only 12 investigators were expected to provide inspection for the entire state of Indiana. One had to cover 4,000 square miles. They only had power to issue impotent “cease and desist” orders. Both the fire marshal and the state inspectors were political appointees; no objective selection procedures existed for either position. Yet by blaming individuals, attention was taken away from all of this.

We believe that putting other persons into the same position could have made little difference. The fire marshal’s staff, for instance, was so inadequate both in quantity and quality that meaningful preventive action by any fire marshal was impossible. Similarly, economic factors were alleged to have been responsible for inadequate safety training for the employees who installed or used the LP tanks.

In essence we are saying that the entire procedure used to remedy the conditions that caused the disaster may well be questioned. As Robert K. Merton and Robert A. Nesbit have pointed out, social problems may not always be recognized as such by those most intimately involved. Sociologists cannot restrict themselves to those social conditions that a majority of laymen regard as undesirable. The majority is not always knowledgeable enough to be a good judge of what is undesirable. Not all “processes of society inimical to the values of men are recognized as such by them.”
Not only does individual blame draw attention from more fundamental causes, but it might actually give the illusion that corrective action of some sort is being taken. A spotlighting by the mass media may give the appearance of action and actually drain off the energy and time that might have led to action. As Merton and Paul F. Lazarsfeld have noted, greater information and publicity can actually create civic apathy. Public attention focused on punishment does not encourage action to correct structural flaws. In the example of the Indianapolis Coliseum, the inadequate inspection procedure remained submerged, hidden by the search for the guilty parties.

It is of more than passing interest that in another major disaster studied by the Disaster Research Center the absence of personal blame was accompanied by relatively rapid and major structural changes. On November 23, 1963, a nursing home fire in Ohio resulted in the death of 63 patients. Several investigations revealed many of the same, if not even greater, general weaknesses in the fire inspection procedures found in Indiana. However, there was little time spent looking for people to “blame” for the tragedy. A Grand Jury failed to indict anyone; no persons or officials were held responsible; and everyone connected with the event was exonerated. Yet within a few months, major and stringent new rules and regulations were put into effect throughout the state. Nursing homes not meeting the new standards were forced to close. Had this event not occurred, it is doubtful that new standards would have been enacted.

By contrast, in Indiana, more than three years after the disaster, not even personal blame had been settled. In early 1967 all legal cases were still pending except those against the owner and the general manager of the firm that supplied the tanks. The former had been found not guilty; the charge against the latter had been reduced from involuntary manslaughter to assault and battery, and he had been fined $500. The charge against the Indianapolis fire chief had been dismissed quite early. The other four persons charged still remained under indictment.

As for any structural changes, even less had occurred. Some of the procedures—nothing substantial—had been altered in the fire marshal’s office. In 1966, a seven-man bipartisan Fire Prevention Commission with supervisory power over the office had been established, but no major internal reorganization had occurred. For a time, fewer people attended events at the reopened Coliseum; but within a year, capacity and standing room audiences were back for some shows. Except for those most directly involved, the community had returned to its pre-disaster patterns.

**The Impact of Disaster**

It would be foolish to argue that personal blame assignment always prevents structural changes. There is indeed historical evidence to suggest that some disastrous events have an impact. For example, the first international code of maritime safety laws came in 1914, two years after the sinking of the *Titanic*; the latest in 1960, four years after the loss of the *Andrea Doria*. In the famous Triangle Shirtwaist factory fire in New York City (March 28, 1911), 145 workers were killed, and the owners were indicted for manslaughter; and yet within months new laws were passed, giving fire inspectors increased powers, establishing a division of fire prevention, and forcing changes in rules regarding fire prevention, drills, alarm systems, sprinklers, and fire escapes.
Even in Boston, three years after the Cocoanut Grove fire it could be written: “Under the impetus given by the worst fire in the city’s history, the state is on its way to a system of building and inspecting regulations that may become a model.” How much real change resulted and how much the basic structural flaws were affected, are of course matters that would have to be more fully studied. Yet these examples certainly suggest that punishment of “guilty individuals” per se does not automatically prevent some structural changes.

Personalizing fault – blaming our problems on the inadequacies or guilt of individuals rather than on systems or institutions – is not confined to disasters. Something akin to it has been observed in every aspect of American life from the content of movies dealing with social problems to the assumptions being made in the present day “war on poverty.” Thus Herbert Gans has noted of certain kinds of contemporary films:

Psychological explanations have replaced moral ones, but the possibility that delinquency, corruption and even mental illness reside in the social system is not considered, and the resolution of the problem is still left to a hero assisted by the everpresent deus ex machina.

S. A. Weinstock, on the approach to poverty problems: The underlying assumption here again is that poverty, social and economic deprivation, results from an inadequacy of the personality rather than an inadequacy in the socio-economic system. . . . Only measures aiming at individual rehabilitation . . . are encouraged, while measures designed to modify the structure of the economy . . . are rejected.

On race riots, Stanley Liberson and Arnold Silverman: Accounts . . . attributing riots to communist influence, hoodlums, or rabblerousers . . . participants of this type are probably available in almost any community. What interests us is the community failure to see the . . . institutional malfunctioning or a racial difficulty which is not – and perhaps cannot – be met by existing social institutions.

As with blame after disasters, here too the fault-finding seems rooted in the very fabric of American society. Here also it distracts attention from structural flaws. If the individual is the source of all difficulties, why raise questions about the society?

Apparently it is not only in totalitarian societies that a “cult of personality” serves to protect existing structures, and keeps them from making rapid changes to meet important cultural values and goals – even if those changes might be vital to the welfare of the society.

Further Readings Suggested by the Authors


Non-scholarly but provocative examination of disaster aftermaths.
Why has it been so difficult to gain sustained, systematic attention to the political aspects of disasters? We seem to have the politics of virtually every other policy domain (e.g., air pollution, cancer, welfare, taxation), but we do not have a well articulated “politics of disaster.” This relative inattention to disasters as political occasions appears to stem from two facts. On one hand, most political scientists have not studied disasters, natural or technological, because they see them primarily (but incorrectly) as engineering problems or, at most, political epiphenomena. On the other hand, only in the last decade has disaster research begun accepting disasters as political occasions – and then primarily from a “policy” perspective. This relative neglect appears due to (1) political scientists not being among the founding leaders of the field, who were principally geographers and sociologists, and (2) a “politics of disaster” carrying serious negative (but very normative) connotations to many disaster researchers and virtually all practitioners, who essentially believe that there shouldn’t be a politics of disaster.

Ignoring the explicit political dimension of disasters, however, does not make it go away. Disasters constitute “exogenous shocks” to which modern political systems must respond, so it should not come as a surprise therefore that literally within minutes after any major impact, disasters start becoming political. The politicization of the event then only increases as the affected community, or at times an entire society, moves from emergency response through the recovery and reconstruction phases.

The most useful place to start deepening our understanding of the politics-disaster connection is with an often overlooked but fundamentally important fact: In any disaster, government officials are confronted with the need to not only manage the situation but also explain it. In any event involving major life loss, injuries, and serious damage, variations on three politicizing questions are almost always posed in the aftermath:

1. What happened? This question appears innocuous and is often couched in scientific or technical terms, but it starts the process of defining the event and constructing its meaning, which is political at least as much as it is scientific or technical.
2. Why were the losses (so) high and/or the response (so) inadequate? This combination question becomes political very rapidly because it focuses attention directly on fundamental pre-event as well as postevent public
policy decisions and their effects, competing causal stories, and associated accountability/responsibility issues (often called the “blame game”).

3. What will happen now? Once the shock of impact wears off and emergency operations begin to wind down, people turn their attention to recovery and reconstruction, which invariably involve (a) large amounts of money and (b) decisions about that money. That combination is politics.

**Toward a Framework**

**Disasters and Political System Stress**

Inimitably direct in his 1936 classic, Harold Lasswell defined politics as “Who Gets What, When, How:”

> The influential are those who get the most of what there is to get. Available values may be classified as deference, income, safety. Those who get the most are elite; the rest are mass.

Almost three decades later, David Easton (1965a, p. 50) argued that the distinguishing characteristic of a political system was its role in the “authoritative allocation of values for a society,” a phrase that became a kind of definitional mother’s milk for generations of political scientists. Dye, Zeigler, and Lichter (1992) supplemented the older definition with politics also being “who says what, in which channel, to whom, and with what effect?”

For our purposes here, it should be noted that Easton (1965b, pp. 58–59) specified “demand input overload” as a major source of stress on the political system and then subdivided overload into *excessive volume stress* as one type and *complexity or content stress* as another. This point is interesting because disasters induce both types of stress simultaneously. That is, disasters – understood as “nonroutine events in which societies or their larger subsystems (e.g., regions, communities) are socially disrupted and physically harmed” (Kreps 1989, p. 219; original emphasis) – invariably increase the number of demands on a political system as well as the novelty and complexity of those demands while at the same time wreaking havoc on system response capabilities. Disasters therefore become political crises quite easily. In fact, disasters as highly problematic political occasions have an ancient history.

**Exemplar One: Losing the Mandate of Heaven**

Refining the concept of the Mandate of Heaven, Mencius (372–289 B.C.) argued that a truly moral king cared for his people, promoted their well-being, and protected them. If he failed to display those kingly qualities, however, then the people had a “right of rebellion” to depose and kill him. In a wonderfully self-fulfilling prophecy, if the rebels succeeded, then the king obviously had lost the Mandate, which then shifted to whomever emerged as the new ruler. Interestingly, a severe natural disaster was often seen as a barbinger of the loss of the Mandate (a “failure to protect the people”), giving heart – or start – to rebels, and as a turning point in the dynastic cycle.
In their classic, *A History of East Asian Civilization*, Reischauer and Fairbank (1958) described one especially interesting dynastic turn. Around 22 B.C., reformer Wang Mang tried to save the Earlier Han dynasty by expropriating poorly utilized lands, increasing income, and in general revitalizing the dynasty. Thwarted by entrenched interests in both rural areas and the imperial court, Wang was consistently frustrated. The turning point, however, was a natural disaster:

A series of bad harvests contributed to the debacle, but these were not simply the result of unfavorable weather. Breaks in the dikes of the Yellow River, which sent part of its waters into a new course south of the Shantung Peninsula, and the breakdown of the water-control system in the Wei Valley, which resulted in famines in the capital district, were clear signs that the whole structure of government was disintegrating. (Reischauer and Fairbank 1958, p. 122)

Disaster Phases, Mitigation, Preparedness – and Political Control

Probing further into the political dimension of disasters, let us examine several important sub-concepts: disaster phases, mitigation, and preparedness. Although other demarcations have been proposed (e.g., Drabek 1986, pp. 9–11), I would like to use the following phase terminology for rapid-onset disasters (e.g., earthquakes, hurricanes, toxic spills): (1) Pre-Impact, a period of indefinite length preceding the event; (2) Impact, those moments or hours in which the community sustains its direct physical losses; (3) Response, the period in which rescue and the saving of lives from impact effects are the paramount activities, usually lasting a maximum of a month; (4) Recovery, when the basic life support systems (water, power, sanitation, food and energy supply lines, medical facilities, etc.) of the affected community are repaired at least temporarily; and (5) Reconstruction, another period of indefinite length when the community rebuilds for the long-term.

The phases for a slow-onset disaster (e.g., drought, desertification, famine) would be slightly different. “Pre-Recognition” would replace Pre-Impact as phase 1, and “Recognition” would similarly replace Impact as phase 2. The other three phases (Response, Recovery, and Reconstruction) remain the same.

It is still not widely appreciated outside disaster research that disaster phases constitute a circle. Communities tend to face cyclical or periodic disaster occurrences, and therefore phase 5 (Reconstruction) from one disaster must also be seen as phase 1 (Pre-Impact) for the next. For example, after a damaging earthquake or hurricane, the building codes and land use regulations that are supposed to guide the rebuilding of the community actually create the physical environment for the next impact.

Understanding disaster phases as circular helps explain why so many people have trouble “placing” mitigation and preparedness. Because both mitigation and preparedness involve activities focused on the next event but are often pushed through a temporarily receptive political system after a disaster (see Birkland 1997), they are really in both places at the same time (Reconstruction from one disaster/Pre-Impact for the next).

The National Research Council (1991, p. 21) once defined mitigation as “actions taken to prevent or reduce the risk to life, property, social and economic
activities, and natural resources from natural hazards,” a definition easily extendable to manmade or technological hazards as well. That is, mitigation may prevent certain occurrences, but the recent emphasis has been on the “reduce the risk” part of the definition.

More stringent building codes for new construction, required retrofit of existing structures, and more informed and enforced land use regulations are all classic mitigation measures. So are improved chemical storage facilities, safer railroad cars, double-hulled oil tankers, and automatic shutdown systems for chemical plants and oil refineries. Basically, mitigation prevents or modifies the event itself and/or reduces the damage it inflicts.

Disaster preparedness, on the other hand, is the “detailed planning for prompt and efficient response once a hazardous event occurs or seems imminent” (National Research Council 1989, p. 7). Preparedness typically includes public education, warning systems, simulations, emergency response and evacuation plans, and provisions for immediate shelter and food for victims. In that sense, the purpose of preparedness is to cope with the residual damages from inadequate or imperfect mitigation. That is, preparedness is supposed to improve response to whatever impacts mitigation was unable to prevent.

With these terms defined and in mind, let us now probe into more political constructions of damaging events. Quarantelli, (1987, p. 25) once suggested that we handle “the threshold problem” of events by dividing and refining the concept of disaster into various categories or levels, depending upon response requirements. If only established response organizations are required, then it is an accident, if an event requires the activation and expanding of latent response organizations (e.g., the Red Cross), that constitutes an emergency; if in addition to expanding organizations, extending organizations become involved (e.g., utility or construction companies doing search and rescue), then it is truly a disaster; if entirely new groups become involved as part of the response, then it is a catastrophe.

Quarantelli probably did not intend this argument to be so politically intriguing, but it is. As we move up notch by notch from accident to emergency to disaster to catastrophe, the political stakes logically increase as a direct result of event effects and therefore of the response requirements, a point that ties back to mitigation and preparedness: From a bluntly political perspective, the purpose of mitigation and preparedness is not only the cliche, to “save lives and protect property,” but also to control the political stakes, to keep events from crossing the thresholds to increasingly problematic political levels. “Accidents” do not really overload political systems. “Emergencies” might, depending upon the context within which they occur and especially if they are coupled with other events or tied to larger issues. “Disasters” certainly do overload political systems, and “catastrophes” can bring down regimes.

Disasters and the Allocation of Values

In the preimpact (for rapid-onset disasters) or prerecognition (for slow-onset disasters) phase, a political system – by action or inaction, decision or nondecision, advocacy or self-suppression – allocates the value of “life safety” in everything from land use and building code decisions to general development strategies (just ask the survivors of the 1984 Union Carbide gas leak in Bhopal about land use or the survivors of the 1985 Tlatelolco apartment complex earthquake collapse
in Mexico City about building code enforcement. Then, in the response phase immediately after impact or recognition, “survival” is allocated (food, shelter, medical attention), and as is commonly observed, no disaster is ever evenhanded in its socioeconomic effects among social classes and/or racial and ethnic groups. Finally, in the longer term recovery and reconstruction phases, the political system is allocating opportunities or “life chances” (e.g., grants, contracts, business niches, and new or altered lifelines). These opportunities are also seldom if ever allocated on an evenhanded basis between classes or racial/ethnic groups.

More specifically, if we simply take (1) the venerable Lasswell values of deference, income, and safety, and (2) disasters as events involving societal disruption and life or property loss, then we see that disasters put at least the income and safety values in jeopardy (depending upon how the event was mitigated, prepared for, and then responded to). Perhaps even more fundamentally, and also depending on the perceived quality of mitigation, preparedness, and response, disasters can throw into question the deference value and even the very legitimacy of the authoritative allocation process itself – the regime.

Exemplar Two: The Somoza “Kleptocracy”

For those trying to help a victim society, the aftermath of the 1972 Managua, Nicaragua disaster was a nightmare. Explaining how the earthquake figured in the eventual 1979 downfall of the Somoza regime, the Kissinger Commission later noted that it merited the term “kleptocracy” and included a “brazen reaping of immense private profits from international relief efforts following the devastating earthquake” (Kissinger Commission 1984, pp. 21–22). Among many other scholars, Anderson (1988, pp. 179–180) noted that this incredibly stupid behavior drove a major wedge between the regime and the Catholic Church, which ultimately would join the opposition coalition led by the FSLN (Sandinistas). Elizabeth Dore (1986) had previously concluded that the kleptocracy of the Somoza regime encompassed not only the response period immediately after the earthquake as well as the recovery, but also the reconstruction phase:

The earthquake marked the beginning of the end for Somoza. The exclusion of the business elite from the reconstruction boom was made even more bitter by a slump in other sectors of the economy, caused in part by increased prices of imports, particularly petroleum. This slump coincided with, and perhaps partly caused, a slowdown in growth in manufacturing, a sector that had experienced rapid expansion in the 1960s. . . . These economic pressures caused many wealthy Nicaraguan families to convert their lack of support for Somoza into active opposition, (pp. 322–323)

Exemplar Three: Unstable Mexico, 1985

In September 1985, a pair of devastating earthquakes struck Mexico City. The official death toll reached 9,000, but the actual was probably a multiple of that number. The administration of President Miguel de Madrid was faulted initially for a slow and disjointed response, and the president himself was castigated for being virtually invisible for several days. The political system was then more profoundly shaken by obvious corruption in the construction and inspection process
(i.e., in preimpact mitigation) that had contributed to the structural failure of numerous public and government-financed buildings, including both apartment complexes and hospitals:

Long after the debris from the earthquake has been cleared, Mexico will still be reeling from the political and economic aftershocks. The earthquake destroyed more than buildings: it effectively ended whatever hope the Mexican government had for a rapid resolution of its foreign debt problem and a return to economic normalcy. Worse still, from the standpoint of Mexican political leaders, the earthquake exposed to the Mexican people and the world the weakness, impotence and outright corruption of the government. . . . (Schroeder 1985, p. 843)

One of the more perplexing aspects of the Mexican government’s response to the 1985 disaster involved the downplaying of the human losses but the exaggeration of the economic losses. Albala-Bertrand (1993) has thrown some politically interesting light on this paradox. Albala-Bertrand reports that under the emergency laws then in effect, if the Mexican government had disclosed the number of people actually killed in the 1985 disaster, it would have had to cede control of the capital to the Mexican military. Because the PRI political leadership in Mexico had spent decades moving the Mexican army out of the country’s politics, allowing martial law in the capital itself was “unthinkable for any government in Mexico and dangerous to the stability of the traditional and highly corrupt ruling party” (Albala-Bertrand 1993, pp. 135–136). At the same time, the Mexican government wanted to use the disaster losses as leverage in its ongoing foreign debt discussions with the International Monetary Fund. The result was to minimize the human losses for domestic, civil-military, reasons but exaggerate the economic losses for foreign policy reasons.

Disasters as Political Crises

I argued at the very top of this paper that disasters are fundamentally political occasions because their impacts must be not only managed, but also explained. Therefore and more specifically, by virtue of the physical and human losses and societal disruption they entail, disasters can and should also be analyzed as agenda control and accountability crises for public officials.

At least temporarily, disasters take, or at least threaten to take, agenda control from the hands of previously dominant leaders and groups (see Birkland 1997 and Olson et al. 1998). In the disaster response phase, government officials and other community leaders invariably face problems (e.g., rescue, shelter, potable water, relief supplies, mass medical attention, etc.) affecting hundreds to many thousands of people, problems of a nature and on a scale with which few, if any, have experience. Disasters put novel issues on agendas and generate a new set and number of” demands, creating and/or empowering some groups and leaders while debilitating others. The situation becomes even more complicated as a community, region, or nation moves into the recovery and then the reconstruction phases because entirely new financial opportunities and developmental possibilities are often posed. Suddenly, agendas reflect vastly increased and often flexible resources, new demands, and an unusual number of high conflict items.
Complicating the situation even further, the disaster, or more precisely its effects, must be explained. When disasters were perceived as acts of God or otherwise outside the realm of possible human control or modification, political accountability was low and blame management a minor concern (not to be confused with scapegoating, which is a different phenomenon). Increasingly, communities and even entire national societies now hold leaders responsible for not only effective management of postimpact response, recovery, and reconstruction programs, but also adequate preimpact mitigation and preparedness programs. The concern with preimpact failures (e.g., lack of policies or corruption in building inspection and construction) focuses attention back to agendas and often poses difficult questions for those perceived as “in control” before the disaster, which resonates with some longstanding concerns in democratic theory.

Agenda Control/Non-Decisionmaking

The complacent 1950s taught some Americans, especially African-Americans and the poor, very hard lessons about barriers to placing an issue or problem on political agendas in the United States. With the real world and empirical theory proving depressingly contrary to classical democratic theory, scholarly attention began to turn toward the underbelly of American democracy, one part of which was agenda control. Schattschneider (1960) led the way with his observations about “mobilization of bias” and how and why “some issues are organized into politics while others are organized out.” Bachrach and Baratz (1962, 1963, 1970) followed closely with their arguments about issue suppression and “non-decisionmaking” generally. Cobb and Elder (1971, 1972) were the first to focus exclusively on political agendas and agenda control in the United States. They posited a relatively broad systemic agenda that included “all issues commonly perceived . . . as meriting public attention and . . . within the legitimate jurisdiction of existing governmental authority” (1972, p. 85). The much smaller institutional agenda included only “that set of items up for the active and serious consideration of authoritative decision-makers” (1972, p. 86). Kingdon (1984) developed further the institutional agenda concept and divided it into what he called the governmental agenda, which is “a list of subjects to which officials are paying some serious attention at any given time,” and the decision agenda, “a list of subjects that is moving into position for an authoritative decision.” Perhaps Kingdon’s greatest contribution, however, lay in his repeated emphasis on the crucial process of “alternative specification,” because decisions are largely driven by the solution choices offered to address items on the decision agenda (see also Baumgartner and Jones 1993; and Sabatier and Jenkins-Smith 1993). Attempting to synthesize, we can identify several co-existing and only partially overlapping political agendas: (1) the systemic or “public” agenda; (2) the institutional-governmental agenda; and (3) the decision agenda. Based on the observation, however, that not all policies or programs are put into place with equal vigor (because of inadequate budgets, lack of direction, or the “wink of an eye”), I must also argue for the existence of agency-level implementation agendas, so we really have four political agendas.

Controlling agendas is important because political systems function primarily for conflict management and can handle only a limited number of items. Therefore, attached to each of the four agendas is a non-decisionmaking screen or zone in the sense of Bachrach and Baratz (who, interestingly, implicitly adopt the notion of at least three agendas):
Non-decisionmaking is a means by which demands for change in the existing allocation of benefits and privileges [echoes of Lasswell and Easton] in the community can be suffocated before they are even voiced [i.e., kept off the systemic or public agenda]; or kept covert [screened from the institutional-governmental agenda]; or killed before they gain access to the relevant decisionmaking arena [the decision agenda]; or, failing all these things, maimed or destroyed in the decision implementing stage [the implementation agenda] of the policy process (1970, p. 44).

A startling disaster exemplar of issue suppression, non-decisionmaking, and agenda control comes from, of all places, California.

Exemplar Four: Earthquakes? What Earthquakes?

California is an acknowledged world leader in earthquake policy and provides legislation and program models for many states and even nations interested in improved seismic safety. This was not always the case.

In 1934, W. M. Davis, a founder of modern geography, wrote the lead article for the January issue of that year's *Geographical Review*. His focus was the very damaging Long Beach, California earthquake of the previous year. Amidst the usual scientific and technical discussions of the event, however, was a most remarkable observation about agenda control:

The Long Beach, California, earthquake of March 10, 1933, will be less remembered by reason of its contributions to seismology – for as a crustal tremor there was nothing especially remarkable about it – than it will be for having broken down the “hush-hush” policy that has hitherto been followed by the commercial organizations of the cities of southern California. It has most fortunately compelled public avowal by the most important of those organizations that earthquakes are a recurrent risk in their magnificent region and that the risk must be met by safer construction of buildings. But the loss of 120 lives and property destruction estimated at more than $50,000,000 are a high price to pay for such wisdom (1934, p. 1).

That “hush-hush” policy, however, had deep roots. In a fascinating 1979 article, Meltsner traced the history of seismology in California. Noting that suppression of information about earthquakes characterized the early history of the state, Meltsner discovered a 1908 Carnegie Institution report on the great 1906 San Francisco earthquake that in part addressed the mystery of what happened to a similar report about an 1868 earthquake in the same general area:

Shortly after the earthquake of 1868 a committee of scientific men undertook the collection of data concerning the effects of the shock, but their report was never published nor can any trace of it be found, altho [sic] some of the members of the committee are still living. It is stated that the report was Suppress [sic] by authorities, thru [sic] the fear that its publication would damage the reputation of the city. Our knowledge of that earthquake is therefore not very full (1979, p. 333).
Perhaps even more astounding, Meltsner reports a systematic attempt to call the 1906 San Francisco disaster a “fire” rather than an “earthquake” because earthquakes were known to recur, but fires were not. Not coincidentally, it took the Carnegie Institution in Washington to launch the research on the 1906 earthquake. No organization in California was willing to be the sponsor.¹

In other words, disasters are political crises because they puncture, at least temporarily, the non-decision-making screens on all of the political agendas and thereby place a large number of new, complex, and conflictual items on all of the agendas simultaneously—hence the temptation to suppress issues or to define the disaster event in other terms. The struggle to regain old, or solidify new, agenda control privileges thus comprises one component of the politics of disaster. A second component is the political construction of reality.

Constructing Meaning, Causal Stories, and Blame Management

Edelman led the way to the realization that language and symbols create political realities and are essential tools for agenda control, issue definition, and alternative specification. Although not concerned with disasters specifically, Edelman (1985) offered several highly relevant insights, among them:

The critical element in political maneuver for advantage is the creation of meaning: the construction of beliefs about the significance of events, of problems, of crises, of policy changes, and of leaders. (p. 10)

Stone built on both the agenda literature and the work of Edelman to probe further into the role of causal stories in politics. Although primarily interested in the preagenda process of how “difficult conditions become problems” and therefore perceived as “amenable to human action,” Stone (1989) offered the following insight, quite relevant to disasters:

In politics, causal theories are neither right nor wrong, nor are they mutually exclusive. They are ideas about causation... The different sides in an issue act as if they are trying to find the “true” cause, but they are always struggling to influence which idea is selected to guide policy. Political conflicts over causal stories are, therefore, more than empirical claims about sequences of events. They are fights about the possibility of control and the assignment of responsibility. (p. 283; emphasis added)

In the aftermath of disaster, much of the politics revolves around precisely that—the possibility of control and the assignment of responsibility, which is only a short step to a much more loaded term: blame.⁴

Although again analyzing at a general public policy and political level and not specifically focusing on disasters, Weaver (1986) noted that public officials tend to be less and less concerned with claiming credit than with avoiding blame because constituents do not respond symmetrically to gains and losses:

Persons who have suffered losses are more likely to notice the loss, to feel aggrieved and to act on that grievance, than gainers are to act on their
improved state. . . . [That is] voters are more sensitive to what has been done to them than to what has been done for them. (p. 373; emphasis in the original)

Building on Stone, Weaver, and Semin and Manstead (1983) but also tracing back to Austin’s 1956 classic “A Plea for Excuses,” McGraw (1991) noted “a growing scholarly interest in understanding citizens’ attributions of responsibility for political outcomes” but observed that most of the literature has dealt with broadly defined problems (e.g., unemployment) that defy easy causal linkages:

In sharp contrast, there has been very little research on assigning responsibility for discrete political events . . . where the behavior of a particular political official can be more clearly identified and evaluated. (p. 1134)

Echoing Edelman as well as the government vernacular of damage control, McGraw (1991) argued that public officials “influence their constituencies’ perceptions . . . through a variety of explanatory tactics, or accounts” and focused on the crucial distinction between two types of accounts: excuses and justifications (pp. 1135–1136; see also McGraw, Best, and Timpone 1995).

Disaster Excuses

Excuses are designed to separate a public official from a problem, to provide distance from a situation that is no-win or could easily become such. That is, excuses connote the depressingly familiar concept of deniability:

An excuse . . . focuses on the causal link between the actor and outcome and involves a denial of partial or full responsibility (if the actor is not fully responsible, then less or no blame is warranted). (McGraw 1991, p. 1135)

Justifications, on the other hand, admit or recognize the causal link between actor and outcome but attempt to create an alternate political reality, “to reframe the undesirable outcome . . . in a more favorable light” (McGraw 1991, p. 1137).

McGraw identified five excuses and seven justifications, but because her purpose was an experimental test of voter reaction to political accounts of hypothetical situations, we must adapt them for analysis of disaster situations. At this point therefore, I would like to offer six “disaster excuses” commonly used by government officials:

1. **Blame the Event.** A spiritual cousin to “God’s will,” this excuse says in effect that it was impossible to anticipate the event’s impacts because it was somehow so big, so bad, so intense. This is often called the “beyond code” excuse, which returns us to the important point of defining the event. For example, an enduring debate about Hurricane Andrew revolved around actual ground-level wind speeds in the northeast eyewall. It was very much to the benefit of several vested interests in south Florida (local building officials, construction companies, and subcontractors) to see Hurricane Andrew authoritatively defined as a “beyond code” event because blame could then be severely attenuated.

2. **Blame the Previous Guys.** This common excuse attempts to move the focus to the “policies of a previous administration.” The essence is that given the
relatively short incumbency of most officials but the relatively long recurrence intervals between disasters, it is possible to blame predecessors for stupidity, cupidity, and/or lack of foresight.

3. Blame The Context, or I Would Have Liked To, But... This excuse attempts to focus attention on resource insufficiency (the economy, the budget) versus good intentions. In California, for example, inability of local government to attack the precode/earthquake-vulnerable building problem is often blamed on inadequate options for financing the generally agreed-upon solution (structural retrofit).

4. Blame Us All. McGraw would term this an excuse based on “horizontal diffusion of responsibility.” The essence here is that blame cannot, and should not, be fixed on one or a few individuals, or even one agency, because many people or agencies were involved. Given the complexity of most modern systems, this has real plausibility. A thread of this excuse can be observed in the aftermath of Hurricane Andrew, when the “beyond code” argument was not fully persuasive. Inadequate mitigation was then blamed on the design professions (engineers and architects), the construction industry, building inspectors, local government, and even the victims themselves (“they wanted homes more quickly than we could safely build them”). Averch and Dluhy (1997) capture many of the post-Andrew blame strategies in their study of south Florida’s 1992 crisis management.

5. Blame Them Up/Down There. McGraw terms this the “vertical diffusion of responsibility,” for example, blaming a superior in one direction or a subordinate in the other. In the aftermath of a disaster where the response is being criticized, this is a favorite. I do not want to beat Hurricane Andrew to death, but it provides some classics. The locals blamed the state and the federal governments, especially FEMA, for slow and disorganized response and inattention to victims. Washington turned it around, however, and began blaming the state (and Governor Chiles) for not making the required formal assistance request quickly enough. Within a few days, however, government officials at all levels took a new tack and began a concerted attempt to change the focus from postimpact response problems to preimpact mitigation (construction) failures, to the private sector, and to very low-level building code officials, which is a very interesting blame management strategy. Given that mitigation and preparedness are inversely related to response problems (i.e., the more hazard resistant and prepared a community, the less it will need outside assistance), the implicit message here was that – in a sense – it was the affected communities’ own fault (poor construction, lax inspection) that they suffered such high damage levels. This constructed political reality would then make the governmental response problems more “understandable” (read “forgivable”) with the blame shifting both temporally (to the preimpact period) and sectorally (to the private sector). Similar versions of this type of blame game played out in South Carolina after Hurricane Hugo (1989) and in California after the Loma Prieta earthquake (1989).

6. The Plea of Ignorance. Citing Ronald Reagan as an example, McGraw explains this strategy as an official claiming that “he or she did not intend or foresee the undesirable consequences...” In a disaster a Plea of Ignorance can be effective if combined with all of the above and especially with #1, Blame the Event (because it was “beyond code”). Recognizable variants center on the theme, “Who could have known?”
Exemplar Five: The PEMEX Disasters

In 1984, a PEMEX gasoline processing and storage facility in Mexico City caught fire and exploded, killing at least the officially estimated 400 people. Attempting a combination horizontal (from the parastatal to the more purely private sector) and downward-vertical (to a much smaller operation) displacement strategy, PEMEX officials initially tried to blame a nearby cooking gas facility for starting the fire. This excuse failed when it was noted that the cooking gas facility sustained damage only from burning debris from the PEMEX explosions and therefore could hardly have been the cause.

Eight years later, in April 1992, an explosion ripped through the sewers of Guadalajara, destroying twenty blocks of a neighborhood and killing hundreds of people (the number itself became politically contentious). PEMEX again attempted a combination horizontal and downward-vertical blame shift a nearby cooking gas facility, but subsequent investigations pointed out that the facility was much too small to have caused the disaster.

Similar to the well-documented appropriation of the event by politically oriented organizations in the aftermath of the 1985 Mexico City earthquake disaster (see especially Taveras 1999), the 1992 Guadalajara disaster became highly politicized, especially around blame for the explosion on one hand and assistance to the victims on the other. Both issues then became linked to an even deeper problem. As Shefner (1999) has explained:

The strong participation of civic associations, as well as the support by individuals in various protests and demonstrations, showed the wide dissatisfaction towards the government's handling of the disaster and aftermath. These groups both condemned governmental negligence and tried to set up parallel aid efforts to keep the politicians from gaining political capital at the expense of the disaster victims. The political rhetoric used by the contentious supporters also demonstrated that this dissatisfaction was part of a wide antipathy to the political process that had prevailed for decades. (p. 153)

Disaster Justifications

While the above subtype of McGraw's political accounts focusing on "excuses" is relatively straightforward, a treatment of disaster "justifications" is necessary to round out the argument, in part because justifications in a disaster context are more rare. They can, however, be quite startling:

1. **See the Unseen Benefits.** McGraw notes that the first "reframe" strategy involves pointing out unappreciated benefits associated with an admittedly undesirable decision (or for us, disaster). The present author has observed public officials in a few unguarded moments taking a type of Malthusian approach to a disaster, indicating that losses were acceptable because they were concentrated in the lower-class tiers of the society, among minorities, and/or because they offered previously unthinkable urban renewal/redesign possibilities.

2. **History Will Absolve Me.** This reframe argument emphasizes future benefits of a policy decision and is especially useful in analyzing the politics behind
mitigation attempts. In California, for example, leaders in those jurisdictions with the courage and resources to tackle their hazardous buildings problem have stressed (defensively and in the face of attack) that when the “Big One” hits, their communities will suffer less, human loss and property damage and will recover more quickly.

3. We Have Been Through Worse. One way to reframe a bad situation is to change the reference point and draw comparisons that make the current situation appear more tolerable. In the aftermath of Hurricane Hugo in 1989, South Carolinians were reminded that a similar hurricane in 1883 killed thousands. Therefore, they should be comforted, if not actually grateful.

4. Others Have It Harder, Distant. Again changing the frame of reference to draw comparisons, this strategy emphasizes looking elsewhere for worse suffering. Hurricane Hugo again provides an example: Because the Loma Prieta earthquake struck the San Francisco area shortly after Hugo struck South Carolina, citizens in the latter state were encouraged to take heart because the hurricane did less damage than the earthquake (a debatable point, especially given impact-to-resource ratio differences between South Carolina and California).

5. Others Have It Harder, Near. It is often the case that the most disadvantaged are not the most vocal about fixing blame for their plight. After a disaster, staying alive tends to take precedence over political mobilization for the poor and marginalized. Officials can then point to individuals or groups who have suffered more than the vocal ones but who are “getting on with their lives.”

6. It Could Have Been Worse. McGraw notes that the final comparison is with the hypothetical. No matter how difficult the situation is now, it could have been far worse. Disaster examples abound: “If the earthquake had been larger, occurred during rush hour, and/or had an epicenter closer to the city, . . .”; “If the hurricane had made landfall just another 20 miles north, . . .”; “If the fire had reached the storage tanks, . . .”; etc.

As McGraw (1991, p. 1137) states, all of these justifications “involve attempts to change perceptions of the . . . outcome.” They do much more, however, and the four “justifications by comparison” are noteworthy: Each tends to delegitimize the media, groups, and/or individuals who are attempting to fix blame and therefore both accountability and the locus of change or reform. Indeed, it would behoove us to look more closely conceptually and empirically at the relationship between “justifications by comparison,” “mobilization of bias,” and “non-decisionmaking.” Disaster situations are rife with public officials, especially in the recovery and reconstruction phases when new or altered rules of the political game are being established, castigating “whiners” and “complainers” who will not let go of the blame issue and “go forward.” This combination strategy attempts to move the focus of public attention away from disaster causes and to the persons or groups who are voicing concerns.

Delegitimation of critics can be articulated at the highest levels and can be quite subtle. In the aftermath of Hurricane Andrew and in the midst of a very difficult reelection campaign made more difficult by the disaster, then-President George Bush faced questions in a session with the White House media. Reporters noted poor federal response to Andrew, and Bush had to answer. One facet of the presidential blame management strategy was to minimize the importance of
assigning blame itself, Bush explicitly using the pejorative term “blame game,” saying that he didn’t want to play it. At one level, this constituted an attempt to transcend all the postevent acrimony and take a kind of moral and political high ground. At another level, however, demeaning and degrading all attempts to assign blame was pure self-protection. Stopping or undermining blame assignment not only protects incumbent reputations, but also significantly enhances incumbent chances for retaining or regaining control of political – or in this case campaign – agendas.

In Conclusion

I started this paper with the goal of reinforcing disaster research’s increasing acceptance of disasters as political occasions and to encourage more political scientists to focus on disasters (and not simply as “policy” problems). I have tried to offer certain tools or points of departure – on values at stake, agenda control, causal stories, and political accounts/blame management – to facilitate systematic and cross national inquiry. The reason is simple: Disasters often strip away layers of semantic, symbolic, and process cover to provide clear insights into the nature, priorities, and capabilities of authorities, governments, and entire regimes. They are deeply, deeply political.

Acknowledgements

The author gratefully acknowledges access, support, and assistance over the years from the National Science Foundation (especially under grant CMS 9729306) and the USAID Office of U. S. Foreign Disaster Assistance. Of course, neither organization bears any responsibility for the contents of this paper.

Notes

1. Several scholars have offered major insights or glimpses into various aspects of the interface between politics and disaster but have been limited by the relatively narrow “policy studies” rubric under which they worked: Alesch and Petak (1986); Birkland (1997); Drabek et al. (1983); Lambright (1984, 1985); May (1985); Olson et al. (1989); Olson and Olson (1993, 1994); Olson, Olson, and Gawronski (1998); and Petak (1984), among others. A long forgotten article on 1965’s Hurricane Betsy, which should be revisited, is Abney and Hill (1966). Delving back even further, see Barnhart (1925) and Hansen (1946). More recent work that ties political science more closely to the study of disasters gives hope for the future as well: Platt (1999), Schneider (1995), and Sylves and Waugh (1996).

2. In volume two (1965, pp. 156–157), Reischauer and Fairbank make a similar point about the fall of the Ch’ing Dynasty, China’s last, in the early twentieth century. Obviously, the Chinese have a very sophisticated understanding of the politics of disaster – and have had for about two thousand years.

3. A different Davis (Mike Davis) makes interesting similar points about more recent downplaying in southern California. See his Ecology of Fear: Los Angeles and the Imagination of Disaster (1998).

4. The disaster research community has not exactly neglected blame, but it has tended to see it in its narrower form, scapegoating (see Drabek and Quarantelli 1967, but also Neal 1984).
References


The Risk Game and the Blame Game
Christopher Hood

‘Cometh the crisis, cometh the buck-passing . . .’

Economists say there is no such thing as a free lunch. The burgeoning ‘risk industry’ – no doubt set for further expansion after the terrorist attacks on US heartlands in 2001 – says there is no such thing as a risk-free lunch. Anthropologists say there is no such thing as a blame-free risk. And political scientists know blame is central to politics.

The growth of the ‘risk industry’, the associated explosion in discussion of safety and hazard issues and the search for better ways of assessing and managing risk, has been much commented on. The BSE issue, highlighted in the UK by the blockbuster sixteen-volume Phillips report in 2000, is taken by Ulrich Beck as emblematic of what he claims to be a ‘risk society’. Michael Power says an age of ‘new risk management’ has dawned in corporate governance, sparked by high-profile business failures and accidents. Much academic and media attention has been paid to risks from food, electric power lines, mobile phones, dangerous people, even dangerous dogs (ostensibly a rather traditional risk, but one that in recent years has been the subject of draconian new regulatory regimes in several countries, including France, Spain and Germany). Such developments in the ‘risk game’ have been described by best-selling sociologists like Beck and Giddens (who make much of their world-historical significance in an era of ‘high modernity’) and by social psychologists interested in what shapes risk perception or ‘amplification’.

However, what this article concentrates on is the link between the risk game and the ‘blame game’ – a term widely but rather loosely used in policy debate. Can there be said to be a ‘blame game’ (or set of related games) in any meaningful sense? Who are the players, what are the possible moves they can make, and how do the outcomes of ‘blame games’ shape the ‘risk game’ in the sense of public policy on safety and hazard?

Political scientists often conceive the ‘blame game’ as a set of interactions between elected politicians and the general public, or voters at large. At least three broad ways for politicians to manage blame from the public have been identified, though they are not always clearly distinguished. One is through presentational strategies (or what Schlenker calls ‘impression management’), selecting arguments to minimize or avoid blame, for example in choosing between excuses intended to mitigate blame and justifications designed to turn blame into credit. Another is through policy strategies – the selection of policy positions to minimize or avoid blame, for example in choosing between policies that support risk creators as against those that support risk victims. A third way to manage blame is through
agency strategies – the selection of institutional arrangements to minimize or avoid blame, for example in choosing between direct control and delegation.

A full account of the ‘blame game’ would need to encompass all those strategies, to analyse how would-be blame avoiders can mix and match presentation, policy and agency approaches, or switch among those strategies when any one of them reaches its limits (for example the policy strategy when ineluctable risk/risk trade-offs have to be made and there is no option available that avoids losses and potential blame). But this article concentrates on agency strategies, both because, if successful, they eliminate the need for presentational or policy bias to achieve blame avoidance and because they are central to a standard and classic way of analysing the blame game in US political science. We begin with the simplest possible way of specifying the blame game from a delegation perspective and then explore some of the complexities.

**In Search of that Teflon Coat: Risk, Blame and Delegation**

Seen from this perspective, the blame game involves interactions between two sets of actors – blamers and blamed on the one hand, and blame-shifters and blame-shiftees on the other. The underlying idea (disregarding presentational and policy strategies) is that politicians seeking to claim credit and avoid blame from voters face a choice of direction or delegation within any policy domain, while voters or citizens choose between praising or blaming those who have direct responsibility in public policy.

Table 1 represents the simplest possible version of the blame game as understood in this way. The assumption is that politicians set out to maximize political support (defined as credit less blame from voters). In the opening move, politicians decide whether or not to delegate responsibility within a particular policy domain. Subsequently, events produce some mixture of benign or malign effects and at the next stage, voters decide whether to assign creditor blame to politicians, agents or other parties (including fate or external enemies). The implication is

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<th>Choice of policy control by incumbent elected politicians</th>
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<td>Direct</td>
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<td>Blame: low</td>
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<td>Blame: low</td>
<td>Result: credit-claiming (undivided glory)</td>
<td>Result: blame attraction ('buck stops here')</td>
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<td>Delegate</td>
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<td>Blame: lower than (2) (assumed to be partly deflected by delegation)</td>
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<tr>
<td>Blame: low</td>
<td>Result: credit slippage (high regret)</td>
<td>Result: blame avoidance (shift or share blame)</td>
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</table>
that politicians are playing some sort of game against ‘nature’, in which the way they choose to manage societal risks depends on how they view their own risks of blame from voters at large (with attendant risks of loss of office or reduced power)\textsuperscript{13} and whether they choose a ‘minimax’ approach (minimizing the maximum loss) or some other strategy. For analytic simplicity this approach considers only the management of blame by agency strategies (delegation to ‘lightning rods’) and not policy or presentational strategies. That idea can perhaps be considered a modern political-science spin on seventeenth-century \textit{Staatsklugheitslehre}, notably Machiavelli’s famous dictum that ‘princes should delegate to others the enactment of unpopular measures and keep in their own hands the distribution of favours’.\textsuperscript{14}

Many refinements on this simple analysis can be offered. First, just dividing results into ‘malign’ or ‘benign’ obviously ignores the issue of how benign or malign they are and to whom. Scale and distribution of risk may make a difference. Moreover, for many kinds of risk, what counts as benign or malign depends on information. Charlotte Twight,\textsuperscript{15} using the case of US asbestos policy over time, argues that if information costs about malign effects to policy victims are high – or can be kept high – blame-avoidance strategies may be less important than they are in conditions where information about malign effects is readily accessible.\textsuperscript{16}

Secondly, Kent Weaver\textsuperscript{17} claims there is a systematic bias towards a minimax strategy by politicians in the blame–credit trade-off. Weaver says contemporary (US) politicians are as a group motivated more by the desire to avoid blame for negative outcomes than by the desire to claim credit for positive ones. That means they ‘tend to discount potential gains relative to losses in their calculus, and thus to minimize blame before being concerned with political credit’.\textsuperscript{18} While cell (1) in Table 1 might be considered the ‘win window’ for political pay-offs considered as credit less blame, the prospect of cell (3) is preferred to that of cell (2), producing a delegation bias. Weaver’s argument reflects a frequently-advanced claim in social psychology that individuals in general tend to give more weight to losses or negative outcomes than to gains,\textsuperscript{19} and he detects rising ‘negativity bias’ both among voters and politicians, albeit in different forms.\textsuperscript{20} The upshot for Weaver is that politicians often forgo potential credit-claiming opportunities and try to protect themselves from blame instead, producing increasing delegation and automaticity in US public policy.

Weaver did not specifically include the growth of the ‘risk industry’ in his analysis of the historical changes that he saw as increasing politicians’ incentives to avoid blame. Yet the growth of that industry – and the interlinked self-reinforcing activity of media, scientific and professional experts and risk management consultants\textsuperscript{21} and regulators – might be seen as a more potent long-term force in racking up negativity bias (perhaps by lowering information costs about malign effects to policy victims, following Twight’s analysis)\textsuperscript{22} than some of the other more transient and US-specific factors identified by Weaver. So if negativity bias is indeed increasing among voters, there might be other ways of accounting for it and other ways of dealing with its consequences for blame (by policy and presentation strategies) as well as by delegation alone.

Nevertheless, examples of delegation strategies by politicians over risk and safety are not far to seek.\textsuperscript{23} In particular, environmental and occupational safety regulation is widely and increasingly entrusted to quasi-autonomous agencies, often with a substantial international element in standard-setting, such as the EU.
For blame-averse national-level politicians battered by the experience of BSE and other blame-generating hazards, the logic of Weaver’s analysis is that the ‘ideal’ design for a regulatory regime is one in which standards are set by international experts, monitored by autonomous agencies and enforced by local authorities – leaving those politicians in the happy position of being able to blame everyone else rather than being blamed themselves when things go wrong. And numerous examples can be found of risk regulation regimes that have precisely that structure.24

However, Weaver’s account of the blame game is limited in several ways. The argument is illustrated by cases selected on the dependent variable (and we have no comparative survey). The notion of negativity bias is not sharply defined in Weaver’s analysis, partly because agency strategies are not clearly separated from policy strategies. Even casual observation suggests that pressures to counter negativity bias are often institutionalized in government and reveals numerous cases where politicians apparently prefer the chance of claiming credit to avoiding blame. ‘Lightning rod’ studies by Richard Ellis25 and others show that formal or technical delegation from one actor to another does not always appear to lead to shifting of blame in the eyes of voters.

Accordingly, to explore the limits of delegation in the credit-claiming/blame-avoidance ‘blame game’ sketched out earlier, the rest of this article focuses on two issues that seem problematic for that approach. One, not discussed by Fiorina or Weaver, is the cultural conditions that link formal institutional lines of responsibility with voters’ propensity to attribute blame to politicians. The other is the relationship between the would-be ‘blame-shifters’ and their intended ‘blame-shiftees’. Attempts by blame-averse politicians to shift blame to others by delegation of formal responsibility can produce a further set of strategic interactions that complicate the simplicities of the blame game sketched out in Table 1.

**Delegation and Blame: Public Attitudes**

‘It takes two to tango’, and the extent to which formal delegation leads the blamers to blame the delegatees rather than the delegators (in the third stage of the basic blame game depicted in Table 1 earlier) may depend on public attitudes and beliefs.26 It is notoriously hard to measure dispositions, and introducing them into the analysis risks tautology, but the result of formal delegation for blame may nevertheless depend on whether the blamers are sympathetic or vindictive. Accordingly, Table 2 shows how blame consequences for politicians under the ‘malign’ outcomes identified in Table 1 may depend on the climate of public opinion.

In spite of extensive discussion of ‘risk society’ issues, no systematic study has linked public blaming and institutional arrangements in the government of risk. Some cross-national studies of voting and economic performance suggest that voters’ propensity to blame government for negative outcomes can indeed be mediated by political context and particularly by institutional clarity of responsibility.27 We do not yet have similar cross-national studies for voting over hazard and safety issues. And in any case the Powell – Whitten ‘clarity of responsibility index’ does not differentiate changes in responsibility in executive government by delegation specifically designed to avoid blame, from different constitutional heritages, for example in divided-government structures, or from
those cases where lack of clarity over responsibility is imposed in a sense by voters themselves, notably coalition governments in multi-party systems. So even for political economy issues, such studies at best amount only to a weak test of the idea that delegation can produce blame-shifting.

In some circumstances – denoted in cell (1) in Table 2 – rulers seem to have ‘teflon’ blame-resistant qualities, somehow evading public excoriation even over outcomes for which they could hardly escape the most personal kind of responsibility. Well-known examples include. US President Bill Clinton’s high popularity during his 1998 impeachment over the Lewinsky affair28 or the continuing high popularity of Japanese Prime Minister Kakuei Tanaka29 after his implication in Japan’s greatest post-Second World War bribery scandal (the Lockheed bribery scandal of the early 1970s). Even – perhaps especially – in the contemporary age, something other than formal delegation seems to account for what makes the difference between political ‘blame magnets’ and ‘teflon politicians’.

But absence of delegation is evidently not a guarantee of avoiding blame either. For the sorts of policy or conditions where blamers are likely to be vindictive, as in cell (2) of Table 2, it robs politicians of any ‘blame shield’, and forces them faute de mieux into presentational strategies. Moreover, there are evidently some cases where delegation seems to shift blame away from politicians for malign outcomes (as also applies to US ‘presidential lightning rod’ studies), as in cell (3) of Table 2. For instance, during a virtual paralysis of the UK rail network following several railway crashes in 2000, a Gallup poll revealed that only 15 per cent of respondents held the government to be ‘greatly to blame’ for the rail chaos. Instead, over half of the respondents held the then privatized rail infrastructure provider (Railtrack) to be ‘greatly to blame’.30 And even if delegation could not serve to shift blame from politicians to delegatees, it might still serve to shift blame, or at least muddy the waters, for the normally limited ‘salience period’ when adverse events or risks command high public or media attention.31

However, it seems hardly plausible that delegation deliberately designed to deflect blame from politicians will invariably have that result. Just as the actual incidence of taxes does not necessarily fall on those with the legal responsibility to pay, political leaders sometimes attract public blame for acts of commission or omission that are formally the responsibility of delegatees – the position denoted in cell (4) in Table 2.32 Indeed, in some times and places rulers have been blamed

<table>
<thead>
<tr>
<th>Public attitudes</th>
<th>‘Sympathetic’</th>
<th>‘Vindictive’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct</strong></td>
<td>Blame: limited</td>
<td>Blame: high and direct</td>
</tr>
<tr>
<td><strong>Delegate</strong></td>
<td>Blame: low (default to delegatee)</td>
<td>Blame: high and redirected (default to delegator)</td>
</tr>
<tr>
<td><strong>Result</strong></td>
<td>‘Teflon effect’ (limited blame)</td>
<td>‘blame attraction’ (‘buck stops here’)</td>
</tr>
</tbody>
</table>

Table 2: ‘Blame game’ with ‘malign’ outcomes and sympathetic or vindictive public attitudes
for events over which they could not plausibly have exercised any control. For instance, in earlier times dynastic rulers might be blamed for natural catastrophes on the grounds that the gods were angry with them or that they had somehow lost the mandate of heaven. Even today some analyses of US gubernatorial elections suggest that severe adverse weather conditions such as floods significantly reduce incumbents’ chances of re-election.

Thus the delegation strategy reaches its limits when voter blame for adverse events does not reflect formal lines of responsibility. There are at least two ways in which voter blame over malign outcomes may revert to politician ‘blame shifters’, in spite of delegation, leading to cell (4) in Table 2. One is blame reversion, or failure to deflect blame by delegation. In such cases voters treat formal delegation like tax inspectors looking at arrangements deliberately designed to avoid tax. Blame reversion has often been identified in US presidential ‘lightning rod’ studies, but the conditions leading to it seem obscure. It would seem plausible to argue that institutional structures are linked to the likelihood of blame reversion, but contradictory claims have been made on this point. Weaver follows Woodrow Wilson in arguing that blame avoidance through delegation is likely to be less credible in parliamentary than presidential regimes, but Harold Laski made exactly the opposite claim, arguing that greater personalization of power made blame harder to dissipate away from presidents. Other institutional features that may affect the credibility of delegation include the ease with which that delegation can be revoked – for instance, delegation to law courts, independent inquiries or other elected actors is likely to be harder to revoke than delegation to quasi-independent bodies.

In cell (4), voters can also respond to delegation by blame displacement. That means increased propensity to blame politicians for their personal and ‘alienable’ shortcomings and failures (for instance, financial, sexual or other misjudgements and personal indiscretions). If delegation arrangements are credible, foreboding blame reversion, but voters are ‘vindictive’, they may respond to blame-shifting strategies by blame displacement. However, clear examples of blame displacement are not easy to find. It is not clear whether or how far the apparently rising concern with political ‘sleaze’ in the post-cold war 1990s is part of a ‘blame displacement’ public response to politician strategies of blame avoidance by policy automaticity or delegation to experts, managers, regulators or independent providers.

So the outcome of the delegation blame game identified in Table 1 may depend not just on whether outcomes are malign or benign, but also whether blamers are sympathetic or vindictive. And that means politicians themselves can hold varying beliefs about the blame outcomes to be expected from delegation strategies (even during the high-salience period of adverse events). So, just as there is contradictory lore about the general efficacy of ‘lightning rods’ in politics, the same can be expected to apply to the applicability of such instruments to the management of risk and hazard.

**Strategic Interaction: Blame Shiftees and Revenge Effects**

If variable public attitudes may shape the outcomes of delegation, another complication arises from the relationship between the delegators and the intended ‘blame-shiftees’. The latter cannot be assumed to be passive actors and the way
they respond to the poisoned chalice offered by blame-shifters may affect the overall blame outcome. They may be able to adopt blame-deflection strategies that result in some or all of the blame reverting to the would-be blame-shifters.

Accordingly, Table 3 depicts a simple delegation game played between politician delegators and delegatees, in which delegators choose between delegating credit as well as blame, or delegating blame but not credit, and delegatees choose between accepting blame and credit, or accepting credit but not blame. The structure has elements of a cooperation game with ‘tragic bias’, insofar as both parties have an incentive to move away from cell (1) (in which both accept blame/credit trade-offs). Delegators have an incentive to move to cell (2) and delegatees have an incentive to move to cell (3). But if they both try to move into their ‘winning’ positions they will find themselves both in cell (4) (where fair-weather delegators meet fair-weather delegatees), in which at least the delegators are worse off than they would be in cell (1).

Table 3: Simplified delegation game

<table>
<thead>
<tr>
<th>Delegator</th>
<th>Delegate blame and credit</th>
<th>Delegate blame but not credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept blame and credit</td>
<td>Symmetrical delegation Outcome for delegator: ‘negativity bias’ (blame shift with credit slippage)</td>
<td>Asymmetrical delegation 1 Outcome for delegator: ‘free lunch’ (blame shift but no credit slippage)</td>
</tr>
<tr>
<td>Accept credit but not blame</td>
<td>Asymmetrical delegation 2 Outcome for delegator: credit slippage with reverse blame shifting</td>
<td>Incompatible delegation Outcome for delegator: conflict and deadlock (probable blame sharing)</td>
</tr>
</tbody>
</table>

Table 3 takes delegation by politicians as opening moves in the blame game rather than the endgame. It is true that some kinds of delegatees may be less concerned than politician delegators to avoid some kinds of blame. But you scarcely need to be a hardline rational choice theorist to suppose that delegatees will often be reluctant to accept the role of scapegoat in a meek and straightforward way, out of resignation, principle or reward. Attempts to delegate blame to other elected bodies frequently leads to a cell (4) outcome, and the literature on presidential ‘lightning rods’ and related political behaviour contains numerous examples both of cell (3) outcomes (reverse blame shift accompanied by credit slippage) and of cell (4) (attempts by politicians to ‘have it all’ by making the credit flow upwards and the blame flow downwards).

The game portrayed in Table 3 can be considered as a nested blame game taking place within cells (3) and (4) of the simple blame game portrayed in Table 1 (though the introduction of public attitudes in Table 2 in effect splits cell (4) of Table 1 into two). There are several ways in which strategic responses by delegatees may result in blame sharing or blame boomeranging rather than blame shift away from politicians. To illustrate the point, three blame-shift strategies are briefly considered here, namely privatization to shift blame for financial failure, managerialization to shift blame for operational failure or organizational malfunctioning and expertization to shift blame for judgemental failure (false assumptions, faulty forecasts, technical errors or ignorance).
These three strategies are only part of a larger array of types of delegation and in particular they do not include delegation to law courts or to other elected levels of government. That means they are all types of delegation that in principle offer politicians a chance to play a variant of the ‘blame game’ in Table 1 by trying to have it both ways: that is, by formally delegating responsibility to avoid blame but at the same time being able to direct policy by behind-the-scenes intervention. That phenomenon is familiar in the use of ‘unacknowledgeable means’ by governments in spying or terrorism, and applies in many other policy fields too. Playing the blame game that way, however, seems unlikely to produce stable blame outcomes. The more politicians seek to avoid the blame-shift/credit-claiming dilemma by phoney delegation, the more the public credibility of such delegation is likely to be undermined in the longer run, producing increased likelihood of blame reversion. But blame can ‘boomerang’ from such delegation in other ways too.

Privatization Blame Boomerangs. Privatization and outsourcing in principle offer risk-averse politicians a way to transfer liability for financial failure (and the attached political blame) to private firms and capital markets. Whether or not privatization contributes to least-cost provision of public services has been much debated, but it is the political blame-shift possibilities of privatization that are at issue here. Indeed, the allure of transferring liability for financial failure from government to private firms or the market often extends beyond commercial public enterprise to domestic projects like prestige sporting or celebratory events and even core public services. That approach offers beguiling prospects for passing responsibility for financial losses (or complex construction projects that run over time and budget) to private sector operators while politicians enjoy credit for whatever benefit the investment brings (that is, cell (2) of Table 3).

As noted earlier, this approach to blame shifting may be undermined by blame-reversion from voters, but it may also be confounded by the strategic moves made by the private providers. The main card the latter can play to transfer blame back to politicians is the threat or actuality of shutting down their operations. Such moves are a variant of the ‘accept credit but reject blame’ approach by delegatees (cell (3) of Table 3) and can oblige politicians to reassume part or all of the financial liability or operational responsibility when things go wrong. Service abandonment is perhaps the most dramatic way that private operators can respond to politicians’ attempts to shift blame (resulting in blame sharing or blame reassignment instead), but it is not the only one. Private sector blame-shiftees may also choose to contest blame by attacking subsidy levels, regulator behaviour, politician interference or the structure of privatization settlements (a tactic pursued by several UK railway companies as well as Railtrack in 2001).

Managerial Blame Boomerangs. If politicians try to shift blame by (ostensibly) placing direct responsibility for operational failure in the hands of managers or other quasi-autonomous actors (such as independent regulators or central bankers, favoured by some elites in the late-twentieth century as devices for ‘good governance’), those actors also may respond with blame-deflection strategies of their own.

The blame-deflection strategy by managers that is most likely to produce blame boomerangs is disputation of residual liability (that is, blame for matters
that are not clearly specified in a contract or service agreement for managers or agencies). A well-known and dramatic example of such a residual liability issue is the New Zealand Cave Creek tragedy of 1995, when a viewing platform in a beauty spot maintained by a government department collapsed, killing seventeen students who were on the platform. Safety of viewing platforms was not identified as one of the ‘outputs’ for which the Chief Executive of the agency concerned was formally responsible, under New Zealand’s much-discussed public-sector accounting framework. Issues could also be raised about the adequacy of the level of funding secured for the agency by the minister and the Treasury. Hence blame for the tragedy was ambiguous – a paradoxical outcome in a system that had been much touted as a way to clarify accountability within government. Neither the relevant minister nor the departmental chief executive resigned in the immediate aftermath of the disaster, and the eventual outcome seems to have been blame sharing, not blame shifting.

Instead of, or in addition to, disputing residual liability as a means of countering ‘blame-shift’, managerial blame shiftees may be able to turn blame back to politicians by exposing politicians’ ‘cheating’ if politicians have covertly interfered in the preserve of the managers’ supposedly autonomous sphere of autonomous responsibility. A classic example of this tactic is the response of Derek Lewis, Chief Executive of the UK Prison Services Agency after his dismissal by the British Home Secretary (Michael Howard) in 1995 over gaol break-outs by high-security prisoners. Blamed, shamed – and fired – by his minister, Lewis went on the offensive, revealing the extent to which (he claimed) Howard had intervened behind the scenes on ‘operational’ details of prison security while denying that he had any responsibility for such matters. Such responses are most likely when the blame-shiftee involved sees no realistic prospect of benefit (for example in further appointments) from ‘taking the rap’. And the tactic is only available if politicians have in fact sought to interfere covertly in the supposedly autonomous decision ‘space’ of managers, regulators or other actors. But where that does happen, counter-tactics by blame-shiftees may lead to blame-sharing or blame reversion rather than simple blame shift.

**Expertization Blame Boomerangs.** Making experts responsible for technical judgements is an established way for politicians to shift blame for judgemental failure in many kinds of regulation. Passing judgements over risk and safety to expert advisers has the political advantage of allowing those eminences to be held responsible when things go wrong, as well as the technical or functional one of ensuring well-informed decision advice.

In such conditions, expert delegatees may deflect blame in several ways. If they disagree (over what Adams confusingly terms ‘virtual risks’) politician delegators are forced to choose which experts to follow (or to follow none of them). If they turn out to be wrong, politicians may share the blame for appointing them or taking their advice. If they talk the language of risk with ‘small-print’ qualifications, politicians are again forced to make potentially blame-worthy judgements about what level of risk is acceptable. That tactic was followed by an EU expert committee set up in 1995 to propose a limit value for occupational benzene exposure. Instead of offering a single limit value (for a chemical that had no safety threshold), the committee merely indicated a number of levels associated with different expected cancer-rates, leaving the politicians to choose among them. Indeed, the more
Experts use the concept of risk rather than dividing behaviour or substances into safe/un safe (particularly when it is linked to complex risk-risk trade-offs), the harder it is for politicians to avoid choice and consequent blame.

Experts too may protect themselves from ‘negativity bias’ blame by ultra- caution or by recommending draconian action for apparently small risks in a way that forces politicians to balance risk against cost (in money or votes). A notable example of that type is the expert recommendation from the UK government’s SEAC committee in 1997 that the sale of beef-on-the-bone (such as T-bone steaks and spare ribs) should be banned because of a minor additional risk (estimated as the saving of one additional life per year) that individuals might contract new variant CJD.52

The inclusion of lay members of the public on scientific committees, or obligations to include public consultation or focus groups as part of expert advisory procedures (increasingly observed in recent years with apparently declining public confidence in scientific experts) introduces another element of cross-cutting ‘delegation’. It gives scientific experts a chance to pass the blame to ignorant lay opinion (or to politicians for listening to such opinion) when things go wrong, leading to blame dissolution rather than blame shifting to the experts.

**Blame Dissolution: Defensive Risk Management**

Earlier sections have discussed factors that can complicate the simple blame game that we started with, in the form of public attitudes that can make the link between blame and delegation problematic (Table 2) and strategic responses by delegatees that can produce blame outcomes different from those intended (Table 3). But what happens if such moves in the blame game are blocked and the blame-shiftees cannot share blame or pass it back?

In such conditions, delegatees are likely to try to dissolve blame, and that in effect means returning to the presentational and policy alternatives to delegation strategies that were discussed at the outset,53 as well as agency strategies at another level. One of the ways in which delegatees can attempt to dissolve blame is by practising ‘defensive risk management’. By ‘defensive risk management’ is meant individual and organizational activity that concentrates on avoiding personal or institutional blame or liability, whatever the broader social consequences of such behaviour for the general social management of risk. The analogy is with ‘defensive driving’, in which drivers choose vehicles and/or driving behaviour intended to maximize their own individual self-preservation in the motoring jungle.

Blame dissolution means attempts to construct personal or institutional alibis or excuses such that blame ‘disappears’ – for instance by rebuttal, denial or the adoption of organizational boundaries that make responsibility ambiguous. Numerous accounts have been given of ways of avoiding blame other than by delegation, by argumentation or ‘blame-prevention engineering’ within organizations.54 For instance, organizational complexity and elaborate hierarchical structures are often argued to be among the standard approaches to blame dissolution55 and both are much in evidence in the contemporary government of risk. In earlier work with Rothstein,56 I have identified seven main strategies of defensive risk management in the face of demands for increased transparency. Those strategies include rebuttal (problem denial), prebuttal, delayed response, reorientation
(by patterns of organization designed to dissolve blame), protocolization, data fabrication and service abandonment. Such strategies can be expected to figure large in the ‘defensive risk management’ behaviour of blame-shiftees to whom formal responsibility for safety and hazard has been delegated, especially if the scope for blame sharing or blame shifting is limited.

In defensive risk management mode, organizations are hyper-cautious about releasing information that may lead to blame or liability, and increase the resources they put into prebuttal and rebuttal activity to deflect or quash public criticism. Defensive risk management may also mean responding to delegation by rigid protocolization of activity, such that organizations have a judge-proof due-diligence defence for every safety incident. It may mean abandoning services, such as advice, that carry substantial potential for blame. Defensive risk management may even involve attempts to ‘change the facts’ by massaging or fabricating reporting data to create the impression of safety. Such approaches are classic ‘first-order’ organizational responses to environmental disturbance.  

Protocolization as a form of defensive risk management by blame-shiftees can be linked with hypercaution over risks for which individual organizations are responsible, irrespective of the effects on the risk/risk trade-offs that apply across organizational boundaries. Examples of such behaviour are often cited in critiques of risk management as well as public management more generally. For example, a recent study of EU rail safety regulation highlighted the closure of a Swedish railway line because of the costs of implementing new requirements for automatic train protection systems, even though line closure could be expected to increase death and injury as a result of the increased road traffic it would produce.  

As with defensive driving, there is something to be said for defensive risk management. And if negativity bias is indeed increasing in developed societies as a result of the activities of the ‘risk industry’, delegatees can be expected increasingly to resort to defensive risk management if they are obliged to stay in cells (1) or (2) of the delegation game. But there are also costs of such behaviour. For instance, if everyone resorts to vehicles and behaviour geared to defensive-driving strategies, that behaviour may produce unintended collective effects, such as a general increase in ‘road rage’. Defensive risk management, intended to minimize blame and liability falling on individual institutions and individuals, may both produce negative side-effects and substantial distortions in the handling of risk at society-wide level. For example, increasing the institutional effort going into rebuttal or problem denial may decrease capacity to respond to the substance of criticism. Protocolizing behaviour for due-diligence defences may produce ill-considered and inflexible responses to complex problems. Focusing on rebuttal and denial may conflict both with expectations about transparency and openness in public services and with the requirements for learning for better risk management. 

Abandoning services to avoid blame may disadvantage recipients who have no other source to turn to. Defensive risk management strategies focused on limiting liability for individuals may deflect attention from systemic risks (those affecting a whole population of organizations), for example in vaccination. It may also reduce capacity for what Wiener calls ‘managing the iatrogenic risks of risk management’ – that is forms of intervention, pervasive in health care, that increase one risk while trying to reduce another. In that sense, the overall effects of defensive risk management may be paradoxical.
Conclusion

Figure 1 summarizes the overall argument, which has sought to link the well-known political science analysis of blame-avoidance by delegation with contemporary discussions of political and institutional behaviour over risk regulation and management. The argument is that the way risk is managed depends on the way the blame game plays out.

The delegation analysis with which we began suggests that blame-averse politicians can avoid the fate of those unlucky Chinese emperors who were liable to be blamed for social catastrophes like famines or earthquakes, by judicious use of delegation or auto-maticity. If it is true that the growth of the contemporary risk industry increases ‘negativity bias’ among the public at large, the blame-shifting imperative may become even more central to politics.

Whether delegation strategies intended to shift blame for adverse events to other actors can contribute to improved social management of risk is one question. Whether – or when – delegation can in fact shift blame away from politicians is another. The analysis earlier suggests that the incidence of political blame does not necessarily follow the lines of formal organization and delegates may follow blame-avoidance strategies of their own. So politicians may themselves be taking a risk when they try to manage blame by delegation. The assumption with which we began, that there is a simple trade-off in the ‘blame game’ between politicians’ credit-claiming and blame-avoiding, may mask the complexities of non-linear blame effects, diminishing returns and unintended blame effects from the delegator-delegatee blame game that is nested inside a broader politician-voter blame game.

The analysis developed here is intended to show that taking the analysis of ‘blame games’ seriously and extending it to include delegator-delegatee interaction is one way of making sense of the contemporary politico-bureaucratic risk game. If politicians try to deal with voter negativity bias by delegation, and blame-shiftees

![Figure 1: Playing the blame game through delegation: Some possible outcomes](image-url)
cannot be certain of deflecting blame, the result is likely to be ‘defensive risk management’ to protect institutional or individual blame and liability, substantially skewing risk management for the society at large. If that is what happens where blame-avoidance imperatives meet the much-discussed ‘risk society’, its implications are ambiguous. There would after all be something paradoxical about a democracy whose elected rulers were so concerned to avoid political blame over hazard and safety that they ended up – ostensibly, at least – hardly deciding or running anything. And though defensive risk management might appear to make government concentrate on what Jeremy Bentham thought should be its main purpose – to protect individuals from ‘sufferings’63 – its focus on avoiding blame and liability may well have the opposite effect in many cases.

Acknowledgements

This article was first presented at a British Academy/Academy of Medical Sciences conference on ‘Risk, Democratic Citizenship and Public Policy’, 7 June 2001 and formed the basis for an inaugural lecture at Oxford on 6 November 2001. I am grateful for helpful comments and advice received on that occasion, and also for comments from Keith Dowding, Bill Durodié, Bob Goodin, Desmond King, Mick Moran, Joseph Nye, Roger Noll, Chris Wlezien and colleagues at the LSE Centre for Analysis of Risk and Regulation, particularly Tim Besley and Henry Rothstein.

Notes

2. This is the term used by J. Dryzek in his review of A. Wildavsky, But is it True? in Journal of Public Policy, 15:2 (1996), pp. 299–304, for the various professions and lobby groups (including victim lobbies) that have developed around safety and hazard issues.


15. C. Twight, ‘From Claiming Credit to Avoiding Blame’, op. cit.


22. C. Twight, ‘From Claiming Credit to Avoiding Blame’, op. cit.


26. Some like Ellis, ibid., p. 148, see mass blaming or approval of politicians as shaped by elite attitudes.


31. Provided adverse effects of the type in question are not too frequent.

32. In the railway poll just mentioned, 42% of respondents held the previous Conservative government ‘greatly to blame’, suggesting that if the crisis had occurred when the Conservatives (who had privatized the rail network in 1995) held government, the blame assignment by voters would have been different, with blame at least shared between politicians and delegates rather than shifted from the first to the second.


35. A UK case of blame reversion occurred over fuel price rises in the autumn of 2000, against a background of OPEC production limits and rising world market prices of oil. In an ICM poll at that time, 63% of respondents said they blamed the UK government most for recent fuel price rises (against much lower figures for OPEC and oil companies). See http://www.icmresearch.co.uk/reviews/2000:guardian-poll-sept-2000.htm.


39. For example, whether blame outcomes have no clear relationship with formal institutional arrangements, whether ‘teflon’ qualities are achievable only if delegation is used sparingly or in some other appropriate way, or whether the relationship between blame and delegation is a product of the particular personality and individual skills of each politician.

40. It is logically possible that delegators might want to delegate credit but not blame and delegates might accept blame but not credit, but those possibilities are not explored here.

41. After all, appointees by definition do not face re-election and in some circumstances public blame may even be turned into an asset. But that can apply to politicians too.


44. For instance, if voters lay part or all of the blame for failure on politicians rather than on private operators, for what is perceived as a botched or ill-judged privatization. That seems to have happened over drinking-water safety after water privatization in England and Wales in 1989. (See Hood, Rothstein and Baldwin, *The Government of Risk*, op. cit., p. 97, fn. 15.) Something similar happened to public blame for airline accidents in the USA after airline deregulation (even though the incidence of airline accidents was falling).


50. The politicians’ dilemma over blame shifting to experts – starkly revealed by BSE – is that the more the experts are chosen from only one school of thought the greater is the chance that they will reach unanimous conclusions (making it easier to shift blame for judgemental failure to them). But the more politicians select experts along such lines, the more likely it is that the experts’ conclusions or recommendations will be contested by other experts, leading to blame-sharing between politicians and groups of experts rather than blame shift.


52. A newly-elected Labour government was anxious to avoid the blame that had attached to some ministers in the previous Conservative government who had made rash pronouncements about the safety of beef and therefore moved to implement the ban. But public opinion turned sharply against the ban as soon as it was introduced, and bone-in beef ‘martyrs’ emerged to create political difficulties over law enforcement. See Hood, Rothstein and Baldwin, *The Government of Risk*, p. 101, fn. 19.


consequences of crisis and crisis management

57. Ibid.
Overview: Crisis Management, Influences, Responses and Evaluation

Allan McConnell


The topics covered in this special issue, as well as other contemporary examples of instances where government must ‘step in’, reveal that crises and emergencies appear in a variety of forms. Some, such as floods and issues of rail safety, present a danger to life, whilst others, such as the Millennium Dome, do not. Threat to employment livelihoods is a feature of the fuel protests and many countryside issues, whilst others, such as the crisis in the regulation of health care pre-Harold Shipman, have little or no such impact. Some crises, such as the A-level crisis and foot-and-mouth disease, place the careers of individual ministers on the line, whilst others, such as the response to September 11, do not. Amidst this diversity, however, we can detect key themes which allow us to develop an understanding of the factors shaping the crisis or emergency responses, as well as the response patterns themselves and the difficulties faced in judging whether or not a crisis has been well-handled. This article will explore each of these issues in turn.

Main Factors Shaping Crisis Responses in British Government

There is nothing inevitable about the way in which British government responds to a crisis. Responses are shaped by a series of complex, often overlapping factors. What we can do, however, is identify the main variables.

The Nature of the Crisis/Emergency: What constitutes a crisis is a matter of judgment, not a matter of fact. It depends on peoples’ perceptions of the scale and importance of the problem faced, the degree to which they are affected, and the extent to which it may provide an opportunity for them to benefit. ‘Crisis’ is simply a word, attached by individuals to a particular set of social circumstances, trying to draw attention to the fact that something out of the ordinary is happening, taking us away from a desirable state of affairs. There are three main types of crisis. These will tend to alter the crisis response in different ways.

The first type is a ‘sudden’ crisis. This is the conventional view of a crisis situation, occurring in the form of a swift, unexpected event or series of events. Examples include the 1989 Hillsborough disaster, the 1999 Paddington rail crash, the 2001 World Trade Centre attacks and the 2002 A-level crisis. Some crisis situations may have been planned for in advance, and so the response is largely a matter of activating contingency plans. In general, however, an unexpected crisis will produce a large measure of improvisation in the response. For example, a
case of foot-and-mouth disease in February 2001 caught the Ministry of Agriculture, Fisheries and Food largely unprepared, without substantive tried and tested contingency plans. As a consequence, much of the early response was painfully ad hoc, compounded by poor communication systems and even a lack of up-to-date maps or lists of farms. The fuel protests of September 2000 are also a classic example of a government caught completely unprepared for the scale of the problem affecting it, resulting in ad hoc and regularly shifting response patterns.

A further type is a ‘creeping’ crisis. It does not have the feature of condensed dramatic events to focus our attention. Rather, vulnerable conditions and pressures build up slowly, often over many years. Examples might include global warming, countryside issues and Bovine Spongiform Encephalopathy (BSE). This does not preclude the possibility of creeping crises culminating in a dramatic event or series of events. The horrific tragedies of September 11 were arguably the outcome of the incremental growth of vulnerable conditions: increased terrorist activities throughout the world, the direction of US foreign policy alienating radical groups, the growth in US domestic air travel and a fairly loose system of flight security. More usually, creeping crises arrive on an agenda by stealth and often unrecognised or dismissed in their early stages. They will tend to elicit a ‘business as usual’ response. The countryside crisis, for example, is an amalgamation of issues such as animal health, rural services, problems of farming and fox hunting. As a consequence, the response has been a multi-stranded series of initiatives: e.g. the Better Regulation Task Force; the creation of the Food Standards Agency; the Action Plan for Farming; the rather haphazard response to foot-and-mouth disease; the subsequent replacement of the agriculture ministry with a more wide ranging Department of Environment, Food and Rural Affairs; and an ongoing stop-go policy on banning hunting with hounds. Another example of a creeping crisis is the Millennium Dome, where a steady trickle of difficulties and media reports gave the impression of a government with a disastrous policy initiative on its hands. The main thrust of its response was dramatically to play down the possibility that anything was fundamentally wrong, while passing responsibility to the body responsible for the strategy (the Millennium Commission) or the organisation charged with day-to-day management of the Dome (the New Millennium Experience Company Ltd). We must recognise, however, that not all creeping crises elicit a ‘business as usual’ response. Around two million homes in England and Wales are at risk from flooding as a consequence of rising sea levels, and the south east of England sinking slowly into the sea. The dangers are fully recognised by the Environment Agency which operates through a series of Regional Flood Defence Committees in an attempt to deal with the issue, despite major pressures on funding.

The final types of crises are ‘chronic’ crises. Whilst there may be ‘creeping’ aspects to them and the occasional sudden onset of extraordinary circumstances, they are chronic because they are ongoing crises with no obvious solution. As a consequence of learning from continual problems, responses to chronic crises will tend to have routine measures ‘on the shelf’, waiting to be used when necessary. The highest-profile example in the UK context is the troubles in Northern Ireland. The imposition of direct rule from Westminster has been threatened and used on several occasions since the setting up of the Northern Ireland Assembly in 1999.
Another factor shaping the crisis response is the nature and extent of the threat posed. A tendency, rather than a hard-and-fast rule, is that the greater the threat, the more centralised will be the response. The reason is that no government can afford to ignore vital issues which threaten its legitimacy, security and capacity to govern. Threats to its political power are obviously of keen interest. For example, in the early stages of foot-and-mouth disease in late February 2001 and throughout most of March, handling of the crisis was left largely to the Ministry for Agriculture, Fisheries and Food. However, with the possibility of a general election announcement not far away and a recognition by the Prime Minister and his close advisors that the disease was far from under control, ultimate authority was transferred at the end of March to the Cabinet Office Briefing Room (known as COBRA). Economic threats are subject to similar centralising tendencies. In the Black Wednesday crisis of September 1992, culminating in Britain’s exit from the Exchange Rate Mechanism, key decisions were taken by the Prime Minister, John Major, the Chancellor of the Exchequer, Norman Lamont, and a small group of senior ministers. Military threats and challenges to security also involve strong centralisation, simply because state security is a function of the centre. Immediately after the September 11 attacks on the World Trade Centre and the Pentagon, the Cabinet Office Briefing Room played a crucial role in the immediate UK response, involving suspension of flights over London and range of measures to tighten security at Britain's public offices, airports and financial institutions. Even before September 11, floods, fuel protests and foot-and-mouth disease helped prompt a wider review of civil contingencies planning in the UK. The outcome was a more centralised and integrated infrastructure, with the Cabinet Office being the focus of decision-making. It is headed by the Civil Contingencies Committee (CCC) which meets on a regular basis to deal with contingency planning and associated issues. When an emergency situation arises, COBRA becomes the focus, coordinating response inputs from the Civil Contingencies Committee and relevant government departments.

The degree of time pressure is another variable shaping governments’ immediate response to crisis. When time is of the essence, there may be little or no time for consultation within the higher reaches of government. The immediate suspension of virtually all flights in and out of the UK for three days after September 11 is a classic example, the decision taken in a matter of hours within the confines of COBRA. In effect, the decision was limited to the Prime Minister, the Defence Secretary, the Home Secretary and other senior security and defence interests. To engage in longer consultation with a wider range of public and commercial interests would have left the UK vulnerable to further attacks. Correspondingly, when time is not at a premium and there are weeks, months or even years to act, the crisis response is more liable to be opened up within government and possibly beyond. The 1999–2000 investigation by the Burns Committee into hunting with dogs is a good example: it illustrates that consultation on a crisis issue is often desirable for government because it ‘buys time’ and can give a measure of constitutional legitimacy to whatever it finally decides.

A further factor is the degree of secrecy required. The higher the level of secrecy, the greater the likelihood that formation of the response will be confined to the Cabinet and senior civil servants, or perhaps only to a few senior ministers. In the initial stages of the fuel protests, for example, the government attempted to present a ‘business as usual response’ whilst secretly using the Privy Council to
grant emergency powers to secure the delivery of fuel supplies. Correspondingly, there are cases such as hunting with dogs, illegal importation and misuse of drugs, high-profile child abuse inquiries, the Hillsborough disaster and others, where secrecy is less important to ensure effective short and long-term responses. Indeed, in the face of media and public pressure, there can be distinct public-relations advantages in opening out the crisis response to some form of wider involvement. For example, the Conservative government’s long-term response to the 1989 Marchioness pleasure boat disaster on the Thames was heavily criticised on a regular basis for the failure to hold a public inquiry. Labour’s response was much more pragmatic, granting an inquiry in 1999 and effectively dissipating the cloud of secrecy that had hung over the case for more than ten years.

Factors ‘Internal’ To British Government: British government responses to crises are shaped by a number of factors associated with British government itself.

(1) The political architecture of the state is important. Even in the post-devolution period, Britain is still a unitary state, or at the very least some form of union state. It has an electoral system which tends to produce a strong executive drawn from the ranks of the majority party in the House of Commons, operating typically on the basis of an adversarial government/opposition style. It should not be surprising, therefore, if this creates a tendency for centralised responses to crisis. Indeed, issues of defence and home affairs are reserved to Westminster in the new devolution settlement.Whilst there were some minor regional variations in responses and effectiveness in the handling of e.g. the fuel protests and foot-and-mouth disease, the overwhelming pattern was UK-wide policy responses.

(2) The institutional structures of the state are also influential, particularly the history and configuration of departments. For example, one of the reasons why the 2001 foot-and-mouth crisis was badly managed was the inward-looking defensive culture of the Ministry of Agriculture, Fisheries and Food, refusing initially to consult outside experts and claiming the disease was under control when it patently was not.

(3) The extent of tried and tested contingency plans must also be taken into account. Lack of preplanning is very liable to produce a deficient response. Correspondingly, well-thought out and tested contingency plans dramatically increase the chances of an effective response. Operation Fresco was the government’s contingency plan to cope with issues of public safety in the 2002–03 firefighters’ dispute. It is widely recognised that this dimension of the government’s role was a model of good practice, perhaps too good for some who saw it as military-style operation to defeat the Fire Brigades Union. Generally speaking, emergencies are easier to plan for in advance, simply because there are known and reasonably assessable risks from events such as flooding, train crashes or chemical accidents. The Civil Contingencies Secretariat in the Cabinet Office plays precisely this role, engaging in ‘horizon scanning’ to assess risks to the UK. Preplanning for some form of ‘political’ crisis is a different matter: verging towards the impossible. Former Conservative Prime Minister Harold Macmillan’s statement that what he feared most were ‘events, dear boy, events’ illustrates the unpredictability of the political agenda.
The way in which British governments manage crises is influenced by the dominant political ideas of the time and the particular philosophy each promotes. For example, the Thatcher government’s response to the ‘chronic crisis’ of terrorism in Northern Ireland was to exclude those who advocated terrorism from participation in the democratic process. The latter stages of the Major government and subsequently the Blair government adopted a more inclusive approach, culminating in the Good Friday Agreement and the acceptance of Gerry Adams, Martin McGuinness and others into the democratic workings of the Northern Ireland Assembly.

We should not forget that personalities can play an important role in shaping the crisis response. In the ongoing crisis of rail safety and the role of Railtrack, the Secretary of State for Transport, Stephen Byers, was embroiled in a series of allegations regarding failure to tell the truth in his dealings with the House of Commons, Railtrack, the Paddington Survivors Group and the media. In effect, his conduct, together with continued media and opposition scrutiny of his personal capacity as a minister, affected popular perceptions of the government’s capacity to manage the crisis of the railways.

Factors ‘External’ To British Government: Crisis management does not exist in a governmental vacuum. Managing crises is complicated and shaped further by a series of factors which are ‘external’ to government itself.

There is media and public opinion. As discussed below, governments often attempt to manipulate these interests in a crisis. That aside, strong pressures from media and public opinion create equally strong pressures for ministers, at times the Prime Minister, to centralise decision-making and accept responsibility. When this does not occur, severe criticism often emerges. In 1990, for example, Judge Stephen Tumim produced his report into a riot at Strangeways prison. However, his recommendation for the removal of all top security prisoners from Brixton prison was effectively ignored by the Home Secretary, Kenneth Baker, who acted only in July 1991 after the escape of two IRA suspects held on terrorist charges. Baker was widely condemned for his failure to act until this second crisis occurred. Correspondingly, strong pressures from the media and the public may create a climate which is conducive to an overreaction in the crisis response. In January 2003, amidst an intensive campaign by the Sun newspaper against the influx of asylum seekers, the Prime Minister hinted at a review of Britain’s obligations under the European Convention on Human Rights.

Powerful interest representation may shape the content of a crisis response in favour of those interests. A good example is the foot-and-mouth crisis, where the National Farmers Union effectively blocked the possibility of vaccination because of its view that vaccination would damage overseas markets for British meat. By contrast, there can exist powerful interests which the government needs to attack or engage with if it wants to resolve the crisis. In 2002–03, for example, it veered regularly between these two tactics in its attitude to the Fire Brigades Union.
The governance of the UK is increasingly fragmented in the new era of devolution. Through the varying degrees of autonomy afforded to the Scottish Parliament, the Welsh Assembly and the Northern Ireland Assembly, the result can be a differentiated response. As was the case with foot-and-mouth disease and the firefighters’ dispute, this can mean crisis management initiatives tailored more closely to local circumstances. As indicated above, however, key crisis and disaster management responsibilities such as home security and the army are ‘reserved’ to Westminster: thus, response patterns throughout the UK share more in common than we might otherwise think.

Decision-making in British government exists in the context of the European Union, a political system where EU laws have primacy over the laws of member states. Therefore, crisis decision-making is at times constrained by EU regulations and directives. The UK’s response to the crisis in farming cannot be separated from ongoing reforms of the Common Agricultural Policy. Similarly, the response to foot-and-mouth disease was constrained by EU directives which provided for compulsory notification of outbreaks and prohibited routine vaccination of animals.

The wider international community can also play an important role in shaping the crisis response. The UK’s ongoing war against terrorism was jolted by the September 11 attacks on the World Trade Centre and the Pentagon. One of the first responses in the form of the Anti-Terrorism, Crime and Security Act 2001 was a direct product of international events.

Patterns of Crisis Responses

The way in which governments respond to crisis or emergency situations is far from uniform. Each response has many component patterns – some more prominent than others, depending on the specific crisis or emergency situation and context. The following patterns are not exhaustive, but do provide an overview of the main, often overlapping responses that we tend to find in the British context.

**Agenda Management:** No government likes to deal with very difficult issues unless it has to or feels there is benefit in doing so. Even when it deals with an issue, it may attempt to manage the political agenda and our perceptions of its own handling of the crisis. There are several ways that governments can engage in agenda management in crisis situations.

1. One of the most elementary is to try suppressing initial demands for government action, often by seeking to delegitimise individuals and groups calling for change. The 2000 fuel protests are a good example of this type of behaviour. In the very early stages of the crisis, when protestors blocked only a few refineries and depots, the government’s response was very much one of trying to marginalise protestors and their concerns. It argued that the ballot box and ‘normal’ consultation were the ways that public policy was made in Britain.

2. Once an issue has broken through to the agenda, governments may also manage the agenda in order to try and isolate demands from some groupings. The various anti-poll tax and non-payment campaigns over the
late-1980s and early-1990s are a classic example. The Thatcher government attempted to discredit campaigners by arguing that they damaged British democracy by disregarding law passed by Parliament.

(3) Another feature of agenda management is the need for some form of governmental action to symbolise that it is in control of the crisis response. On the day of 1999 Paddington rail crash, for example, John Prescott visited the scene and also announced a public inquiry – both high-profile measures to symbolise hands-on control.

(4) A further feature of agenda management relates to ‘scientific’ problems and the way they interact with democratic processes. In essence, there is a potential tension between scientific advice, often contradictory and subject to innumerable qualifications, and the needs of government which usually involve a clear, simple policy line. The BSE crisis is a case in point, where on several occasions ministers first decided the policy line to be adopted and then ensured that advice from advisors was constructed, or portrayed, as supportive of a policy based on ‘sound science’. In 1990, for example, the Bovine Spongiform Encephalopathy Advisory Committee was asked for its recommendations on the safety of British beef. In response to an early draft which noted that infectivity was still entering the food chain, ministry officials simply deleted ‘inflammatory’ paragraphs.4

(5) Official statistics can also be used in such a way that government tries to portray a successful response. In the case of foot-and-mouth, farms which had herds slaughtered under suspicion or slaughtered either as part of a contiguous cull or dangerous contact, were not listed as confirmed outbreaks. By late April 2001, official figures showed that 1,440 premises had been subject to infection and slaughter, whereas the true figure, taking into account the culls outside the official definition, was 4,940. In effect, official statistics were presented in such a way as to underplay the magnitude of the problem. In this instance, the wider exercise in agenda management was an attempt to portray a crisis-management exercise in the ‘home straight’ in order to pave the way for a general election.

**Centralisation within Government:** In a crisis situation, there are strong public, media, interest group, civil service and party-political expectations of an upwards transfer of decision-making to the Cabinet and indeed the Prime Minister. If senior figures absolve themselves of responsibility, they are liable to attract severe criticism for failure to act. We should not think, however, that senior ministers are pushed reluctantly into crisis decision-making. When the stakes are high on political or economic issues, there is a strong desire for intervention. In September 2002, the government established the Bain Inquiry into pay and working practices in the fire service. The intervention came on the back of ministerial concerns about the wider implications for public sector pay of the demands by the Fire Brigades Union for a 40% pay increase for firefighters. A further illustration of centralisation can be found in May 2002 when the Prime Minister announced that he was taking control of policy relating to asylum-seekers and the Channel Tunnel. This intervention came in the wake of concern at British National Party successes in municipal elections, as well as a wider resurgence of the far right in France and the Netherlands. On a more practical note, central
executive authority is often needed to galvanise forces into action, especially if there is little time for wide consultation, or indeed, if there is little desire for consultation because a strong element of secrecy is required. We must also recognise, however, that whilst there may be political expectations and demands for strong central intervention, such action can leave ministers open to accusations of interference. In the fire dispute, for example, Deputy Prime Minister John Prescott came under considerable criticism at the end of November 2002 when he effectively vetoed a deal which had been agreed between the Fire Brigades Union and representatives of local authority employers.

**Decentralisation:** Whilst virtually all crises or emergencies contain an element of central decision-making and authoritative choices, a large element of decentralisation is more or less inevitable. Most crises or emergencies require those individuals close to the impact of the crises to take ‘local’ decisions. There are three main reasons for this.

1. In emergency situations such as train crashes or floods, loss of life could result if the emergency services waited for authority to act from senior ministers. Thus, there are long-established patterns of decentralisation which promote quick and effective responses. Civil Contingency Planning in the UK has for many years adopted the ‘lead department’ approach, where crisis responsibilities are predetermined. If there is a disaster in a sports ground in England, for example, responsibility immediately lies with the Department of Culture, Media and Sport, unless the disaster cuts across departmental boundaries (e.g. a more widespread terrorist attack), in which case the Civil Contingencies Secretariat would delegate lead responsibility.

2. The centre would be overloaded if it took every crisis decision, therefore it is often practical to leave aspects of such decision-making to lower-level organisations: local government, quangos, non-departmental public bodies, health boards and trusts, the Scottish Parliament and Welsh and Northern Ireland Assemblies.

3. With the increasingly fragmented nature of UK governance, it is often politically expedient for the centre to leave aspects of crisis response to lower-level bodies. Decentralisation often lets other bodies take the flak when things go wrong. This was precisely the government’s tactic for dealing with the Millennium Dome, where it took advantage of pre-existing decentralised responsibilities with the Millennium Commission and the New Millennium Experience Company to pass difficult issues on them.

**Bureaucratic Politics:** Crisis responses are rarely neat. Often they are a product of a series of inter-agency and intra-agency conflicts covering a wide range of governmental and non-governmental bodies.

1. We should not think that any organisation or group automatically gives up its self-interest just because a crisis exists. A crisis often raises the stakes by putting organisations to the test – the role of the army
in the fire dispute being a good example. Indeed, a crisis situation often highlights weaknesses in organisations (especially resource weaknesses) and those concerned may use the situation to lobby for future increases in their funding. The State Veterinary Service played a crucial role in the operational management of foot-and-mouth. However, numbers and resources had been greatly weakened throughout the 1980s and 1990s, with vets temporarily recruited throughout the world in order that the service could cope. In some senses, the crisis became an opportunity for the State Veterinary Service, because it subsequently received a significant increase in budgetary resources. In any case, bureaucratic politics is not necessarily a bad thing. It opens out decision-making to a wide variety of interests, and each organisation is typically keen to show that it can make a positive contribution.

(2) Correspondingly, of course, many crisis-management situations may become bogged-down by confusion and in-fighting. The problem of how to deal with illegal immigration into Britain via the Channel Tunnel and cross-channel ferries was characterised in the early stages by the British and French authorities each passing the buck to the other. Similarly, the government’s capacity to handle the fuel protests was made much more difficult in the early stages by the oil companies, accused of colluding with the protestors in support of a reduction in fuel taxes, and the police, who insisted on operational independence and low-level interventions at protest sites.

Strategic Evasion: On occasion, government may try to dissociate itself from the course of events. There are a number of ways it can do so.

(1) It can refuse to recognise that a crisis exists, because to do so would be to admit that something is wrong and that government is culpable. The Millennium Dome is a good example. Ministers regularly played down problem issues and uses quangos to try and insulate themselves from direct criticism.

(2) It can try to pass the buck to other bodies, claiming that it is their responsibility, not government’s, to resolve the crisis. In the 1989–93 period amidst periodic crises of non collection levels for the poll tax, the Conservative government persistently argued that the problem was one for local councils, which should be more proactive in using the legal instruments at their disposal to pursue debtors. Another example is the Sangatte camp for asylum seekers, where initial problems were considered a matter for the French authorities alone. There is also the performance of Edexcel in school exams administration and the awarding of marks. Ministers attempted to fend off criticism of government by passing responsibility to the Qualifications and Curriculum Authority, the body responsible for overseeing quality assurance in education and training in England and Wales.

(3) Government may actually create a new body or position to try and help deal with the crisis. In early 1999, for example, Keith Hellawell was appointed as the UK’s first ‘drugs czar’ to tackle the growing national
problem of drug abuse. Moves such as this allow government to pass responsibility to others: taking the credit if it is successful and distancing itself in the event of failure.

(4) Government can set up some form of inquiry, as it did with BSE, foot-and-mouth, various examinations crises and many other situations. Such moves are practical because good practice in crisis management requires hindsight investigation into what went wrong and then a process of learning and reform to reduce vulnerabilities in the future. Inquiries also bring political benefits, because they allow government to deflect criticism about what it will do in the longer term. Inquiries may allow an issue to be ‘kicked into the long grass’ in the hope that it will have shed much if its political contention by the time the inquiry reports many months or even years later.

(5) One should also remember that individuals may on occasion use deception to evade a crisis or some aspect of it. For example, there were many allegations about attempts by the former Transport Secretary, Stephen Byers, to extricate himself from rail issues by being less than frank with Railtrack and the Paddington Survivors Group. More generally, we should recognise that to engage in strategic evasion of crisis issues is an understandable and desirable tactic from a government’s point of view. Otherwise, it would have to deal head-on with too many crises and admit to more mistakes than is politically sensible. The negative aspects of strategic evasion, however, is that it leaves government vulnerable to criticism that it should have dealt directly with an issue.

Failure to Recognise a Crisis: There is no universal scientifically-agreed definition of a crisis. But if we consider a crisis broadly as a set of extraordinary circumstances which take us away from a desirable state of affairs, we might think that all crisis situations would be recognised and acted upon. This is not necessarily the case.

(1) One reason is that we often assume crises to be the product of swift, unforeseen events, giving little time for action. Thus, events such as the spread of foot-and-mouth disease and the terrorist attacks of September 11 are circumstances which we might traditionally view as crisis situations. As indicated earlier, however, crises may be of the ‘creeping’ variety, where they are a product of months, perhaps even years, of smaller problems. In this incubation period, they may not have the media-attracting focus of tragedy or leave political careers hanging in the balance, but they nevertheless create real and extraordinary problems. The difficulty for government is that a crisis may creep up by stealth to a point when it fails to see the magnitude of the problem. In the twelve years prior to the September 2000 fuel protests, petrol prices in the UK had risen incrementally to the highest in the EU, increasing by 107% (compared to a 48% general rise in petrol prices). The difference is accounted for largely by tax on fuel. The early stages of the fuel protests saw a clear case of ‘denial’ that the protests would have any significant impact on British public life. In essence, the government was
blinkered in its perception of how significant the underlying problem was, with its potential for deep-rooted resentment to turn into protest posing a major economic and political threat.

(2) One should also note that whilst a crisis may be recognised in general terms and acted upon, specific aspects may be ignored. In Scotland, during 2002, there was major health scare when drinking water became contaminated by cryptosporidium at a reservoir near Glasgow. Although residents in certain areas were asked to boil water, Clydebank was completely missed from Scottish Water’s assessment of areas at risk because of inaccurate printed plans and poor use of a geographical database.

**Paralysis:** At times, a feature of crisis management is an inability to act because decision-makers are so overwhelmed by events.

(1) During March and April 1985 in Scotland, there was a statutory revaluation of domestic properties for local tax purposes. This provoked a backlash so severe in the ranks of Conservative supporters that the party was in danger of having no parliamentary seats north of the border after the next general election unless the Conservative government of the time gave a commitment to abolishing the domestic rating system. For a period of several weeks, Scottish Office ministers were paralysed politically by the revolt because they had no power to provide a solution and could only hope that a wider governmental review of local finance at Westminster would produce a replacement system.

(2) A different type of paralysis arguably occurred on Black Wednesday in 1992, with the collapse of the Conservative government’s low interest-rate policy and sterling’s membership of the Exchange Rate Mechanism. Rumours circulated afterwards that John Major had suffered some sort of nervous breakdown, unable to cope with the problems facing him.

We can safely assume, however, that cases of paralysis rarely make it into the public arena but remain behind closed doors in ministerial offices and Cabinet committees.

**Post-Crisis Evaluation:** Managing a crisis does not stop with a resolution of immediate difficulties. It is also about finding out what went wrong and trying to put in place measures to prevent or reduce the risk of similar situations in the future. Furthermore, it is about putting in place procedures which leave decision-makers better able to cope in the event that something does happen. Investigations into ‘what went wrong?’ are the key to such evaluation. Some, such as those in rail, sea and air accidents, are the product of statutory requirement. Others are discretionary: by select committees in the House of Commons (e.g. impact of foot-and-mouth disease, flood and coastal defences) and committees in the House of Lords (e.g. Chinook helicopter crash, war against terrorism). Most inquiries, however, are at the discretion of government and as a result may take a variety of forms.

(1) They may be internalised within the governmental machine for sensitive political reasons. In December 2002, when the Prime Minister was accused of breaching the Ministerial Code of Practice because Cherie Blair
used money from his blind trust to purchase two flats, the investigation was conducted by Tony Blair himself and the Cabinet Secretary, Sir Andrew Turnbull. In the wake of the fuel protests, substantial post-crisis responsibility lay with the Chancellor of the Exchequer, Gordon Brown, who needed to produce a budgetary settlement which appeased the protestors but did not compromise his long-term financial strategy.

(2) Investigations can be rather more open, although still largely confined to a particular department. For example, the Department for Transport has separate Air Accidents and Marine Accident Investigations Branches specifically for such purposes.

(3) There may be semi-independent inquiries where committee terms of reference, chairpersons and membership are determined by ministers. Recent examples include the 1996 Cullen report into the Dunblane shootings, the 2000 Phillips report into BSE, and the 2002 Tomlinson inquiry into the exams crisis in England and Wales. It should be noted that such inquiries may be commissioned from the private sector. In the Scottish Qualifications Authority crisis of 2000, for example, the Scottish Executive commissioned Deloitte and Touche to undertake a quick review of the role of the Scottish Qualifications Authority. The advantages of this private sector input is that it can often be quick, narrowly-focused, and sufficiently distant from government for the findings to be ignored with relative ease if ministers so wish.

(4) More thorough and wide-ranging is the public inquiry. In recent times, there have been failed attempts to obtain public inquiries into the deaths at Deepcut army barracks and into foot-and-mouth disease. Often, government will try to avoid public inquiries for a variety of political and logistical reasons, although there are times when the scale of public concern is such that only a public inquiry will satisfy. The murder of Stephen Lawrence, the tragic death of Victoria Climbie and the deaths of babies undergoing heart surgery at Bristol Royal Infirmary are recent examples of this.

Whatever the type of inquiry, all are potentially limited. Difficulties may include: a narrow remit, careful selection of chairpersons and members for their political views, reluctance of witnesses to appear and speak frankly; bipartisan nature of many House of Commons select committee investigations; and direct or indirect political interference by ministers. The last is undoubtedly of concern to many who consider that inquiries should not have their independence compromised. A recent example concerns the 2002 Tomlinson inquiry into the A-level exam results. The Education Secretary, Estelle Morris, was accused of pre-empting the inquiry in a tactical piece of agenda-setting by stating that the likely outcome of the review could be a regrading of all results.

**Difficulties in Assessing the Effectiveness of Crisis Responses**

As students of British politics, we usually do not stop at simply ‘knowing’ something. We often want or are required to make some form of judgment on the merits of government activity. Thus, we are liable to make judgments on whether
or not British government has been successful in its crisis management initiatives. As a starting point for exploring this issue, we can say that crisis initiatives are influenced by: machinery of government structures and processes; degrees of contingency planning; the availability of sufficient resources; the role of a variety of elected and non-elected bodies throughout the country; political debates, powerful interest groups, the media and public opinion; the wider political and economic contexts in Britain and beyond. The sheer scale and complexity of factors involved is indicative of the difficulty in judging ‘success’ or ‘failure’. More specifically, there are certain factors which make evaluating crisis management initiatives particularly difficult.

First there is the matter of personal perspective. Deciding what event or course of events constitutes a ‘crisis’ is not an exact science, and the same applies to evaluation of its handling. A crucial factor is how we perceive the situation. This is influenced by how we are affected by the crisis and by the political values we hold. For example, many farmers would argue that the 2001 foot-and-mouth outbreak was badly managed because of the way in which an initial underreaction by government was replaced by an overreaction and the unnecessary culling of millions of livestock. From the government’s point of view, however, there was certainly the electoral success of being able to return a Labour to power in the midst of one of the most high-profile, sustained and potentially politically fatal crises in modern British history.

A further issue pertains to the fact that in many areas of public policy we assess the activities of government by looking at original objectives and then match the results against these.

1. In crisis or emergency decision-making, however, there is often a lack of clear written objectives, apart from attempting to stabilise the situation and return to normal. Indeed, we often struggle to disentangle and weigh vague governmental objectives that emerge during a crisis. In the firefighters dispute, for example, we can detect objectives such as maintaining public safety, modernising the fire service and avoiding concessions which may send out wrong signals on the control of public sector pay.

2. Objectives may also conflict, so that it is not possible to state definitively whether handling a particular crisis has been successful. For example, British peace envoy Terry Waite was taken hostage in Beirut in 1987 and held captive for four years. The dilemma facing the Thatcher government was that it had one objective of releasing Terry Waite and another of refusing to bargain with terrorists. His freeing in 1991 could be considered a success and/or a failure depending on how we view the conditions which led to his release.

3. Another difficulty is that a government may clearly breach an original objective, yet its actions could be construed as a success. The fuel protests were ended on the basis of a strategy that the government had originally rejected, i.e. listening to and dealing with the demands of those prepared to engage in civil disobedience.

4. There is also the question of whether failure exists if an objective is not achieved in its entirety. For example, the New Labour government
in 1997 set a target of reducing child poverty by 1.2 million between 1996–97 and 2004. Does it constitute a failure if the figure achieved is 1.1 million? Is there a margin for error which we should allow: 10%? 20%? There is no definitive answer to this question.

Overall, therefore, crisis and emergency management is beset by vague, multiple, often contradictory objectives which require a strong degree of judgment.

A different problem is that one cannot separate government’s handling of a crisis from other factors. In the 1980s, for example, the Conservative government’s response to the threat from HIV/Aids was to mount a public information campaign through the television and print media. The difficulty is in isolating the impact of the government’s initiatives on people’s perceptions and behaviour when they are also exposed to messages from the media, peer groups etc. Another example is the debate on the safety of the measles, mumps and rubella (MMR) vaccine. The government’s main contribution has been to recommend the triple vaccine as the safest and best, rather than individual vaccines. It is not easy to separate this contribution and judge it when parents also get their information from a variety of other sources.

Crisis management initiatives can also have unintended consequences which may be difficult to quantify and balance against unintended outcomes. In the 2001 foot-and-mouth crisis, it gradually became apparent that a strategy of footpath closures and biosecurity measures to limit the spread of the disease had the unintended consequence of damaging tourism, giving the appearance that Britain was not ‘open for business’. Indeed, since employment in the tourist sector was over three times that in the agricultural sector, the negative side-effect was arguably more damaging than the success of the primary strategy.

Difficulty in judging ‘success’ is compounded by the fact that our assessment may vary over the period of the crisis and beyond. The early stages of the fuel protests were undoubtedly mismanaged because of the government’s refusal to recognise the scale of the problem that was looming, but the latter stages were arguably much more successful because the Chancellor was able to defuse the situation by his preparedness to ‘look and listen’. Similarly, the early stages of the foot-and-mouth crisis were dominated by the inability of the Ministry of Agriculture, Fisheries and Food to cope with spread of the disease, but government was widely thought to be much more efficient after the Prime Minister shifted command to Downing Street. Even after a particular crisis is over, our judgment of long-term ‘success’ may differ from our views on short-term crisis management. In 1985, when the Conservative government managed to extricate itself successfully from the domestic rates crisis in Scotland, longer-term crisis loomed because the policy replacement was the poll tax. This proved to be a policy failure of unprecedented proportions. Ultimately, therefore, many crisis management initiatives exhibit a combination of success and failure over time, depending particularly on personal perspective.

Conclusion

We might assume that when government in Britain is faced with crises or emergency situations, individual interests give way to a collective pooling of ideas
and resources in order to resolve immediate difficulties and return to some form of normality. Certainly, all crises will by their very nature have political authorities trying to achieve stability and resolution. Nevertheless, crisis management is essentially no different from any other area of governmental activity. It cannot be separated from political ideologies, institutional structures, powerful interests and personalities. For example, we cannot separate the management of the 2000 fuel protests from: the ideologies surrounding legitimate ways of protesting; state structures which allow one side to deploy military resources; the power struggle between government, protestors and oil companies; and the personalities of the Prime Minister and the Chancellor. Similarly, the handling of the 2001 foot-and-mouth crisis was shaped by: the ideologies surrounding electioneering and the need for a government in power to pave the way for a general election; the widely-recognised inability of the ministry to cope; the power struggles between agricultural, tourist and governmental interests; and the personalities of the Prime Minister and the Agricultural Secretary. Ultimately, therefore, the reality of public life is that government does not respond ‘rationally’ to crises or disasters. Aspects of rationality are undoubtedly one component. At heart, however, crisis and emergency management in British government is a political activity.

Notes


Gary L. Wamsley and Aaron D. Schroeder


On August 24, 1992, Hurricane Andrew slammed into southern Dade County, Florida. What followed was tragic, costly, and remarkable in many respects. In this article, we focus on one multi-faceted aspect of Andrew’s aftermath – the policy aspect, political and administrative. For this aspect was every bit as remarkable as all the others. The event threw a spotlight on a largely ignored policy subsystem – emergency management – and on the complicated and interesting political and administrative relationships that comprise that subsystem, and the context for that policy or, as some might say, nonpolicy (Wamsley and Milward, 1984). This article uses that spotlight to sharpen our understanding of some of the pathologies of our governmental institutions and processes in general and, more specifically, to chart the destabilization and change that is taking place in the emergency management subsystem. Something that is bringing about the first significant changes in the subsystem since the Federal Emergency Management Agency (FEMA) was formed 14 years ago.

The subtitle of this article, “Escalating in a Quagmire,” is borrowed from a paper about America’s increasing involvement in Viet Nam delivered by Daniel Ellsberg to a convention of the American Political Science Association in the late 1960s, apparently before he became infamous for obtaining and leaking the Pentagon Papers (Ellsberg, 1967). While the escalating involvement and expenditures of America in emergency management will not have consequences as tragic and traumatic as the Viet Nam War, they are nonetheless significant and worthy of our concern. And most assuredly, the emergency management policy subsystem and its political-administrative problems constitute a quagmire.

The Escalation

Requests for presidential disaster declarations and declarations of disaster have grown steadily since 1988 and have steadily set record highs since 1990. Fiscal year 1993 established yet another record with over 70 requests and over 50 declarations. No one can say with certainty that this trend is irreversible. In FY 1984, declarations peaked at 42 and then fell steadily until 1988, before beginning the steady climb to the current record high. Today, from the local level to the White House, those involved in emergency management widely believe that the trend will continue inexorably upward, and not because of nature’s whims. It is generally believed by people throughout the subsystem that disasters are being
both nationalized and politicized and that involvement is growing because of a combination of advancing technology and human-created forces and dynamics (Wamsley, Interviews, 1992–1993; Wallace, 1994). It is also recognized that some states have contributed more than others to this escalation. As one FEMA executive opined, “in Texas they want a declaration every time a cow pisses on a flat rock” (Wamsley and Schroeder, Interviews, 1995).

The CNN Syndrome and the Media Presidency

The first of these forces might be called the CNN Syndrome or the Camcorder Policy Process. In a few decades, we have gone from conveying news via an occasional action photograph backed by postevent printed and spoken words to instantaneous, live-action images and words in our living rooms, the Oval Office, and even the White House Situation Room. Can there be a local or even a regional disaster under these conditions? The news media have become increasingly intrusive and influential in the emergency management subsystem. At the same time, the media have increasingly reflected (and created?) the growing public pessimism regarding government capabilities (Lipset, 1987; Mitchell, 1987; Cloud, 1989; Washington Post, 1995). In other words, problems are being defined as national problems at the same time the national government is being portrayed as more and more inept. This has dramatically changed the context for the policy subsystem (NAPA, 1993; 18).

News media have always played a role in politics and influenced policy, but something more is at work today, something of a qualitative change. Television is a voracious and insatiable news medium; but even more important, it is more demanding than other media of drama and action, and disasters provide these (Wamsley and Pride, 1972).

Hurricane Andrew provided us with a vivid example of the converging effects of the CNN Syndrome and what might be called the Media presidency. Things were unfolding in the aftermath of the hurricane in a rather predictable fashion for the emergency management policy subsystem. Initially there was some confidence at FEMA because a disaster declaration had been secured, and the agency

![Figure 1: Disaster declaration program for fiscal years 1983–1993](image-url)
had dispatched officials to the state Emergency Operations Center (EOC) and communications equipment to Dade County even before Andrew's landfall. For Dade County and the State Emergency Management Organization, there was initially a sense of relief because the storm had missed the population center of Miami and loss of life was small because warning and evacuation had been relatively effective.

Things rapidly came unraveled. Neither the county nor the state emergency management systems were prepared for the destruction of a Class IV hurricane (NAPA, 1993; 1). Emergency management personnel, police and fire departments, power companies, and others who normally would have been the mainstays of disaster response were victims of Andrew themselves. No one was able to mount an effective assessment of the damage or of medical and life support needs. Officials in the state EOC at Tallahassee kept pleading with local officials to tell them what they needed, and frustrated and equally frantic local officials kept saying they did not know what they needed – “Send Everything!” To which agonized state officials could only reply, “We can’t send everything!” (NAPA, 1993; 28; Wamsley, Interviews, 1992–1993).

Finally on the third day after the hurricane and three days after a visit by President Bush and the Director of FEMA), the chaos, frustration, and lack of large-scale help from anywhere prompted Kate Hale, the Dade County Director of Emergency Preparedness, to hold a press conference. In exasperation, she uttered a politically explosive sound bite: “Where the hell is the cavalry of this one? We need food. We need water. We need people. For God’s sake, where are they?” (Newsweek, September 7, 1992; 23).

In the waning months of a hard fought presidential election campaign with an embattled President Bush sagging in the polls, the sound bite, uttered in a key state with 25 electoral votes, had the effect of a percussion grenade tossed into the White House. The president had visited the disaster site the same day the hurricane had struck, but now that gesture was being made to look worse than empty. Established policy process and existing standard operating procedures were instantly shattered by Kate Hale’s angry and nationally telecast words (Wamsley, Interviews, 1992–1993).

FEMA, which had been responding with what is considered better than average speed, suddenly found itself completely bypassed as the White House hastily shifted to warp speed. Between noon on the day of the sound-bite and noon Friday, 7,000 federal troops arrived in Florida. On the weekend, 7,500 more arrived, and later, Navy, Air Force, and Coast Guard units would bring the total to nearly 20,000 (Newsweek, September 7, 1992; 23; Davis, 1991; 1).

The White House hastily dispatched Andrew Card, the Secretary of Transportation, to take charge of response and recovery activities of the federal government – something the FEMA director, up to that point, had assumed was his statutory duty. The Federal Coordinating Officer, a FEMA regional director, suddenly found himself engulfed and pushed aside by Secretary Card, his staff, and an astounding crowd of generals – alleged to number 19 at one point (Wamsley, Interviews, 1992–1993).

Despite the favorable press that flowed from this dramatic taking charge by the President’s personal representative, there were many involved who felt that the whole response effort was set back several critical days by the White House’s intervention (Wamsley, Interviews, 1992–1993). It seems neither flippant
nor inaccurate to label the ad hoc policy process that resulted from Hale's sound bite as a Camcorder Policy Process.

Hale's comments, being live and nationally broadcast, had an immediate effect on the response process. Emergency management's SOPs and the tradition of first response by state and local government with federal supplementation were instantly dismissed by both victims and a viewing public expecting immediate intervention by the President. Over two hundred years of the traditions of federalism and a decade and a half of FEMA SOPs based on them dissolved instantly. A gap was created between what Saundra K. Schneider (1992) has referred to as “bureaucratic procedures” and “emergent norms.” Emergent norms here refers to the collective beliefs that emerge after a disaster.

As the immediate disaster recedes, people are confronted with situations and problems that lie outside the bounds of normal, everyday existence. Damaged houses, blocked roads, contaminated water supplies, and power outages all contribute to the situation. The natural and immediate reaction that most individuals experience is: “How do we deal with this?” Thus, people begin to search for appropriate standards of behavior (p. 137).

Schneider refers to this period as the “milling process.” In this process, it is quite often the act of “keynoting,” the selection of specific ideas around which to rally, by either public figures or other individuals, generally via the news media, that provides the basis for these emergent norms. In the case of Hurricane Andrew, Hale’s comments instantly transformed, in the eyes of the public, what the federal response should be. A very large gap had been created between standard operating procedures and public and public expectations. The disaster was no longer local. The CNN Syndrome had effectively disrupted and distorted normal procedures and response patterns. As stated in a study by the National Academy of Public Administration (NAPA), “The best laid plans and procedures are now vulnerable to disruption, indeed destruction, by one dramatic sound bite that the media turns into political shock waves” (NAPA, 1993; 18).

It is not merely the change in communications technology and the unique nature of television that have brought us to this point. The other half of the equation is the emergence of what Lowi and Wildavsky have labeled the “plebiscitary” president and Terry Moe has called the “politicized presidency” (Lowi, 1985; Wildavsky, 1991; Moe, 1985). Steadily and swiftly since 1939 in the wake of the Brownlow Commission’s report two years earlier, the presidency has been elevated from a status co-equal with the other branches of government to one of *primum inter pares*, or first among equals. This is the inevitable consequence of the Brownlow Commission’s logic that the president should be conceived of and supported as the sole executive officer of the executive branch, or more pointedly, as analogous to the chief executive officer of a corporation based on mono-centric and hierarchical power (Rohr, 1989 and 1986; Karl, 1963; Wamsley, 1993). We have sought to legitimate this informal alteration of our Constitution through concepts like Emmette Redford’s “overhead democracy” (1969) that make it possible to see the president as the one and only official elected by “all the people” (Redford, 1969; Lane, 1993). Such a presidency and the Camcorder Policy Process seem made for each other by some universal, omniscient but perverse rationality – both feed on drama and action, both are dangerously corrosive of established and constitutional processes.
It is more than coincidence that one of our recent and most popular presidents was an actor. The politics of the presidency is played out on center stage of a national political theatre. The title of Frederick Smoller’s book, *The 6 O’clock Presidency*, speaks volumes (1990). The plebiscitary presidency has merged with the media presidency. As Thomas Cronin puts it, “Television fixes on a president and makes him the prime symbolic agent of government” (1980; 95–96).

Ronald Reagan, for the time being, stands out as the ultimate media president; and it says a great deal that as Democratic President Bill Clinton struggled to get his presidency off the ground, he hired David Gergen, Reagan’s first-term press secretary. Reagan’s former chief of staff, Donald Regan, captured the importance of the media, especially television, and one of its pitfalls for a president:

Every moment of every public appearance was scheduled, every word was scripted, every place where Reagan was expected to stand was chalked with toc marks. The president was always being prepared for a performance and this had the inevitable effect of preserving him from the confrontation and the genuine interplay of opinion, question, and argument that form the basis of decision (Regan, 1988; 248).

Disasters provide perfect locations and backdrops for the heroic, plebiscitary/media president. Even a war or military intervention falls short of the heroic potential of a disaster. If a president going to war were to appear any closer than a reassuringly prudent distance from the front, he would be considered either reckless with the nation’s security or foolish. But in the event of a disaster, a president can don his khakis, board a helicopter, and fly directly into the thick of the action. Photo opportunities are unlimited. In the midst of destruction, he will be seen comforting those in grief, listening sympathetically to the distressed, reassuring the distraught, and dispensing federal largesse to the afflicted. A disaster, for all the pain and loss it entails, is nonetheless a presidential image-maker’s dream.

If a president is doing well enough in the polls to resist the lure of such attractive image-making or sustaining opportunities, the stage is sure to be seized by governors, mayors, congressmen, or senators, all of whom will request, nay demand, a presidential disaster declaration, immediate waiver of marching grant requirements, and instant dispatch of federal assistance to his or her stricken constituents. Usually this is done with the same dramatic disaster backdrop and props used by presidents, whoever the officials may be. It makes for exciting political theater.

Use of the theater metaphor is in no way meant to belittle what is taking place. Symbolism and symbolic action are important (Edelman, 1967). One can make light of all this, but serious functions are being performed. People in distress and shock need reassurance and look to their leaders to provide it. The positive effects are enhanced by political theatrics.

Burden Shifting

Another powerful factor driving the escalation of disaster involvement is the conscious or unconscious burden shifting that is taking place around development of the “built environment.” This burden-shifting is a typically American phenomenon; witness the cost-shifting in our national health care crisis. As we
develop more and more land – pushing into wetlands, barrier islands, and building cities on seismic faults – we steadily increase not only the physical threat to those inhabiting such areas, but the fiscal threat to the American taxpayers as a whole and to the federal treasury in particular.

The same holds true in rural areas and in agricultural lands as we build complicated and expensive levee systems that create an impression of invulnerability at the same time they concentrate the power of rivers in flood. Because local government participation in levee systems has been voluntary and on a matching grant basis, many cities like Davenport, Iowa, have chosen to go unprotected. Some farmers have chosen not to buy federal crop insurance, and many persons (42 percent) who have lived in flood plains prior to the development of federal flood insurance have also chosen to go unprotected (Kerber, 1992; 11). The result, however, is that political leaders in both the executive and legislative branches, and at all levels of government, find it impossible to deny disaster assistance to those who failed to invest in protection.

Rep. Glen English (D-Oklahoma), Chairman of the House Agriculture Subcommittee on Environment, Credit and Rural Development, summarized the dilemma that fuels escalation:

Each time we’d have a large-scale disaster that made the news, you’d then have Congress yielding to the pressure for assistance...because you didn’t have enough farmers participating in the [insurance] programs to begin with. You simply can’t go to a whole region and say, “Golly, you guys should’ve bought crop insurance” (Kerber, 1992; 11).

While we all value voluntarism over mandates, we fail to recognize the cost shifting that is involved when we allow persons and governments to opt out of insurance programs, but then help cover their losses with disaster assistance – losses to individuals and to public works. According to Representative Fred Grandy, the implications of this “mixed message” are pretty clear. According to Grandy, there is great incentive to not participate in the program precisely because if you did not participate “we’ll bail you out anyway” (Shogren and Houston, 1992; 29). A spokesman for Senator Tom Harkin captured the essence of the problem when referring to Davenport, Iowa – a city that chose not to build expensive flood-control levees even though the federal government would cover much of the cost. As a result, it has suffered millions of dollars of damage which the federal government is likely to help pay for through disaster assistance instead of through flood control. The spokesperson for Harkin asked, “How many times do you let Davenport get away with that? They’ll get assistance...but it shows that all of our programs probably need a good, hard raking over” (Shogren and Houston, 1992; 29).

Increasing Burden Shifting through the Federal Match Game

Finally, a part of the general escalation of federal disaster involvement is the game attendant to many disasters. This might be called the “increasing the federal match game.” It involves the reduction of state and local match requirements for disaster assistance while increasing the federal share. The Stafford Act presently sets the match requirements at 75 percent federal and 25 percent state. FEMA has tried to hold to a formula that would have the federal match upwardly alterable
if the losses averaged at least $64 per person for a state. Once again, however, a president is under pressure by state and local officials and the media to make a dramatic gesture that serves to acknowledge the loss; of victims and affirming his support. The pressures are virtually irresistible and again cost shifting is involved (NAPA, 1993).

Usually the President, under the Stafford Act, orders FEMA to waive the requirements and to pay 100 percent of the emergency response costs, as well as 100 percent of the recovery and some mitigation costs for the affected states and localities if the $64 per capita loss is met. Recently, however, despite the flood devastation in nine states, the standard of $64 per capita had not been met. Not to be thwarted in his effort to make a grand gesture, President Clinton set a new standard for disaster relief (NAPA, 1993). He announced that FEMA would reimburse the states for 90 percent of eligible disaster costs rather than 75 percent. His reasoning was:

The scope of this disaster is so great that it has the potential to have a dampening effect on our entire national economy, and we must respond accordingly. Therefore, today I have established a second standard that will be used to address those disasters with wider economic impact (Wamsley, Interviews, 1992–1993).

States vary tremendously in their interest and investment in building and maintaining emergency management capability. On the top end of the scale is California’s Office of Emergency Services with a staff of about 300 people and an annual budget of about $416.6 million. (Of that amount, about $8.7 million came from FEMA last fiscal year via FEMA’s Coordinated Cooperative Assistance [CCA] funding mechanism. The state also received $18.1 million in Emergency Food and Shelter funds and $129 million in Disaster Relief payments from FEMA in fiscal year 1992 (NAPA, 1993; 85). At the lower end of the scale is South Carolina where the state contributes relatively little (about 10 cents per capita) to the amount of funding the state Office of Emergency Services receives from FEMA, which was $1.6 million in CCA funds in fiscal year 1992 (NAPA, 1993; 85).

For some states and localities that have neglected to develop and maintain an adequate emergency management capacity, waiver or reduction of match requirements is a windfall that can be seen as a reward for their neglect. The negligent governments may receive as much money as those that made significant efforts at emergency management prior to the disaster. In effect, tax payers in California who are already investing a lot in emergency management or those in Montana who experience few disasters, are paying for the short-sightedness and imprudence (or shrewdness) of other citizens in South Florida; Charleston, South Carolina; or Davenport, Iowa. As long as this kind of burden-shifting can take place, the federal involvement in disasters and their associated costs will continue to escalate.

The Quagmire

The above forces of escalation would be disturbing enough if it were believable that the emergency management policy subsystem might possibly be capable of coping with them and bringing about a slower pace, if not a stop. Unfortunately
this remains a dim prospect until the subsystem’s focal agency, FEMA, has convincingly put its reputation for disarray and ineptitude behind it. Despite much recent favorable press accorded FEMA after years of being the Rodney Dangerfield of Washington, and despite promising efforts of a new director to turn things around, the agency’s problems still haunt the policy subsystem. They are both a cause and effect of the condition of the policy subsystem as a whole and will take considerably more time and effort to change. As one FEMA staffer colorfully put it, “We’ve been a short fire plug in a world populated by tall dogs...and once an agency gets ‘on the ropes,’ it’s hard to make a comeback” (Wamsley, Interviews, 1992–1993).

FEMA was cobbled together in 1978 by a rapidly declining Presidential Reorganization Project under President Jimmy Carter. It has never to dare overcome the results of its many birth defects. It has been an agency torn by turf fights along program lines, overburdened with political appointees, stuck with a “Mr. Bumble” image, labeled the “federal turkey farm” for the quality of its appointees, tagged with a reputation for petty sleaze and tacky scandals, seen as trying to play a major role in national security without the necessary skill or clour, and perceived of by other agencies as claiming more power to coordinate the test of the government than it had muscle or capability (NAPA, 1993).

Nor are other actors in the policy subsystem likely to be of much help in slowing the escalation. As the analysis below will show, the subsystem is indeed a quagmire: FEMA has a “mission impossible” (NAPA, 1993; 16–18); the president has vacillated between ignoring FEMA and micro-managing it (NAPA, 1993; 21–23); FEMA has always been top heavy with political appointees of dubious quality (NAPA, 1993; 48–51); Congress has played a major role in fragmenting the agency into programmatic “stovepipes” and in sustaining that condition (NAPA, 1993; 69–80); the Office of Management and Budget (OMB) and the General Accounting Office (GAO) have regularly bullied and beaten up on FEMA (Wamsley, Interviews, 1992–1993); and its potential advocates and interest groups have been relatively indifferent or weak when it comes to defending and supporting FEMA at the White House or on the Hill, or obtaining a decent share of resources for the emergency management function (NAPA, 1993; 18).

The Unfortunate Effects of being Controversial

The Carter administration had high expectations for FEMA and the amalgamation of a host of programs under one roof – “one agency/one official/one point of contact” (NAPA, 1993; 15). In addition, it was believed that bringing different aspects of emergency management together would result in a synergistic effect. As one person involved in the reorganization put it, “It was assumed that all these programs were related, not at their cores, but at their margins; and that their relations at the margins could create an important synergism” (NAPA, 1993; 15). In other words, lessons learned in response and recovery (e.g., homes in hurricane-prone areas were not built to sufficient standards of wind resistance) could be used in mitigation efforts (e.g., model building codes).

The prospect of developing a comprehensive statute as a foundation for an agency in order that it might be genuinely integrated, and first getting agreement from all interested parties, “seemed a hopelessly difficult task” (NAPA, 1993; 16). A comprehensive statute would have required drafting a new law that placed all the
statutory fragments relevant to FEMA into one consolidated act. This of course would have required numerous congressional committees to give up jurisdiction over FEMA and emergency management – a daunting prospect. Abandoning the idea of some more serious form of integration, the Carter reorganization project decided, as one participant put it, to settle on “at least bringing all the animals into the same ark,” that is, getting the structural pieces in place at least, and doing so quickly as time was running out. To aid in allaying the anticipated opposition by interest groups and congressional committees to the transfer of programs from other agencies, the plan eventually called for the transfer to FEMA of each program’s political executive positions, including the incumbents. One participant in the reorganization process recalled. “It was like trying to make a cake by mixing the milk still in the bottle, with the flour still in the sack, with the eggs still in their carton...” (NAPA, 1993; 16). The resulting fragmentation of FEMA into hermetically scaled programmatic compartments, or stovepipes, each headed by a political appointee with his or her own links to Congress and interest groups and with no cooperation on integration with other FEMA programs, has been a crippling birth defect for FEMA. A defect that both the presidency and the Congress have perpetuated.

The perpetuation of the large number of political appointees has been part of a struggle between the presidency and Congress to control the contested ground of emergency management bureaucracy and policy. As part of the plebiscirary presidency concept, both Democratic and Republican administrations have sought to penetrate the bureaucracy with increasing numbers of political appointees reaching down into the bureaucracy farther than ever to give the president control over the bureaucracy and policy (Nathan, 1975; 37–76). Nor has Congress done anything to offset this trend, because regardless of which party occupies the White House, Senate committees see value in the Senate confirmation process for presidential appointees (PASs), and House committees and subcommittees stand to gain with additional points of access in oversight.

The effect of this growing number of political appointees on government capabilities and the morale of the career service has been referred to by some as “a quiet crisis” and others as “a national catastrophe” (NCOPS, 1989; xiii–xiv; Rosen, 1983; 1986). FEMA has not escaped this “drill-down” of political control. Although a relatively small agency (about 2,200 employees), FEMA has been saddled with more than 30 political appointees, a number exceeded in percentage only by OMB. Even more alarming is the fact that 9 of these 30 plus appointees are presidential appointees requiring Senate confirmation. These PASs face confirmation hearings by no less than six different Senate committees (Table 1), each with its own particular program interests (NAPA, 1993; 48–49). Small wonder that FEMA has gained the reputation of being a “dumping ground for political appointees” (Wamsley, Interviews, 1992–1993). As indicated by the new administration’s appointment to FEMA of a few individuals with no actual emergency response management experience, but with plenty of political-life experience, this situation does not seem to have improved (FEMA, “Memorandum” 1–2 1994).

As noted earlier, the original intent behind bringing the agencies together that now form FEMA was to achieve integration and to create a synergy (NAPA, 1993; 15). However, the struggle between Congress and the president to control
FEMA and its programs through political appointees has vitiated the original hopes. The last director appointed under President Bush took his position after the appointment of 32 political appointees – including 8 PASs (Wamsley, 1993; 9). Thus behavioral contracts, committee demands, and expectations had already been established between congressional subcommittees and the appointees as to how each of their program responsibilities would be carried out (or how their stove pipes would be maintained).

Under these conditions, if the director tries to change the course of the agency, the largest obstacle is most likely going to be his supposed subordinate political appointees. These appointees are going to do what they have to in order to ensure the structural integrity of their pipes, and if the director proposes anything that sounds like it may create a “leak” or a “connection” with another pipe, they will be quick to let the relevant members of Congress know. They, in turn, have the ability to make the director’s life miserable. Coupled with the quiet crisis of increasing political appointments, the stove piping effect created by program specific concerns of legislators has in the past resulted in an agency mired in, or in fact paralyzed by, internal incompetence and turf wars (NAPA 1993; 41–68).

Congress and its Pernicious Particularism

Congress’s role in contributing to the quagmire is not confined to the confirmation process of PASs. It plays an even more important part through the oversight of so-called substantive or subject matter committees. The jurisdiction of these committees must be described as splintered at best. This splintering, besides precluding any comprehensive overview, contributes to fragmentation within the agency by programmatic authorizations tied to specific kinds of disasters, such as radiological hazards or earthquakes, and renders relations with Congress needlessly time-consuming, complex, and contentious (NAPA, 1993; 69–80).

According to NAPA, “about 20 committees in the House and Senate have legislative jurisdiction over Emergency Management Programs and appropriations operated by FEMA” (NAPA, 1993; 69). Additionally, there are numerous other committees that have jurisdiction over other federal agency programs which provide assistance to disaster victims (e.g., the Department of Agriculture and the Farmer’s Home Administration). Although numerous authorizing committees have jurisdiction over some aspect of emergency management, there is no single committee that has comprehensive oversight responsibility for FEMA. In fact,
one FEMA document states that “about two-thirds of the House and Senate committees get involved” (NAPA, 1993; 70).

Even within these committees there are many subcommittees each of which has its own jurisdiction over some aspect of FEMA that differs from those of the full committee. The fragmentation is so pervasive that no one has an overall perspective as to where individual programs fit within the broad framework of federal emergency management. For example, the Sub-committee on Strategic Forces under the Senate Armed Services Committee has jurisdiction over the Civil Defense Act, while the full committee oversees the classified national security emergency preparedness programs. In fact, in the 1992 report on internal controls, FEMA formally recognized the problem of fragmented jurisdiction when the director commented:

FEMA’s programs are authorized and directed by a myriad of enabling legislation, appropriations acts, executive orders, and National Security Directives. In addition, congressional oversight and jurisdiction involves some 16 congressional committees and 23 subcommittees. As a result, FEMA’s mission is continually altered and shaped in a piecemeal fashion by diverse events, the influence of various constituencies, and differing congressional interests. For FEMA’s management, appropriate integration of these various authorities into a cohesive mission is difficult at best, especially given the fragmentation and dynamics of legislative policy (NAPA, 1993; 75). FEMA’s major programs and the committees that have jurisdiction over various aspects of FEMA are shown in Table 2.1

A description of the appropriations system for FEMA serves as a case in point with regard to fragmentation. Even though FEMA’s appropriations are handled by one subcommittee in each house of Congress, any concentration on the overall mission of FEMA is still lacking. There are four reasons for this situation. First, FEMA by tradition is placed in the same appropriations bill with environmental, housing, space, and veterans affairs programs which tend to get a far greater share of the subcommittees’ attention. Second, different appropriations subcommittees have jurisdiction over the small business and agriculture loan programs available to disaster victims. Third, emergency management programs are authorized for varying durations, from permanent authorizations to annual authorizations. Each authorization is handled individually with little consideration of other emergency management programs and, therefore, the programmatic subcultures or stovepipes are perpetuated. Finally, because of concerns about FEMA’s performance, a tight rein has been put on its ability to reprogram because the committees have taken on the role of micro-managers. Reprogramming without committee review is limited to $250,000. In addition, committee reports often include specific directives for spending on individual projects (NAPA, 1993; 73). Flexibility of response is certainly diminished.

With such little direct attention paid to the continuity of FEMA’s authorizations and appropriations, especially as they apply to FEMA’s capabilities to be flexible in emergency response, it is no wonder that fragmentation within FEMA should seem systemically rooted and impervious to simple reform.
This congressional fragmentation of authority and the resulting stove pipes are probably the leading obstacles to the construction of a unified and, therefore, achievable mission. As one agency official put it, “FEMA is a check-writing agency, an intelligence agency, a social service agency, and insurance agency, with a fire administration thrown in” (NAPA, 1993; 73). But there are problems, intrinsic to emergency management and the way it relates to the Constitution and our governmental institutions.

First of all, there is the disconnect between our three-tiered federal structure and the need and expectations that FEMA will respond rapidly to emergencies. This is a natural expectation, yet it simply does not fit with our traditions.
of federalism. Our federal system is essentially a bottom-heavy system in spite of all the rhetoric about the national government becoming too powerful. The Constitution leaves with the states, and the states delegate to local governments, many of the broad police powers which naturally come into play in responding to an emergency. Thus FEMA has always felt constrained to conceive of itself as the “responder of last resort,” and only after local and state governments have been overwhelmed and requested assistance. But the context for emergency management has changed dramatically. Political debate and rhetoric is filled with references to FEMA as the nation’s 911 number; something that is simply counter to our federal system. At best, FEMA can only “appear to be the nation’s 911 responder” (Wamsley, Interviews, 1992–1993; NAPA, 1993; 12–19, 28).

The second impossibility for FEMA’s mission lies in the word coordination. The central statutory base for the agency’s mission is to coordinate the response of federal agencies to emergencies or disasters. Coordination, however, is one of the more mysterious terms in politics and administration. Everyone will agree that it is essential when more than one actor or organization must cooperate in accomplishing a task, but no one knows exactly what it means and certainly no one wants to be coordinated by some other person or organization (Howard, 1992).

When a small, independent executive agency like FEMA tries to coordinate large and powerful cabinet departments, one is reminded of the proverbial chicken trying to dance with elephants.

The third impossible aspect of FEMA’s mission is the “not on my watch” syndrome. In the frenetic world of American politics, time horizons are very short. Disasters may be matters of very high salience once they occur, but politicians calculate that they are of low probability. Given the pressure of events, it is easy for American politicians in the White House, on the Hill, or in state capitols or cities and towns to gamble that a disaster will not happen on their watch (NAPA, 1993; 16–17). Consequently, FEMA has historically found it very difficult to get other federal agencies, or state and local governments, to take it seriously; let alone to engage in expenditures, planning, and practice under the agency’s coordination (Howard, 1992).

Beyond these three “impossible aspects,” there are three enduring problems of emergency management which, when added to the problem of fragmentation, seem to create an environment in which the establishment of a unified mission seems improbable. These problems include America’s lack of appreciation of the need for long-range planning; the fact that regardless of planning and training, emergencies quite often entail ad hoc organizing and a certain amount of learning through mistakes; and the fact that emergency management has almost no natural constituency base until an emergency or disaster occurs. The predictable results of these problems are inadequate funding for planning and training, a public expectancy of response generally beyond what is possible, a parallel and contradictory cynicism about the agency’s capability to respond, and a very small power base from which to initiate any change.

Presidential Neglect and Intervention

A small agency with a statutory charge as daunting as FEMA’s desperately needs timely access to the president and his strong support when planning, practice, and coordination of other federal agencies is necessary. Until the Clinton administration, it has never enjoyed significant access or support. (It remains to be seen
Historically, the institutional presidency has always paid less attention to dealing with natural disasters and more to the national security aspects of FEMA’s mission like civil defense and continuity of government. Certainly the long decades of the Cold War exacerbated this focus (NAPA, 1993; 21–23).

When a disaster occurs, however, the president needs an effective FEMA and may need it desperately as did President Bush. In the wake of a disaster, the agency is likely to get more attention than it wants. Such events generally provide an atmosphere in which there is high drama and little partisan bickering. The image of the president is greatly enhanced in such situations when he can be seen as taking charge while suffering little detraction from political enemies.

Presidents prior to Bill Clinton have neglected FEMA. This happened for several reasons. As domestic policy, it was never a matter of partisan campaign contention and thus never on a president’s domestic agenda. It was also highly episodic, and the White House has usually found it difficult to stay focused on anything, let alone something as episodic as emergency management. As national security policy, it was viewed as marginal, and FEMA was seen as an insignificant player in a high-stakes game. FEMA’s program concerns were post-Armageddon in nature so there was little desire to think about it. The national security policy process at the level of the institutional presidency is well established and highly professionalized. It was easy for FEMA to be marginalized in that context.

Presidential neglect, interspersed with episodic micro-management, is thus just one more among the many conditions within the emergency management subsystem and within FEMA which warrants labeling the situation a quagmire.

**Conclusion**

In April 1993, President Clinton appointed James Lee Witt of Yell County, Arkansas, to the directorship of FEMA. He was the first person to come to the position with significant experience as a state director of emergency management, having held such a position in Arkansas under Governor Clinton. If there were any doubts about his abilities, they were quickly dissipated (Rivera and Miller, 1994). He has the instincts of an institutional leader who operates in a political environment. He quickly quieted congressional critics, including the agency’s theretofore implacable critics – Senator Barbara Mikulski (D-Maryland) and Congressman Curt Weldin (D-Pennsylvania). He then moved quickly to turn around the abysmal morale of FEMA employees and to reinterpret the statures so as to enable response capability to be set in motion before the declaration of a disaster by the president (Wamsley, Interviews, 1993).

In the meantime, Senator Mikulski had introduced a bill that incorporated most of the recommendations of the study conducted by the National Academy of Public Administration. Witt, who neither supported nor opposed the bill, was accused of “incredible obstinace and stonewalling” by Mikulski, who until 1994 chaired the Senate appropriations subcommittee responsible for FEMA. Although the bill adopted almost all of the NAPA study recommendations, there were clearly things in the bill that Witt did not like (e.g., elimination of most political appointees, transfer of the continuity of government functions to the Department of Defense, and establishment of a domestic crisis monitoring unit in the
White House) (Claiborne, 1994). Although the bill died in committee. Witt proceeded to reorganize the agency in November of 1993 along the lines suggested by NAPA and has led the agency in its first responses to potential disaster (preparation for Hurricane Emily which did not come ashore), a real, if slow-developing disaster in the Mississippi Valley floods, a significant earthquake in California, floods in Texas and Georgia, and the Oklahoma City bombing.

In these cases, the press coverage has generally been very positive. As of this writing, FEMA has been basking in its most extensive public plaudits in its history. Witt deserves a lot of credit for what he has done so far. Whether or not Witt is an extraordinary political executive, he is assuredly a good one. Perhaps it should be sobering to think about how much difference a good political executive can make to an agency in a governmental system that operates with roughly 3,000 senior political executives of little skill and experience and an average tenure of two years (Stokes, 1994).

The costs and burden shifting, and the public expectations of timely response by the national government are escalating at the same time that the emergency management policy subsystem and its focal agency, FEMA, are floundering in a deepening quagmire that shows only a few early signs of improving. Those things the new director has done are some of the necessary but insufficient conditions for building a high-performance, high-reliability public institution that not only can seem to be a national 911 responder but also place a new and much-needed emphasis on mitigation. He and the agency, and indeed the entire emergency management policy subsystem, have reached a fork in the metaphorical road. One fork leads toward the president, Congress, and other subsystem actors making FEMA as good as a highly politicized FEMA can be; the other leads toward a high-performance, high-reliability institution led primarily by career administrators with access through a few well-connected political executives to support of the president and responsible consolidated oversight by Congress. Neither road will be easy nor will success happen soon. The second road is assuredly the more difficult and less rewarding in the short run, although more beneficial for the nation in the long run.

Regardless of which fork in the road is followed, the problems and the politicization of FEMA and the lack of political responsibility shown by other members of the policy subsystem, the president, Congress, and state and local governments toward the function of emergency management have been placed in sharp relief by recent events. The policy subsystem has been thrown into a far from equilibrium state. It is hoped that a new and dynamic equilibrium will be reached that serves America better, but such an outcome is far from a certainty. The dynamics of policy subsystems often fail to produce something that could be agreed upon as the public interest, and the emergency management policy subsystem has more than a reasonable share of obstacles to discovering the public interest in this policy realm.

Notes

1. For a discussion of policy subsystems, see Gary Wamsley and Brinton Milward (1984).
2. Many of the points that will be made in the following analysis have been discussed in the emergency management literature. Much of this excellent literature was used as background material by the study team of the National Academy of Public Administration (NAPA). Although many of the points originated with the authors cited here, for convenience the
text will simply cite the NAPA report. See for example the review essay in Public Administration Review by Richard Sylves (1994) on recent studies of the national emergency management system and FEMA; see also parts of William Waugh’s article in the same issue. Peter May’s (1985) work on national emergency management policies is well known; see also Louise Comfort (1988).

3. The new Republican leadership of the 104th Congress elected in 1994 has promised as of this writing to reduce the number of committees and subcommittees. It remains to be seen whether or not this will happen. We think it is likely the number will be reduced but will then begin to gradually increase again.

4. There are some interest groups which concerned themselves with FEMA. Foremost among them are the National Emergency Management Association (NEMA) and the National Coordinating Council on Emergency Management (NCCEM). These associations are comprised of persons directly involved in emergency management at state and local levels. They are certainly influential in matters of emergency management, but they never have been described as powerful. Several other associations with marginal interests include the National Association of Counties (NACO), the International City Managers Associations (ICMA). Association of State Floodplain Managers (ASFMI), and on matters related to fire—the National Fire Academy and the National Association of Volunteer Firemen, as well as other organizations involving fire chiefs and firefighters.

5. Word of Director Witt’s long-time relationship to President Clinton preceded his confirmation, as has the report that he and his wife often view movies with “Bill and Hillary” at the White House. Such things are an integral part of agency clout and have helped FEMA immeasurably. The likelihood of this relationship occurring again is extremely unlikely.

References

consequences of crisis and crisis management


Disaster and the Sequence-Pattern Concept of Social Change
Lowell Juilliard Carr


Social change is a vague term which seems to refer to at least four distinct types of phenomena: (1) populational changes; (2) cultural changes; (3) relational changes; and (4) catastrophic changes. These may be studied from the evolutionary, the ecological, the comparative, the psychological, and other points of view. Comparative studies of typical catastrophic changes suggest the hypothesis that all social change tends to follow a definite sequence-pattern, beginning with a precipitating, or initiating, event or condition and moving through a phase of dislocated adjustment into a phase of readjustment and eventually renewed equilibrium. This is not a particularly new hypothesis, but the implications of it for social thinking and its utility for research need to be emphasized. As a matter of fact, the possibility of studying contemporary change in process would seem to depend on the invention of new techniques based on this hypothesis.

In the present paper six things will be attempted: I. A criticism of the prevalent identification of social change with cultural change. II. A description of the sequence-pattern found in typical disasters. III. The sequence-pattern concept will be taken as a working basis for the study of all types of social change. IV. The bearing of this concept on the general nature of social change will be considered. V. Some implications of the idea for statistical studies will be noted. VI. Some non-statistical research problems will be pointed out.

I. Cultural Change is Merely One Kind of Social Change

Most American students of social change in modern society have dealt with populational changes and with additive and distributional changes in culture. In fact, there has been a tendency to regard social change as synonymous with cultural change. This view seems to be based on an incomplete analysis of the social process and of the nature of cultural change. Movements of population are obviously not changes in the content or distribution of culture, nor is a declaration of war, yet both are social changes. Likewise there is no warrant for calling a collapse of cultural protection, such as occurs in a flood, or a shipwreck, or a fire, a change in culture. No one would think of calling a railroad wreck a change in the transportation complex. Catastrophic change as such, apart from its consequences, is a change in the functional adequacy of certain cultural artifacts such as levees, ships, houses, and the like. It is not a change in the content or distribution of culture traits which is the meaning attached to the term by the writers cited above. Apparently, then, we are driven to the conclusion that cultural change does not
exhaust the field of social change. There are many and important changes in association related to but not confined to changes in the content and distribution of culture traits.

II. The Sequence-Pattern in Disaster

Except for Prince’s fine study of the Halifax disaster, this type of social change has received little attention at the hands of sociologists. This can hardly be due to its unimportance, for despite our boasted conquest of nature it is estimated that more than a million people died in disasters somewhere in the world in 1931. Even in the United States, where nature is supposed to be most completely subdued, there were 938 disasters in the forty-eight years from 1881 to 1928, each large enough to induce the American Red Cross to give aid and all together costing that organization nearly $50,000,000. Dr. W. J. Humphreys, professor of meteorological physics, of the United States Weather Bureau, has estimated that on the average we have 100 tornadoes alone every year which kill 250 people and destroy $8,000,000 worth of property. During the three years ending in April, 1928, the International Union for the Relief of Disasters, a subsidiary of the League of Nations, tabulated 788 disasters in the world – 46 per cent of them in Europe, 18 per cent in Asia, and 14 per cent in North America. The very existence of such an organization is commentary enough on our so-called conquest of nature.

Queen and Mann, classifying disasters on the basis of their consequences, divide them into “those which involve loss of life and personal injury, especially to breadwinners,” for example, the Cherry Mine fire, and “those which involve destruction of property, and frequently of life as well,” as, for example, the Halifax disaster. More refined analysis would distinguish disasters not only on the basis of consequences but also on the basis of (1) the character of the precipitating event, or catastrophe, and (2) the scope of the resulting cultural collapse. On this basis there are at least four types of disaster: (a) an instantaneous-diffused type such as the Halifax explosion which was over before anyone could do anything about it and wreaked its effects on the entire community; (b) an instantaneous-focalized type such as the Bath, Michigan, schoolhouse explosion of May, 1927, which killed or injured more than a hundred children and teachers in the village school, yet left the rest of the community physically intact; (c) a progressive-diffused type such as the Galveston hurricane of 1900 or the Mississippi floods of 1927, one of which lasted several hours and the other several weeks, and both of which affected whole communities; and (d) a progressive-focalized type such as the Cherry Mine fire or the wreck of the “Titanic.” Disasters also differ in complexity, i.e., in the number of different physical forces operative at a given time, and in violence, or the degree of cultural destruction wrought.

With this conception of disasters as differing according to the speed, scope, complexity, and violence of the catastrophes that cause them, it becomes possible to look forward to researches that should reveal the uniformities of societal behavior in this type of change. Even an incomplete comparison of one disaster with another, based on fragmentary secondhand evidence recorded in books, magazines, and newspapers, reveals a broad sequence-pattern of events whose
occurrence in disaster after disaster suggests a new point of departure for the study of social change in general and some interesting research problems in contemporary change in particular. Forerunning the sequence-pattern itself is a period of preparation.

At Halifax there was a period of about twenty-three minutes during which the Belgian relief ship “Imo” and the French munition ship “Mont Blanc,” with her 2,300 tons of picric acid and 450,000 pounds of trinitrotoluol, were coming into collision and the “Mont Blanc,” afire and deserted by her panic-stricken crew, was drifting toward the docks. At Bath there was an unknown period of several months during which the disappointed school trustee, Andrew Kehoe, was hatching his insane plot and hiding nearly a ton of dynamite in the schoolhouse basement. At Galveston the approach of the great storm was known for a full day ahead of its coming; and nearly twelve hours before it struck, the local representative of the weather bureau was personally trying to persuade residents along the beach to move to higher ground. In the San Francisco earthquake of 1906, as in the wreck of the cruiser “Memphis” at Santo Domingo ten years later, the earth-strains that were to cause the earthquake had probably been developing for a long time. In every disaster there is a preliminary period during which the forces which are to cause the ultimate collapse are getting under way. We shall call this the preliminary or prodromal period.

A second phase begins with the actual onset of the catastrophic forces. Not every windstorm, earth-tremor, or rush of water is a catastrophe. A catastrophe is known by its works; that is to say, by the occurrence of disaster. So long as the ship rides out the storm, so long as the city resists the earth-shocks, so long as the levees hold, there is no disaster. It is the collapse of the cultural protections that constitutes the disaster proper. The deaths, injuries, and other losses that follow this collapse are integral parts of the calamity, but for present purposes they are essentially consequences of the disaster, not the disaster itself. This phase we shall call the dislocation and disorganization phase.

How a community reacts to disaster is probably determined by its culture, its morale, its leadership, and by the speed, scope, complexity, and violence of the catastrophe itself. Some catastrophes are so violent and engulfing that they sweep entire communities out of existence. Such was the eruption of Vesuvius in 79 A.D. that buried Pompeii; such was the outbreak of smallpox that wiped out the Mandans in the nineteenth century; and such was the eruption of Mount Pelee on Martinique that killed everyone in St. Pierre in May, 1902. Fortunately, absolute catastrophes of this kind are the exception. Usually some part of the community, even though badly shaken as at Halifax or Galveston, remains on its feet, fighting back. The dislocation and disorganization phase tends, therefore, to pass into a third phase, the phase of readjustment and reorganization.

The acute danger to life which accompanies cultural collapse necessitates the extrication of the dead and the rescue of the injured. This usually begins spontaneously, without organization, and is gradually taken over by institutionalized agencies such as firemen, policemen, soldiers, Red Cross workers, and the like. For aiding the injured, feeding and sheltering the homeless, and for protecting property from fire and theft, every community either has institutionalized agencies at hand or is speedily given the benefit of those in nearby communities. But for dealing with the disorganization of community services caused by disaster no
community has any plan or pre-arranged organization. At Halifax, not only was it five hours before any plan in the rescue work appeared, but it was the following day before the hastily-formed citizens’ committee could begin to make effective such plans as it had been able to formulate at all. From the time of the catastrophe until the emergency plans begin to operate is the time of the confusion-delay. This is a marked phase of every diffused disaster. At Halifax it lasted at least eighteen hours; at Galveston probably ten or twelve. At Bath, on the other hand, where the disaster was highly focalized, the confusion-delay was relatively short. This suggests an important difference between the diffused and the focalized disaster: in diffused disaster the coordination of community life is one of the vital cultural elements disrupted; in focalized disaster community co-ordination remains relatively unaffected, and the main problem, aside from rescue, is to concentrate on the point of breakdown. Thus, at Halifax the survivors nearly starved before the relief trains could fight their way through the blizzard, while at Bath the community structure was so little affected that the village housewives were able to serve coffee and sandwiches to the rescue-workers at noon.

In all types of disaster it is possible to discern three levels on which readjustments proceed: (a) the level of individual readjustment; (b) the level of interactive readjustment; and (c) the level of cultural readjustment.

a) Individual readjustment. Obviously each individual must readjust as best he can to the changed environment. He must define the change and redirect his life accordingly. Prince has pointed out how greatly individuals differ in their reactions: the “stun” effect, the hallucinations, the hysteria, and all the rest.

b) Interactive readjustment. But the individual is not alone in the disaster situation. Inevitably he must take account of other people, and this leads to a certain amount of interaction – exchange of experience, mutual aid, and the like. Now under normal conditions society lays down the patterns along which interaction proceeds: We live in closer relationships with some people than with others, and for certain situations there are certain social rituals of speech and action. Disaster disrupts this pattern of normal relationships and normal situations. We find ourselves associating with impossible people in impossible situations. We may have no shelter, no clothing, no food; nothing is the same. Hence a readjustment in interactive behavior is inevitable. New patterns appear, persist a few hours or days, and pass away with the return of normal conditions. Interactive readjustments are inevitable.

c) Cultural readjustment. Seldom, however, can the readjustive process stop here. It is not enough for individuals to change their behavior individually and to change the patterns of interplay between them; usually, since the essence of disaster is cultural collapse, there must be some readjustment of the cultural environment as well. Thus, at Halifax, after the disaster, women conductors appeared on the street cars; a new attitude existed toward Sabbath observance; bungalows replaced the old square houses; a new public health program was developed; the schools adopted a more socialized point of view; community team work increased; and so on. At Galveston the new sea-wall and the commission form of government were two outstanding cultural gains from the disaster. The Ohio floods led to an extensive program of flood-control. The “Titanic” disaster led to increased emphasis on bulkhead construction. And so it goes. Every disaster tends to set up individual, interactive, and eventually cultural readjustments.
So much, then, for the sequence-pattern of disaster. In every limited, or non-absolute disaster, the prodromal period is followed by (1) a precipitating event; (2) a dislocation of adjustment; and (3) a series of (a) individual, (b) interactive, and (c) cultural readjustments, working out eventually to a new level of equilibrium.

III. The Sequence-Pattern as a Working Hypothesis

That there is a pattern in cultural changes has been implied if not specifically pointed out by practically all theorists of social change, at least since Thomas' discussion of the rôle of crisis. The fact that three levels of the readjustive process have not been distinguished is of minor importance. There is a certain uniformity in social change which has been recognized for a long time. The question is, Can the present formulation of this uniformity, namely, the sequence-pattern concept, be applied to populational, cultural, and relational changes, and if so, what would it mean for statistical and other research problems?

That populational changes follow some such phase-cycle as precipitating event – dislocation of adjustment – readjustment seems evident from the history of population growth following the industrial revolution, the depopulation of Hawaii following the coming of the white man, the Negro migrations during and after the war, and from similar evidence.

To that type of cultural change with which I am most familiar, namely, invention, the same phase-cycle seems applicable. It was a request to repair a working model of Newcomen’s old pumping engine for the University of Glasgow that formed the precipitating event which so dislocated James Watt’s adjustment to culture that he spent years working out a new adjustment, namely, the separate condenser engine. This engine itself has in turn set going innumerable cycles of dislocation and readjustment.

As for relational change, the outbreak of the World War seems to have followed the pattern fairly well: first, the various declarations of war; then, in each case, dislocation of diplomatic, commercial, intellectual, and other adjustments; finally, readjustments to the war situation.

If we may assume, then, that the sequence-pattern which appears in disaster also appears in other types of social change, what follows?

IV. Social Change in the Light of the Pattern Concept

The first and perhaps the most important thing that follows is that atomistic, episodic views of social change must be revised. Consider again such a change as the Halifax disaster. What was it? Was it the explosion? Few of us would admit that only the physical explosion was social change and that the destruction of the city was not. Was it the destruction of the city, then – the collapse of more than half a square mile of buildings, the loss of life, the disorganization of the community? Yes, to be sure. But was that all the social change in that disaster? Were not the various readjustive processes set going by the explosion and by the cultural collapse; the individual, interactive, and cultural readjustments, were not these social changes, too? Most of us would agree. In short, isn’t it obvious that
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neither the explosion, collapse, and disorganization, nor the readjustive changes – no one of these alone – constituted the social change which was the Halifax disaster? Social change in disaster is catastrophe, plus cultural collapse, plus peril and perhaps death, plus disorganization, plus reorganization – it is no one of these alone, but all of them together. In other words, it is not a single event or even a single kind of event: it is a series of events, linked one with another. This is the first thing that follows from the sequence-pattern concept: social change is not an episode, a protrusion, so to speak; it is a series, a cycle of events no one of which is competent to represent the whole.

V. The Sequence-Pattern and Statistics

Another thing that follows is that, if no isolated event is competent to represent the cycle of change, selective sampling would seem to be indicated rather than random sampling in the collection of statistical data. What, for example, are the statistical correlates of the precipitating event? Of the dislocation phase? Of the readjustment phase? Ogburn, Thomas, and others have already been at work on these problems, but the material might usefully be reinterpreted in the light of some such orienting concept as the sequence-pattern.12 We need to have the statistical facts which will show how the disorganization phase passes into the reorganization phase, and how the new level of equilibrium emerges, and we need this not merely for cultural changes but for populational and relational changes as well. The problem is broader than statistics, however.

VI. The Sequence-Pattern Concept and Research

It would seem to be desirable, for one thing, to determine what variations in pattern there are in different types of change. How closely, for example, did the introduction of the automobile approximate the Halifax explosion as a precipitating event, and in what way was it totally different? Both seem to have started things, but each seems to have started somewhat different things. In like manner the Negro migration to the North during the last fifteen years deserves to be studied as a precipitating event or series of events in a sequence in which precipitating event, dislocation, and readjustment follow one another, but with endless variations under different conditions. We have many studies of these and similar phenomena, but they are disconnected and add rather to our masses of fact rather than to our understanding. The sequence-pattern might function here to throw these findings into clearer perspective.

Another line of research is suggested by Ogburn’s concept of cultural lag. From the point of view of the sequence-pattern, cultural lag appears as a marked failure of culture traits or complexes to move into the readjustive phase promptly after the dislocation of adjustment.13 In this respect cultural lag has some similarity to the confusion-delay which we found characteristic of diffused disaster. From the point of view of the sequence-pattern, both signalize the failure of the readjustive processes to function. At once it becomes pertinent to inquire whether there are similar blocking phases in populational and relational changes. Does a population group, whose adjustments in numbers or in distribution have been
dislocated by some precipitating event, experience a period of maladjustment before readjustments begin? If so – by analogy we should expect this to be the case – how do these periods of populational maladjustment compare with cultural lag? Do relational changes have similar periods of blockage? What are the factors at work in each case?

Still another type of research problem suggested is the feasibility of studying contemporary change. Up to date practically all our studies of social change have been retrospective: we have had broad evolutionary studies based largely on contrasts between our own culture and the culture of preliterate peoples; we have had statistical and ecological studies of successive cross-sections of our own culture, or at least of certain chosen indexes of given cross-sections; and we have had step-by-step analyses of the genetic development of some organization or situation. But we have not had systematic studies of social change in process day by day. Possibly such studies are impracticable. But at least the sequence-pattern concept points very definitely toward the necessary precondition that will have to be met before they can even be considered.

The sequence-pattern concept tells us that things happen in a cycle of linked events. This means that to study contemporary changes we must be able to identify initiating events. If some technique could be devised for doing this it might be possible to study the actual evolution of the dislocational and readjustive processes in some selected sequence as they occurred. What we need is some technique for identifying those events which, whether or not they themselves depart from the ordinary, tend to have extraordinary consequences for population, for cultural content or distribution, for human relations, or for cultural functioning. Now certain events are of course, more or less self-identifying for this purpose. Such are natural catastrophes, declarations of war, and the like. Others are readily identified as belonging to a class of events which very frequently produce extraordinary consequences. Here belong discoveries, inventions, original works of art and literature, and so on. But beyond that point our existing means of identification break down. We face a bewildering mass of apparently ordinary events such as deaths, births, administrative decisions, crimes, concerts, public speeches, and the like, whose importance as precipitating or initiating events no one can evaluate at the moment. Now the question is, Can we devise techniques by which we can improve on guesswork and intuition in identifying the dislocative events among the mass of commonplaces before the dislocations actually appear? What are the conditions that determine that one event shall be dislocative and another not? What must we know of the prodromal conditions to predict at all?

Has not the inutility of history for purposes of prediction issued from the very difficulty that we are here facing? Until events are seen to be linked in necessary objective sequences and until some technique has been devised for identifying the beginnings of those sequences, libraries of historical data are of no predictive value. Philosophers of history from Hegel to Spengler have been busy predicting on the basis of so-called necessary sequences, but their sequences have grown out of philosophical speculations, not out of verifiable observations of empirical data. To predict the fate of civilization five centuries hence may be intellectually thrilling, but the scientifically useful thing would seem to be the discovery of the sequence-patterns followed by events in small local groups here and now. When we have devised a technique for identifying the initiating events in a village it will
be time enough to discuss the future of civilization. In the development of techniques of prediction the sequence-pattern concept should be useful. At least it suggests interesting research problems for those interested in populational, cultural, relational, and catastrophic changes.

Notes

1. Populational changes are changes in (a) the number, (b) the composition, or (c) the distribution of population elements. Cultural changes are changes in the content or distribution of culture, i.e., changes in (a) the number, (b) the quality, or (c) the distribution of culture traits. Relational changes are changes in the relations of (a) individuals or (b) groups to one another. Catastrophic changes are changes in the functional adequacy of cultural protections following catastrophes, i.e., the relatively sudden collapses of cultural protections resulting from catastrophes.


7. A shipwreck is a somewhat special case of the progressive-focalized type. Usually an appreciable interval of time is involved and only a small area is affected, yet, like the diffused disaster on land, the entire community is involved. In the firmness with which the usual controls continue to operate as long as the physical basis remains, a shipwreck resembles a focalized land disaster, but in the degree of cultural collapse relative to the number of people affected it resembles a diffused disaster.

8. San Francisco and Halifax are type examples of complex disasters. At San Francisco the disaster resulted from both earthquake and fire. At Halifax the disaster combined the features of earthquake, fire, flood, explosion, tornado, air raid, and blizzard.

10. Specific suggestions have, however, been made for meeting at least one type of disaster, namely, earthquakes. Cf. Arthur Pound, “Meeting the Earthquake Halfway and Conquering the Earthquake Crisis,” *Independent*, Vol. CXV, July 18–25, 1925. Professor Himes has suggested that every mayor before being allowed to take office should be required to think out his course of action in disaster and equip the responsible decision-makers of the community with copies of his plan. Each type of disaster would probably require a different plan.


13. Cultural lag seems more useful in the sense of developmental disharmony as between any cultural elements rather than such disharmony between the material culture and the adjustive culture, which was the meaning originally given to the term by Ogburn.
Comparative policy specialists have focused much less on how an unusual degree of policy change can occur than on why such change is seldom possible. Given the ubiquity of frustrated governments seemingly condemned to incrementalism, “most of the generalizations that can be gleaned from the literature . . . pile up constraint after constraint on elite desire or capacity to alter existing policy priorities” (Bunce, 1981, p. 133). Scores of studies explain that governments generally come to power with inconsistent and vaguely defined policy agendas; that they are plagued by a shortage of time, information, expertise, energy, and other resources; that their scope for choice is limited by the commitments they inherit from past governments; that their plans are often disrupted by events that necessitate “firefighting”; and that, given the risks inherent in innovation, waiting or doing nothing often seems to be a reasonable alternative (Light, 1983; Hennessy, 1989; Rose, 1984, 1989; Rockman, 1992). Those rare governments that have surmounted such obstacles or inhibitions, at least for a time, and managed to achieve significant redirections or reinforcements of policy have thus commonly been discussed simply as interesting exceptions to the patterns of what might be termed ordinary policy-making. Given the “small n” problem, political scientists have generally been content to leave analysis of the exceptional “reform governments” to historians and have thus failed to search for patterns of extraordinary policy-making.¹

In the effort to understand the dynamics of reform governments (RGs), it seems logical to begin with the process that brings them to power and propels them into action. Under what conditions are governments within established democratic political systems willing and able to launch ambitious reform programs?² In other words, what conjunctural factors generally serve to open the “window” for reform? Is there a regularity to the window-opening process the identification of which should help us to understand not only the achievements and problems of the past but also the possibilities of future cases? The central purpose of this article will be to attempt to show that there is.

Before proceeding further, it will be useful to define the key terms employed in the article and justify the selection of cases to be analyzed. Reform is herein defined as a policy innovation manifesting an unusually substantial redirection or reinforcement of previous public policy. An example of such redirection would be the Thatcher governments’ privatization program, and an example of such reinforcement would be the Johnson era’s Civil Rights Acts that extended or expanded programs created under previous administrations. Reform government...
is herein defined as a government that manages to achieve, through sponsored legislation and/or other executive action, an unusually large number of reforms. It is impossible to specify precisely what minimal number of reforms must be achieved by a government to qualify under this definition. As will be discussed below, the cases selected may at least be said to be generally considered to have achieved an unusually large number of reforms within their respective national contexts. Unlike some others (see Huntington, 1968, p. 344; Schmidt, 1978, p. 165), the definitions employed here do not assume that policy change must proceed in any particular direction to qualify as reform. Especially since the emergence of Reagan and Thatcher, the term reform has commonly been applied to experiments of the Right as well as the Left, and that usage is accepted here. Our concern is to study not what makes a particular type of change, but rather an unusual degree of change, possible. It should also be noted that the definitions given here do not assume that “legislative achievement” necessarily entails what might be termed impact success, that is, the obtainment through innovation of all intended or expected socioeconomic goals. On a related point, no assumption is made here about the durability of change achieved. The RG category thus includes some governments whose achievements were short-lived or rapidly reversed. Inclusion of these cases serves an analytical purpose, for one issue to be explored is whether the problems experienced by certain RGs can be attributed in part to the size or nature of the windows within which they were operating.

The eight cases to be dealt with here are drawn from four different countries and from temporal settings ranging from the 1930s to the 1980s: Roosevelt’s New Deal of the 1930s, Johnson’s Great Society of the 1960s, and Reagan’s New Beginning of the 1980s in the United States; Attlee’s Labour Government of 1945–51 and Thatcher’s Conservative Revolution of the 1980s in Britain; Leon Blum’s Popular Front government of the 1930s and Mitterrand’s Socialist Experiment of the 1980s in France; and Allende’s Socialist Revolution of 1970–73 in Chile. Space does not permit a lengthy justification of each of these cases. Debates rage over the accomplishments and failings of each, but few scholars would contest the assertion that all of them involved unusually ambitious attempts to bring about social change through legislation and other forms of executive action, and that all of them did produce a substantial or even radical degree of policy change in particular issue areas.

The first section of this article will present a theory of the macro-window-opening process. The second section will test the central hypothesis generated by that theory with data from the United States, Britain, and France. These data serve not only to support the hypothesis but also to allow for some direct comparison between reform governments and ordinary governments. The third section will use the eight selected reform government cases to illustrate the role played by both mandate and crisis in facilitating reform, and to show how the nature and size of windows helps to explain the variance of policy outcomes across the eight cases.

1. A Theory of the Macro-Window-Opening Process

As Kingdon and others have noted, a burst of successful policy innovation is possible only when the various constraints that normally frustrate a government give way, opening a “policy window” or opportunity for action on public policy initiatives.
Two types of factors can act separately or in combination to open such policy windows: political developments and societal problems. Political developments that may serve to open policy windows range from the coming to power of a new administration to shocks such as the JFK assassination. A wide variety of societal problems may act to open windows by focusing attention on particular issues and generating public demands for action that public officials find impossible to ignore or convenient to exploit (see Kingdon, 1984, pp. 174, 182–187).

Within the literature on ordinary policy-making, the factors presented as acting to open policy windows are generally quite undramatic (e.g., the election of any new government) or limited in scope (e.g., a plane crash) and the windows opened are thus naturally either rather small or restricted to certain narrow issue areas (e.g., regulation of aviation). Such windows might be deemed “micro-windows.” For one concerned with patterns of extraordinary policy-making, it is clear that what needs to be understood is how dramatic and wide-ranging developments on the political and social scene combine to produce “macro-windows” providing sufficient opportunity for profound policy innovations across a variety of issue areas.

In the remainder of this section an effort will be made to specify how dramatic political developments and societal problems can logically be expected to operate so as to open the sort of macro-window necessary for the successful launching of ambitious reform programs. As Figure 1 acknowledges, the scope of a democratic government’s legislative achievement is determined by a wide variety of variables, including the nature of its program and the will and skill of its leadership. However, it will be argued here that a government’s prospects for achieving dramatic policy innovation are largely shaped by the size of the window for reform within which it functions, and that window size is itself determined principally by the size of mandate that the government enjoys and the severity of crisis present during a would-be reform government’s election and its first crucial months in office.

**Figure 1:** Opening the window for reform: A model of the process
Mandates

The quintessential window-opening political development is the achievement of an impressive mandate: a landslide electoral victory that, through a large swing in votes and seats reflecting “a shift in national mood,” makes a new government appear authorized and empowered by the public to implement its program. Such an “electoral uprising,” as V. O. Key (1964) noted, “may amount, if not to revolution, to its functional equivalent” (p. 523).

Many recent studies have argued, in different ways and in different contexts, that there is a link between dramatic electoral outcomes and prospects for policy change (see Brady, 1988; Hargrove & Nelson, 1984; Bunce, 1981; Goodin, 1977; Brady et al., 1988; Skocpol & Finegold, 1990; Goldfield, 1990). From this literature it is possible to extract three analytically distinct causal mechanisms through which an impressive mandate should be expected to open a macro-window for reform. The first of these may be termed the authorization mechanism: The mandate makes a government appear authorized by the public to enact its program and thus reduces political and institutional opposition to policy innovation. Although some scholars have noted that putative “mandates” are frequently attributable to misperception or media hyperbole, others have stressed that “perceptions are often more important than reality” in this regard. A common perception that a government has been authorized to act can add “legitimacy and credibility” to proposals for innovation and “change the premises of decision.” “Nothing is more important in Capitol Hill politics,” as David Mayhew has argued in the America case, “than the shared conviction that election returns have proven a point.” Although any impressive electoral victory is likely to be based as much (or more) on rejection of the losers as on approval of the policies proposed by the winners, legislators as well as the public tend to interpret a landslide as evidence of public demand for “a new order” (see Edwards, 1989, chap. 8; Kelley, 1983, chap. 7; Key, 1964, p. 523). As both scholars and politicians have observed, the authorization mechanism invariably functions most powerfully in the immediate postelection “honeymoon” period and then tends to dwindle in force over time; developments such as by-election defeats or antigovernment demonstrations may accelerate the evaporation of this intangible governmental asset (Light, 1983; Bunce, 1981).

The second mandate-innovation link may be termed the (legislative) empowerment mechanism: An impressive mandate normally empowers a government to implement its program by providing a large majority for the governing party or parties in the legislature. In presidential systems, especially that of the United States featuring two equally powerful legislative houses, it is possible for an administration to achieve a measure of the intangible “authorization” associated with mandate without acquiring a partisan majority sufficient to assure full implementation of a president’s agenda. Generally, however, a government deemed to have won a sizable mandate will have the partisan support in the legislature necessary to pass reforms, and this is obviously crucial. As studies of the American case have shown, such factors as high public-approval ratings and political skill may make a marginal difference in determining a president’s legislative success rate, but a president’s “push, pull, punch, power or clout” is determined mainly by the number of seats his party holds in Congress (Light, 1983, pp. 25–34; see also Bond & Fleisher, 1990; Edwards, 1989).
It should be noted, of course, that one would expect legislative empowerment to have an uneven impact on the window-opening process across political systems. A higher degree of such empowerment should be necessary for extensive policy change in a system featuring fragmented institutions and weak parties (e.g., the United States) than in one featuring stronger executive control over the policy-making process (e.g., France) and/or more disciplined and coherent parties (e.g., Britain).

A third causal mechanism can be termed the party pressure mechanism: A large mandate, by making reform politically possible, may create so much pressure from party activists who expect the government’s commitments to be fulfilled that it makes reform politically unavoidable. “If not now, when?” is the question a cautious government with a solid majority will hear repeatedly posed by party activists if it hesitates to enact promised policy innovations. This party pressure mechanism should be expected to have greatest effect in cases featuring large majorities produced by a large swing of seats, as an influx of many new legislators means that the majority is likely to include many “vigorous young recruits” enthusiastically committed to the party program and unaccustomed to the constraints that commonly inspire caution among older members (Morgan, 1984, p. 59).

The effects of the party pressure mechanism explain why government leaders may well interpret a huge mandate as a mixed blessing: They may feel compelled to innovate more radically and more broadly than they deem politically prudent. Roosevelt learned that “to win a great majority of votes may involve such commitments as to make victory politically embarrassing” (Burns, 1956, p. 288). By the same token, it was said of British Prime Minister Lloyd George in 1918 that his large majority “was not so much behind his back as on his back” (Goodin, 1977, p. 401). Recognition of the problems posed by the party pressure mechanism makes understandable the apparent paradox of a French president, Mitterrand, publicly expressing the hope that his party would not win the sort of smashing majority in 1988 that it had won in 1981 (Jaffré, 1988, p. 174).

In sum, at least three basic causal mechanisms can be expected to translate an impressive mandate into a relatively large window for reform and thus an unusual degree of legislative achievement. As analysts ranging from Key (1964, pp. 523, 544) to Skocpol and Finegold (1990) to Brady (1988, p. 15) have observed in differing contexts, landslide electoral results do not require any particular policy response from a government. However, unusually dramatic results do tend to create conditions under which a government may or even must legislate major policy changes. The quality of governmental leadership will obviously have an impact on the type and extent of legislative achievement in such a setting, but the causal mechanisms outlined here make evident why the assumed importance of that impact should not be exaggerated. Leadership skill can certainly affect the degree of policy achievement, but those “who benefit from a large electoral victory . . . will surely be able to lead more easily than those who lack such capital” (Kellerman, 1984, p. 254). Although the leaders’ desire for or commitment to reform will also play a role, the party pressure mechanism should assure that even a timid government thrust into office with a huge mandate will produce at least a significant legislative record.
The mandate mechanisms are clearly potent, and indeed – as Section 2 will discuss – it is possible to demonstrate that data on mandate alone allow for fairly accurate “predictions” of legislative achievement. However, the contention here is that even a parsimonious model of the window-opening process must include at least a second independent variable: severity of crisis. For our purposes, crisis will be defined as a situation of large-scale public dissatisfaction or even fear stemming from wide-ranging economic problems and/or an unusual degree of social unrest and/or threats to national security (see Flanagan, 1973). The recognition of the potential utility of crises for the achievement of policy innovation is prevalent enough so that political leaders have often attempted to create, through rhetoric and related actions, a public sense of crisis for the advancement of their policy goals. Indeed, given the absence of any commonly accepted threshold beyond which a problem merits categorization as a crisis, it may be said – as “social constructionists” stress – that any crisis is to some extent “a creation of the language used to depict it.” Nonetheless, only when a social problem is severe enough to make the public audience receptive to its depiction as a crisis can it be expected to have a significant impact on the policy-making process (Edelman, 1988, pp. 30–33; Stone, 1988, 1989).

There are two compelling reasons to include crisis in a model designed to illuminate the dynamics of disparate reform governments. First, crisis may logically be expected in some cases to affect the window-opening process through its impact on elections, that is, on mandate size. It would be misleading not to acknowledge that to some extent mandate size may be viewed as an intervening variable reflecting the effect of severity of crisis (Goldfield, 1990, p. 1306; see also Quermonne, 1988, p. 6). Second, crisis may in some cases be expected to have a very different, more direct effect that can either reinforce the mandate mechanisms or operate in their absence.

As with mandate, therefore, it is important to acknowledge that crisis can be linked to the window-opening process through several distinct causal mechanisms. The first, the crisis-mandate mechanism, operates in the following fashion: To the degree that a crisis serves to discredit the ideas and leaders of the incumbent party (or coalition), it will tend – by stimulating both negative voting and the inclination to risk giving new leaders (with new ideas) a chance to resolve the crisis – to produce an unusually impressive mandate for the opposition party. Needless to say, the appeal of the opposition will, to an extent, be dependent on the particular leaders and ideas it offers. But in a context in which the incumbent has been discredited by a severe economic downturn and/or social malaise, as the literature on “the electoral punishment model of democracy” shows, many voters will decide to “throw the rascals out” and take their chances with an available alternative (see Page, 1978; Lewis-Beck, 1988). The policy-making literature is replete with references to the fact that crises can serve to “break old patterns of thought and behavior” and thus open up “the possibilities for new approaches and ideas” (Luebbert, 1991, p. 312). One likely effect of a severe crisis, therefore, is an impressive electoral victory for a new government both empowered and seemingly authorized to put extensive reforms into effect. The other side of this coin is that
it can be expected to leave the (new) opposition in disarray, seeking new leaders to replace those who have been discredited and considering a reorientation of its own policy.

Aside from its potential effect on elections and mandate, a crisis may also create a sociopolitical context for governance uniquely conducive to the passage of reforms. There are, as Bunce (1981) notes, “conditions under which incrementalism is risky, when change seems far better than stasis, when doing, what was done before is irrational, and when innovation would improve public policy, enhance a leader’s power, and help him to win over subordinates” (p. 133). In short, a crisis can present “an opportunity to be exploited” (Damgaard et al., 1989, p. 186; see also Gourevitch, 1986; Rose, 1989; Ceaser, 1988; Grindle & Thomas, 1991). Specifically, such an opportunity may arise through the urgency mechanism: A crisis can create a sense of urgency predicated on the assumption that already serious problems will be exacerbated by inaction. A sense of urgency may serve to override the caution and/or concern for procedure manifested by officials of both the executive and the legislature (and the judiciary as well) during more tranquil times and allows for unusually rapid and uncritical acceptance of reform proposals intended to resolve the crisis. A classic example of this dynamic is presented in Burn’s account of the dawn of the New Deal, when Congress was presented with an emergency banking act:

Completed by the President and his advisers at two o’clock that morning, the bill was still in rough form. But even during the meager forty minutes allotted to the debate, shouts of “Vote! Vote!” echoed from the floor. . . . The House promptly passed the bill without a record vote; the Senate approved it a few hours later; the President signed it by nine o’clock. (Burns, 1956, pp. 166–167).

Similar or even more dramatic outcomes can be produced by what might be termed the fear mechanism: Crises featuring not merely serious socioeconomic problems but also an unusual degree of social mobilization (e.g., strikes, demonstrations, and/or sporadic acts of violence) related to demands for reform can create a sense of genuine fear predicated on the assumption that inaction may endanger lives and property or even result in a revolution or coup d’etat. Events in Britain in the early 1830s provided a classic example of this dynamic. Against the backdrop of the July 1830 revolution in France and in the context of economic crisis, waves of demonstrations and rioting provided the impetus necessary for enactment of the celebrated Reform Act of 1832 that expanded voting rights to an extent once considered unthinkable (Powell, 1973).

When either the urgency or fear mechanism comes into play, especially the latter, not only is the government likely to be propelled to take immediate action, but the political opposition and the social opposition (e.g., the business community confronted with a government of the Left) may be too intimidated to resist or may even feel compelled to lend at least reluctant support to the government’s proposals designed to defuse protest and restore order. This dynamic is the prime explanation of a paradox of reform politics: Some of the most radical innovations within democratic systems have been unanimously approved by the legislature.
Needless to say, however, it is logical to assume that measures passed only through the aid of the urgency or fear mechanisms may often be diluted or even rolled back once the crisis wanes and the forces of political and social opposition become assertive (Block, 1977, pp. 24–25; Lipset, 1971, p. 340; Tarrow, 1993).

To sum up, a resounding mandate and a severe crisis can logically serve – separately or in combination – to open macro-windows for reform. An ideal-typical maximum window would feature a severe crisis that helps empower a new government with an overwhelming mandate, then creates an extraordinary policy-making context in which the authorization, party pressure, urgency, and fear mechanisms combine to produce an outpouring of reform legislation. Windows can differ not only in size, depending on the size of mandate and severity of crisis, but also in nature. Some windows may be opened primarily (or exclusively) by mandate mechanisms; these produce what may be termed mandate-driven reform governments. Those opened primarily by crisis mechanisms produce crisis-driven reform governments. The latter, lacking in legislative empowerment and authorization and thus highly dependent on what is virtually certain to be an ephemeral sense of urgency and fear for the passage and consolidation of reforms, may be expected to manifest dynamics very different from those of the former.

2. Testing the Mandate-Reform Hypothesis

The case studies of Section 3 can provide support for the hypothesized relationship between mandate size/severity of crisis and window size/reform achievement, but they cannot of course provide a genuine test. Only eight cases are considered and all of them are known to have featured an unusual degree of policy innovation, so it might be said that this represents “sampling on the dependent variable.” In fact, it will be shown that there is substantial variance from case to case in regard to window size/reform achievement and it will be argued that this can be attributed largely to variance in the two independent variables stressed here. Nonetheless, it is clear that a supportive statistical test would bolster the validity of that argument.

No attempt will be made here to test directly the hypothesized causal link between severity of crisis and window size/reform achievement. To do so would necessitate developing an index of crisis severity; and the only available data with which such an index could be constructed measure solely the economic dimension. That dimension is important, but as Section 3 will show, the more elusive social dimension is crucial as well. Developing a comprehensive quantitative index of crisis is thus a task that must be left to later projects.

The hypothesized causal link between mandate size and window size/reform achievement can be tested, however. Moreover, it should be stressed that such a test also provides at least an indirect test of the hypothesized effect of crisis defined as the crisis-mandate mechanism. To the extent that severity of crisis does play the role assumed here, one would expect extremely large mandates generally to reflect a crisis atmosphere and very small mandates to reflect the absence of crisis.

Surprisingly few prior efforts have been made to test with comparative data what we will call for simplicity’s sake the mandate-reform hypothesis. A study by Goodin (1977) of the American and British cases through the early 1970s found...
a positive correlation between size of legislative majority and rate of legislative success. Bunce (1981) argued on the basis of data from seven national cases that “a large mandate” or “an increasing mandate” tends “to foster innovations in public policy” (p. 80). In an article featuring American, British, and Irish cases, Brady, Bullock, and Maisel (1988) provided evidence that “major policy shifts” tend to follow elections in which “the combination of program differences and high membership turnover induced a sense of mandate” (p. 419). All three of these studies thus lend support to the mandate-reform hypothesis. None of them, however, operationalized the independent and dependent variables in a manner that would seem most compelling for our purposes. In regard to mandate, Goodin did not take into account the degree of swing (or turnover) in party seats. And as for legislative achievement, Goodin considered not the extent but the rate of success, Bunce examined only the degree of shift in budgetary allocations, and Brady et al. simply listed major innovations of each case rather than using any common measure.

For my test of the mandate-reform hypothesis, I constructed a mandate index and compiled measures of legislative achievement (MLAs) for the governments of postwar America, Britain, and France. These national cases were selected because they not only featured readily available data, but also encompassed five of the eight reform government cases (LBJ, Reagan, Attlee, Thatcher, Mitterrand) to be discussed in Section 3. The data employed here are thus doubly useful for our purposes. They not only allow for a statistical test, but also show clearly how these five RG cases compare in regard to both mandate and the MLAs with many cases of “ordinary” government.

In light of the many comments in the literature noting that perceptions of “mandate” tend to be shaped not only by size of majority but also by degree of swing in partisan support, both of these elements were included in the mandate indexes for all three national cases (see Table 1). All of the MLAs were based on data for the first year or two (two if possible, one if necessitated by the data source) in office since this honeymoon period is widely acknowledged to be the one in which governments tend to wield greatest power and put their most significant, high-priority legislation into effect (Bunce, 1981, chap. 1; Light, 1983, pp. 218–219; Foot, 1982, p. 273).

In the American case, the mandate index was composed of data related to both presidential and congressional elections (Wilson, 1986; Salamon & Abramson, 1984); scores on the mandate index produced a mean of 10.5 and varied from a high of 29.9 for Roosevelt and the Democrats in 1936 to a low of –0.6 for Bush and the Republicans in 1988 (see Figure 7 of Section 2). Three different MLAs were employed: (1) the number of presidential victories on conflictual roll call votes in both the House and the Senate during the first year of each administration (Bond & Fleisher, 1990, pp. 72–73) – number rather than percentage was employed here, contrary to the usual practice employed by students of the American case, so as to take into account the extent of legislative agenda and achievement; (2) the number of presidential victories on conflictual domestic policy roll call votes in both the House and the Senate during the first 2 years (first Congress) of each administration (Bond & Fleisher, 1990, p. 156); and (3) the number of laws passed by Congress during the first 2 years of each presidential term that were deemed important in both evaluative sweeps of the recent Mayhew (1991) study – the
few laws categorized by Mayhew as being of “historic” importance, for example, the Voting Rights Act of 1965 and Reagan’s 1981 tax cut, were weighted more heavily (by a factor of 5).6

The small \( n \) involved (8 for MLA 1 and 2, covering the first Eisenhower administration through the first Reagan administration; 10 for MLA 3, covering Truman through the second Reagan administration) limits the significance that can be attributed to statistical findings based on these data, but the data do consistently support the hypothesis of an association between mandate size and legislative achievement (see Figure 2). The correlations between the scores on the mandate index and conflictual roll call vote victories (.765), domestic roll call vote victories (.744), and important laws (.763) are all strongly positive. The Kennedy case, with a very small mandate index score and relatively high MLA scores, is a notable outlier in this data set. Excluding this case yields extremely strong correlations between mandate and all three MLAs: .939 with roll call victories, .925 with domestic roll call victories, and .839 with important laws.

It was hypothesized in Section 1 that the mandate-reform link should be expected to be especially strong in the American case, given the limits to executive control over the legislative process and the weak parties of the United States. In cases such as Britain and France, it was argued, the stronger executive powers and more coherent parties could be expected to allow for – at least in some cases – a degree of legislative achievement high by American standards even at a relatively low level of mandate. As expected, the mandate-MLA correlations are at least somewhat lower in the two European cases, but they are still positive.
In the British case, mandate index scores based on House of Commons elections (Butler & Kavanagh, 1988) produced a mean of 10.2, or 8.2 with the single highest case excluded, and varied from a high of 32.7 for Labour in 1945 to a low of –4.9 for Labour in 1950. One MLA was employed: the number of new government acts subjected to parliamentary division (recorded vote), by demand of the official opposition, at the second reading in the House of Commons during the first two parliamentary sessions of each government (Van Mechelen & Rose, 1986, pp. 61–62; Burton & Drewry, 1988). This measure includes nearly all acts deemed controversial and/or important.

The $n$ in this case is a bit larger (12), and again the data support the hypothesized relationship between mandate size and legislative achievement (see Figure 3). The correlation between scores on the mandate index and number of bills subjected to partisan divisions is .610. It is worth noting that, in the British case, a mandate index based on vote (rather than seat) swing and margin was also constructed, and that scores on this index produced an even higher positive correlation with the MLA: .876.

In the French case, the mandate index formula necessarily differed from election to election, given that of the six election-based changes of government from 1965 to 1988, three (1965, 1969, and 1974) were ushered in by only presidential elections, two (1981 and 1988) by presidential and parliamentary elections, and one (Chirac’s “cohabitation” government of 1986) by only a parliamentary election. *Faute de mieux*, an American-style index was employed for 1981 and 1988, a British-style index for 1986, and only the presidential margin component of the American-style index for 1965, 1969, and 1974. Scores on the mandate index produced a mean of 10.3 and ranged from a high of 17.9 for Mitterrand and the
Socialist-Communist coalition in 1981 to a low of 1.4 for Giscard d’Estaing in 1974 (Ehrmann, 1983; Wright, 1989). Two MLAs were employed: (1) the number of government-sponsored bills (projets de loi – ensemble) subjected to a scrutin public or recorded vote at the first reading in the National Assembly during the first 2 years of each presidency/government – this measure is nearly identical in functional terms to the one used in the British case; and (2) the number of hours of legislative debate in the National Assembly during the same period (Bulletin, 1967–1989; Historique, 1959–1966).

The n for the French data is quite small (6), and one would expect weaker mandate-MLA correlations in this case, for two reasons. First, maximizing both empowerment and authorization in France necessitates a legislative victory in the wake of a presidential victory and, as noted above, that combination occurred in only two of the six elections on which the mandate data are based. Second, three of those elections produced a mandate score based only on presidential victory margin – the component of the mandate index shown in the American case to yield the weakest correlation (less than .30) with the MLAs.

The correlations for France are indeed weaker than in the other two cases, but they are both positive and are thus consistent with the hypothesis being tested (see Figure 4). The correlation between scores on the mandate index and number of government-sponsored bills is .163, whereas the correlation for hours of debate is .356. It should be noted here that one exceptional case (with a high mandate score and low MLA results), that of Pompidou’s election in 1969, serves to depress the French Figures far below the levels found for Britain and the United States. Omitting this case yields correlations of .379 (for bills) and .708 (for hours of debate).7

![Figure 3: British mandates and a measure of legislative achievement](image-url)
3. Case Studies of the Macro-Window-Opening Process

Useful though they are, the statistical tests of Section 2 leave open two key questions that can only be adequately addressed through a qualitative analysis of our selected RG cases. First, do the correlations between mandate size and degree of legislative achievement genuinely reflect the sort of causal relationship specified in our theory of the macro-window-opening process? Second, to what extent does severity of crisis – the significance of which was tested only indirectly and partially in Section 2 – regularly join with mandate size to play an important role in the window-opening process? The case studies will answer these questions by fleshing out the meaning of the key variables and probing the extent to which the mandate mechanisms (authorization, empowerment, and party pressure) and crisis mechanisms (crisis-mandate, urgency, and fear) presented in Section 1 do indeed serve to open macro-windows for reform.

The discussion of the case studies will be structured in such a way as to highlight the assumed centrality of the mandate variable in determining prospects for reform. Given the demonstrated significance of the mandate-reform correlation for individual elections/terms, it would seem possible to use mandate data to predict (or “postdict”) at least roughly the total window size – and thus total legislative achievement – for the eight cases. Total window size here simply means the sum of the windows produced by successive mandates in each case. The total window concept reflects the obvious fact that a government’s potential for
legislative achievement is a function not only of the size of the window with which it is presented after any one election, but also its longevity (Pempel, 1990, p. 332). On one extreme, a governing party that enjoys a remarkable string of relatively small windows may well prove capable of instituting substantial reform; the experience of the Swedish Social Democrats, who enjoyed 44 years of rule under three prime ministers, stands as no doubt the most celebrated such case (see the Garrett and Pontusson pieces in this issue). On the other extreme, as the Attlee case will illustrate, one huge window may suffice to produce a great degree of legislative achievement.

In constructing a mandate-related index with which to predict total window size, it would appear sensible to (1) weight the first election’s mandate more heavily than the rest, given that reelection seldom produces a “honeymoon” effect comparable to the initial one (Bunce, 1981; Light, 1983, pp. 38–40); and (2) count more than the results of the first national election even in cases where the first election represents the only victory for an RG. A negative result in a second national election can be expected to signify that the government’s perceived “authorization” has been waning considerably for some time; the message that the mandate has vanished is likely to have been sent by political developments other than national elections (e.g., losses in local elections, low opinion poll ratings, antigovernment demonstrations) and thus to some extent closed the window for reform (Dupoirier & Grunberg, 1986; Lancelot & Lancelot, 1987).

The index of predicted total window size to be used here will thus consist of the following: \(2 \times \text{Mandate 1} + \text{Mandate 2} + \text{Mandate 3}\). Mandate scores for only two elections are counted in cases where the second election was the last to take place due to regime change (Allende), was the last in which the RG’s leader took part (Johnson), or ousted the RG’s leader as effective head of government (Mitterrand). In the case of the Popular Front, where not even a second election took place (due to the creation of the Vichy State), a surrogate for a second election is employed: the combined margin of parliamentary vote on the government’s bill demanding decree powers in June 1937, the rejection of which prompted Blum’s resignation (Jackson, 1988, pp. 272–273).

Mandate scores for each of the eight RG cases in all respective national elections (presidential, legislative, or both depending on the case and year) are shown in Figure 5. Figure 6 gives the predicted total window size index scores for each case. In terms of these scores, the cases can be grouped in four categories. It is predicted that total window size should be enormous in the New Deal case; large in the Attlee, Thatcher, and Johnson cases; medium-sized in the Reagan and Mitterrand cases; and small in the Popular Front and Allende cases.

Three caveats should be noted here. First, the terms *medium-sized* and *small* must be understood in the context of comparisons made exclusively with the total windows enjoyed by other exceptional reform governments, not more typical governments engaging in ordinary policy-making. Second, in line with the theory of Section 1, it is expected that the mandate-based predictions of total window size will underpredict actual total window size in the cases most affected by the urgency and fear mechanisms triggered by severe crises. Third, although it is assumed that the case studies should provide qualitative evidence to support the hypothesized importance of mandate size and severity of crisis in facilitating reform, it is also to be expected that they – unlike the correlations of Section 2 – will
Figure 5: Reform government mandates in all presidential/legislative elections (+PF37)

Figure 6: Reform governments ranked by predicted total window size
be useful in demonstrating the precise nature of the limits to the utility of our parsimonious theory of the window opening process. Those limits will be duly noted in each case.

An Enormous Window

FDR’s New Deal

It is indisputable that the Roosevelt Administration functioned within a policy-making context that – as predicted – was extraordinarily conducive to policy innovation. All six of the window-opening mechanisms discussed above operated in this case, and they combined in what might be termed a synergistic manner to make possible not one but two unprecedented bursts of reform.

The election of 1932 featured a paradigmatic crisis-mandate effect. With Hoover and the Republicans discredited by the onset of the Great Depression and the claim that it could not be cured by legislation but only by “self-reliance,” FDR and the Democrats were able to win a historic landslide in support of a program vague on details but clear on the commitment to “wage war against the emergency” with “action now.” By winning with the greatest margin ever recorded against an incumbent while also securing overwhelming control of both the House (310–117) and the Senate (60–35), FDR was both empowered and seemingly authorized to innovate in a wide range of issue areas related to economic recovery (Hargrove & Nelson, 1984, p. 70; Leuchtenburg, 1963, chap. 2).

Impressive though it was, the mandate of 1932 was only part of the context-shaping process. The window was opened even wider by the fact that “the interval between Roosevelt’s election . . . and his inauguration . . . proved the most harrowing four months of the depression.” Unemployment worsened, banks failed in every corner of the country, and thousands of farmers lost their land. Public opinion was “whipped to a fury” by the apparent “social irresponsibility” of bankers and businessmen, farmers resorted to violent protests, antiunemployment demonstrations mounted, and spectacular incidents such as the bonus march gave rise to speculation that “the country faced imminent revolution.” In short, as Roosevelt assumed office in March 1933 the power flowing from his mandate had been reinforced by classic examples of the urgency and fear mechanisms, so much so that many commentators argued that the new president should be granted dictatorial powers. It was through this remarkable window of the first “Hundred Days” that Roosevelt pushed “the most extraordinary series of reforms in the nation’s history” (Leuchtenburg, 1963, pp. 21–39, 61; Burns, 1956, p. 172).

But this was only the beginning. What really sets this case off from the others discussed here is that – as Figures 5 and 7 show – the mandate of 1932, impressive enough (25.2) so that no other president has matched it in 56 years, was surpassed in the 1934 midterm elections (with a score of 31.2, still the all-time American record) and followed up in 1936 by yet another stunning victory (an index score of 29.9, still the record for a presidential election year). The 1934 congressional elections, which “almost erased the Republican Party as a national force,” provided the Democrats with even larger House (319–103) and Senate (69–25) majorities, and thus inspired presidential aid Harry Hopkins to remark “this is our hour.... We’ve got to get everything we want – a works program, social security, wages and hours, everything – now or never” (Leuchtenburg, 1963, p. 117).
The window was thus reopened wide for the “Second Hundred Days.” And this time the momentum stemming from mandate effects and recurrent crisis effects was reinforced as never before by the “party pressure” mechanism. In Leuchtenburg’s words, “Roosevelt was riding a tiger, for the new Congress threatened to push him in a direction far more radical than any he had originally contemplated.” Congress now put into effect “the most far-reaching reform measures it had ever considered,” with FDR getting “every item of significant legislation he desired” – sometimes, as in the celebrated case of the 1935 National Labor Relations Act, in more radical form than he initially planned (Leuchtenburg, 1963, pp. 177, 150). The Wagner Act stands as a classic example of dramatic reform made possible by a huge mandate but achieved, in the face of “the wavering position and contradictory demeanor of the President,” only through the additional forces of party pressure (led here by Wagner) and the fear mechanism, as the worker insurgency of 1934 and “fear of even greater labor struggles” shaped the debate over this issue (Chamberlain, 1946, p. 175; Goldfield, 1989).
The renewed mandate of 1936 (increasing Democratic control to 331–89 in the House and 76–16 in the Senate) might have been expected to lead to yet another wave of reform, but several factors combined to produce a very different result. FDR asserted that his reform program had “now reached substantial completion,” many pro-New Deal figures pressured for a “breathing spell” and a turn toward consolidation, and the President’s central initiative – the “Court-packing” plan – “destroyed the unity of the Democratic Party and greatly strengthened the bipartisan anti-New Deal coalition” (Leuchtenburg, 1963, pp. 170, 139). However, the long-term impact of the New Deal was surely strengthened, at least through consolidation, by the election of 1936 and those that confirmed the initial “realignment” over the next decade. As Figure 5 makes clear, this remarkable RG is the only one to have enjoyed such a string of electoral successes. As a result, the two huge bursts of reform gave way not to rollback, but merely to “deadlock on the Potomac” (Burns, 1956, chap. 17).

Large Windows

Attlee’s Britain

The dynamics of the window-opening process in the Attlee case were, in most respects, very different from those of the New Deal and much more typical of the other cases in our selection. Crisis effects played a smaller role here than in the New Deal; the government produced only one burst of reform; and the initial mandate score, as in six of the eight cases, was never surpassed – indeed, the second election, as in five of the eight cases, yielded a negative mandate score. However, the case of Attlee’s Labour Government stands as uniquely impressive in its own way. As Figure 5 shows, it entered office with the single most impressive mandate score (32.7) in our entire selection of RGs. And as predicted, it enjoyed a large total window for reform and a commensurate level of achievement.

The 1945 British election did not take place in a context of crisis, at least in the normal sense of the term. In stark contrast to the atmosphere of America in 1932, the Britain of July 1945 was savoring the recent victory in Europe and the political mood was thus relatively “tranquil” and even “festive” (Morgan, 1984, p. 39; Childs, 1979, p. 3). Further, the incumbent Conservative Prime Minister – Winston Churchill – was not a discredited figure in the mold of Hoover, but instead a triumphant wartime leader. At first glance, therefore, it might seem that the crisis effect that often serves to produce large mandates for RGs was inoperative in this case.

Accounts of the electoral campaign reveal, however, that a variant of the crisis-mandate mechanism did play an important role in 1945. With the war already over in Europe and nearing its end abroad, electors thought less about the Conservatives’ wartime achievements (it should be remembered that Labour also played a significant role in the all-party coalition government) than about their earlier peacetime failures. The Conservative Party “was popularly identified with that sense of insecurity, due mainly to fear of war and unemployment, which had dogged so many” during the crisis-ridden period from 1918 through the end of the 1930s (McCallum & Readman, 1947, p. 44). “Folk memory,” as A.J.P. Taylor (1965) wrote,
counted for much. Many electors remembered the unemployment of the thirties. Some remembered how they had been cheated, or supposed that they had been cheated, after the general election of 1918. Lloyd George brought ruin to Churchill from the grave. (p. 596, emphasis added)

The Labour Party campaign “harped continually on the comparison between 1918 and 1945,” warned electors to “learn from the past,” and presented a manifesto full of innovative programs designed to “win the peace.” The “spirit of Dunkirk” and wartime discipline, it was pledged, would be applied to the “tasks of peace” so as to assure jobs, housing, and improved welfare for all (McCallum & Readman, 1947, pp. 45, 52; Craig, 1970, p. 524).

The result was “one of the rare seismic landslides” of British history. The swing in votes and seats reached levels attained previously only in the elections of 1832 and 1906, and Labour won an overwhelming 393–210 majority over the Conservatives in the House of Commons (Morgan, 1984, p. 41; McCallum & Readman, 1947, p. 247). As Figure 8 shows, Labour’s score on the mandate index was dazzling; no British government since has achieved a score even two-thirds as high. By any standard, then, the new Labour Government was almost incomparably empowered to act, and it seemed authorized to do so as well.

**Figure 8**: Mandates of British governments, 1945–92

At least for its first 2 years, then, the Labour Government enjoyed an enormous window for reform, and virtually all of the key programs outlined in the party’s manifesto – from the nationalization of crucial industries to the creation of the National Health Service – were put into effect. The Attlee Government “wrenched the course of British history into significant new directions,” even if its reforms sometimes went insufficiently far to please radical critics (Morgan, 1984, p. vii; see also Miliband, 1972, chap. 9). To the disappointment of Bevan (who had a “fifteen-year plan” for reform) and others on the Left, however, the window began to close with the onset of the economic crisis of 1947, and it was never reopened in the fashion of the New Deal (see Foot, 1982, p. 273). Labour won only a slim majority in 1950, too narrow to allow for major new initiatives, and was defeated following an early dissolution in 1951. Nonetheless, it is important to note that the Attlee Government had both reflected and reinforced a new national policy consensus so effectively that very few of its initiatives were reversed during the 13 years of Conservative rule that followed.

**Thatcher’s Britain**

As Figure 5 should make clear, the prediction of a large total window in the Thatcher case rests not on the initial mandate of 1979 – which was the third smallest among our eight cases – but rather on the fact that, along with the Roosevelt Administration, the Thatcher Government is one of only two cases in which an RG proved capable of improving on its first mandate score at its second election and of achieving three consecutive positive scores. The Thatcher Government can be shown to have enjoyed several policy windows, none as large as the one that opened for Labour in 1945, but all together amounting to an equally significant opportunity for innovation.

The 1979 elections featured a crisis-mandate effect much less dramatic than that of 1932 in America, but significant nonetheless. The Labour Government of 1974–79 was only the latest in a series that, since the early 1960s, had come to power promising to reverse Britain’s long-term economic decline and then failed to deliver (see Skidelsky, 1990). But three special features of the Wilson-Callaghan Government served to discredit Labour more fully than its failed predecessors. First, its problems were exacerbated by the international economic crisis that served to increase inflation and unemployment and slow growth further. Second, it let the economic situation deteriorate to the point that the only solution as of 1976 was a humiliating turn to the IMF for assistance. When Thatcher spoke as leader of the opposition in 1977, she was thus able to argue that Labour “all but took the country over a cliff” and that its next election slogan should be “You know IMF government works” (Thatcher, 1977, p. 132, emphasis in original; Holmes, 1985). Third, and most important, after Callaghan had replaced Wilson and scored at least some modest successes, the Government was faced with the “Winter of Discontent” in 1978–79. A long and bitter wave of strikes, the most disruptive since 1926, destroyed Labour’s claim to be the party capable of maintaining social peace and also allowed Thatcher (in Callaghan’s words) to strike “a chord with a public heartily sick of the trade unions” (Holmes, 1985, p. 139).
The stage was thus set for Thatcher's Conservatives to win a convincing, if not overwhelming, victory. As Figure 8 shows, the mandate score of 1979 was the second most impressive since that of 1945 (and looked even better if measured by votes rather than seats), and it featured a politically important swing of working-class votes to the Tories, but it was no “seismic landslide.” One reason for this was that polls showed Thatcher to have a lower personal approval rating than Callaghan, and even some Tories thus felt that they had won “in spite of an unpopular leader” (Holmes, 1985, p. 161; Jenkins, 1987, p. 89). The Conservatives were thus empowered enough (with a 339–269 edge over Labour) to embark on a Thatcherite reform course, but seemed to have been accorded only guarded authorization. This constraint was reinforced by the fact that Thatcher had not yet even convinced a majority of her party’s elite to accept the redirection she sought, and was thus forced to work initially with a cabinet of more moderate “wets.” In her first government, therefore, Thatcher was able to do no more than make a significant start on her controversial program of reform. Most important, an anti-inflationary macroeconomic policy was launched, two important acts were passed limiting the powers of trade unions, and a cautious move toward privatization of industry was made (Young, 1989, p. 140; Riddell, 1983; Mcllroy, 1991).

What really made the Thatcher Government an RG worthy of note, however, was its ability to build on these initial innovations. The “Falklands effect,” which enhanced Thatcher’s stature with the public and her control over her own party, an upturn of the economy, and unprecedented divisions within the opposition combined to produce another, more impressive electoral victory in 1983 and thus to open a second and larger window for reform. This time the Conservatives were empowered with a far greater majority (144 seats, with an edge of 397–209 over Labour) and Thatcher was much more fully in command of her cabinet (Young, 1989, pp. 303–312). Enhanced power and authorization led to a flood of reforms reinforcing those begun earlier: a vast series of privatizations, additional legislation designed to weaken the unions, acts restructuring local government, and enough innovation elsewhere to inspire volumes on “Mrs. Thatcher’s Revolution.” Meanwhile, the terms of political debate shifted to the Right in the wake of the crushing 1983 election as both the Trades Union Congress (TUC) and Labour Party leadership grudgingly adopted a “new realist” perspective (Mcllroy, 1991, chap. 3). By the end of the second Thatcher Government it was “now unarguable that the ascent to power of Margaret Thatcher . . . represented a major change in the direction of British political life” (Graham & Prosser, 1988, p. 1; see also Veljanovski, 1987; Kavanagh & Seldon, 1989).

A window opened yet again in 1987, as Thatcher became the first Prime Minister since Lord Liverpool in 1826 to win three consecutive elections. Behind a manifesto declaring the intent to “press on with the radical Conservative reform which we embarked on in 1979” (Butler, 1989, pp. 38–39), the Tories won a 376–229 edge over Labour and thus set the stage for what was, in certain issue areas such as the poll tax and privatization, the Thatcher Government’s most controversial era (Skidelsky, 1990; Gibson, 1990; Roberts et al., 1991). In 1990, when opposition to both her domineering style and her relentless push for certain unpopular policies led to her ouster as Prime Minister by the Conservative Party, Thatcher left behind an extraordinary policy legacy. Although the efficacy of her reform efforts remains a major point of debate (Marsh & Rhodes, 1992; Edgell & Duke, 1991; Michie, 1992), there is no question – as Pierson and Smith
LBJ’s Great Society

Lyndon B. Johnson’s impressive legislative record was accomplished within two separate policy windows, the first of which opened in a manner quite unlike that of any of our other cases. When Johnson moved into the White House following the assassination of John F. Kennedy in November 1963, he was in the unusual position of being “a new President with no electoral mandate” (Johnson, 1971, p. 35). His administration thus lacked completely the sense of authorization visible in our other cases. However, two developments combined (with Johnson’s help) to pry open a window for reform. First, the Kennedy assassination shocked and traumatized the nation, but also provided Johnson with some unique opportunities. By presenting himself as “the dutiful executor’ of his predecessor’s will,” LBJ was able to don the martyred president’s mantle of authority. And by presenting the implementation of key legislation backed by JFK as a “memorial” that could “eloquently honor President Kennedy’s memory,” LBJ was able to create a sense of urgency and to rally public opinion and a large number of legislators behind his proposals (Kearns, 1976, pp. 173–174; see also Wilson, 1986, pp. 483). Second, racial tensions heightened and the related civil rights movement increasingly gained momentum and national visibility. Against the backdrop of recurrent demonstrations, highlighted by the “March on Washington” in August 1963, LBJ was able to translate the willingness to build legislative memorials to Kennedy into a special focus on civil rights and poverty. It was within the window thus created that measures such as the Economic Opportunity Act, the keystone of the “War on Poverty,” and “the most sweeping civil rights bill in history” were passed in 1964 (Kearns, 1976, pp. 188–192; see also Light, 1983, p. 32; Levitan, 1969, chap. 1).

A second and larger window opened for Johnson as a result of the 1964 election. The opening process was more conventional this time, though it differed in one significant way from that of most of our RGs: The context of the election was not the sort that could create a crisis-mandate effect. Far from facing a desperate economic situation, Johnson himself was able to proclaim: “We are in the midst of the largest and the longest period of peacetime prosperity in our history” (quoted in Page, 1978, p. 213). Johnson won an impressive landslide victory here through a combination of public approval of his initial achievements and rejection of his opponent, right-wing Republican Barry Goldwater. As Figure 7 shows, Johnson’s mandate score for 1964 stands as the record for presidents other than FDR. LBJ thus achieved a sense of authorization for action and the empowerment that flowed from overwhelming Democratic majorities in both the House (295–140) and the Senate (68–32), margins large enough to change the composition of key committees in a way that would speed passage of programs such as Medicare (Kearns, 1976, pp. 199–206).

Within this context, the ambitious president thus pushed Congress “to go beyond the normal pattern of slow, incremental change” (Kearns, 1976, p. 212). Over the next few years, a burst of legislation larger than any in the United States since the New Deal created federal programs addressing a vast array of social problems.
from health and education to the environment and civil rights. In the latter area, crisis effects continued to reinforce the mandate-based push for reform; in the most celebrated case, the violent confrontation in Selma in early 1965 created a sense of both urgency and fear that facilitated passage of the Voting Rights Act of 1965 (Garrow, 1978). Even while many of these programs were still being debated, the window was beginning to close due to the emergence of doubt about the efficacy of the Great Society venture and, especially, escalation of the war in Vietnam. The war not only divided Johnson’s reform coalition but also sapped resources needed for the full implementation of many initiatives. Ultimately, therefore, Johnson was thus deprived of the chance for reelection and the sort of enormous, extended window enjoyed by Roosevelt. But there is no denying that the total window was at least relatively large, and LBJ’s legacy would be that the “legislative record of the 89th Congress (1965–66) reads like a roll call of contemporary government programs” (Hargrove & Nelson, 1984, pp. 73–74).

Medium-Sized Windows

Reagan’s New Beginning

As in the other cases of the late 1970s or early 1980s, the initial window for the Reagan Administration opened largely as a result of the crisis-mandate mechanism. Total window size here was clearly not on a par with that of the more spectacular cases discussed above, but it was sufficient for the launching of the first RG of the Right in the United States. A distinctive feature of the Reagan case is that the medium-sized window was selectively exploited, with a focus on instituting high-priority economic recovery programs rather than an extensive and diverse agenda as pursued in the Mitterrand case discussed below.

In the wake of the second oil crisis in less than a decade, the “misery index” (unemployment rate plus inflation rate) for the U.S. economy reached 28 in early 1980 – the highest figure recorded since the depths of the Depression in 1932 (Burnham, 1981). Although it declined to the low 20s as the year progressed, it remained bad enough for the American public generally to view “the economic situation in dire terms, amounting to a feeling of genuine crisis” (Ceaser, 1988, p. 180). The Carter Administration was discredited in the eyes of many voters not only by its apparent failure to manage the economy effectively, but also by its incapacity to resolve the humiliating Iran hostage crisis. By mid-1980, Carter’s approval rating in the Gallup poll had hit a record low for postwar presidents, surpassing even the figure recorded by Nixon in the latter days of the Watergate scandal (Beck, 1988).

It was within this context that Ronald Reagan and his Republican Party, promising a “New Beginning” based on radically conservative economic policies and a huge defense buildup, swept to a landslide victory in the 1980 elections. As Figure 7 shows, the Reagan score (9.8) on our mandate index was not large compared with that of other RGs, but it set a record for post-FDR Republican presidents. Moreover, several elements of the victory made it appear to be an electoral “earthquake.” In two-party terms, Reagan’s popular vote margin over the incumbent – only the third elected president to be defeated for reelection in the 20th century – was nearly as large as that of Eisenhower in 1952, and Reagan
actually scored better than Eisenhower had (91% vs. 83%) in the electoral college. Although the Republicans gained majorities in both houses of Congress in 1952, while winning only the Senate in 1980, Reagan’s “coattails” effect was more impressive: The Republicans gained 33 seats in the House (vs. 22 in 1952) and an eye-catching 12 (vs. 1 in 1952) in the Senate, giving the GOP a majority in the upper house for the first time in 26 years. The 1980 figures represented the largest presidential-election year increases of Senate Republicans since 1868 and of House Republicans since 1920 (Bumham, 1981; Jones, 1988; Salamon & Abramson, 1984).

Although the GOP minority in the House meant that Reagan was less fully empowered to act than were most other RG leaders, the extent of his “authorization” by the public impressed even liberal commentators and – more important – powerful congressional Democrats. Anthony Lewis of the New York Times portrayed the election as reflecting a nationwide shift toward conservatism, and House Speaker Tip O’Neill noted that he was “afraid that the voters would repudiate the Democrats if we didn’t give the President a chance to pass his program. After all, the nation was still in an economic crisis and the people wanted immediate action.” With O’Neill reading a flood of letters asking him “to give the President’s program a chance” in a time of widely perceived crisis, the urgency mechanism thus combined with the mandate mechanisms to open the window for the “Reagan Revolution” (Jones, 1988, pp. 33–34).

As accounts of Reagan’s first year in the White House make clear, this was one of the few periods in American history when “the politics of incrementalism . . . was suspended for a short time” to allow for “breathtaking legislative successes.” As Figure 2 shows, the number of legislative victories won by Reagan in the honeymoon period was smaller than the record achieved by LBJ. These statistics reflect both the more limited size of the Conservative president’s federal policy agenda, and the fact that rallying right-wing “Boll-Weevil” Democratic votes in the House required restricting the focus of reform to high-priority economic and defense issues, thus eschewing a drive to implement more divisive measures such as those pushed by the “moral majority.” But Figure 2 also indicates that Reagan achieved a larger number of legislative victories than any other post-war Republican president. The triumphs of 1981 were highlighted by the Economic Recovery Tax Act, a massive defense spending program, and significant reductions in a host of domestic programs, many dating from the Great Society. Less visible but also important were “regulatory rollbacks” that reduced the effect of such “liberal” agencies as the EPA and OSHA. All in all, these moves amounted to “one of those rare policy breakthroughs, and its effects reverberated throughout the subsequent years of the President’s term” (Jones, 1988, pp. 37–41; Barrett, 1984, chaps. 9–10; McCann, 1986, chap. 5).

Although the Reagan Revolution was often portrayed as a policy shift potentially of New Deal proportions in 1981, the spectacular successes of that year were never followed up by the sort of “Second Hundred Days” that Roosevelt enjoyed. It was the nearly unbelievable Democratic landslide of 1934 that opened the window for that second burst of innovation. In the Reagan case, the 1982 midterm elections occurred in a context of worsening economic problems and declining Presidential poll ratings, and they produced a very different (or more typical) effect: The Republicans lost a Senate seat and 26 House seats. The Democrats were thus “emboldened” enough to oppose Reagan’s initiatives, and with twice
the number of Democratic House defections now required for the President to succeed, the 95th Congress featured Stalemate and “a politics of avoidance.” A bipartisan social security reform was the only major achievement of this era (Jones, 1988, pp. 42–44; Light, 1985).

The political picture changed somewhat in 1984, as Reagan won reelection by an impressive margin. However, this second “mandate” was less imposing than that of 1980, as the Republicans gained only 14 House seats and actually lost two Senate seats. The Reagan team did manage to exploit this second small window to achieve one of “the most sweeping tax-reform bills in history,” but most of the President’s proposals were “dead on arrival” in a hostile Congress increasingly concerned about the growing problem of the deficit and mobilized against a variety of controversial foreign policy initiatives. The window closed decisively with the disastrous 1986 elections, in which the Democrats recaptured control of the Senate, and Reagan’s last 2 years were spent on the defensive combating the political fallout from the Iran-Contra Affair (Jones, 1988, pp. 44–52; Mayer & McManus, 1988).

In sum, then, the Reagan Administration faced a total window far less permissive of change than that within which FDR acted. Exploiting the honeymoon period to the fullest enabled the administration to make a profound impact on economic policy, setting the scene for an era of “contractive politics” complicated by the deficit problem. In many areas, however, the administration was insufficiently empowered to legislate desired policy redirections and was thus forced to admit defeat, compromise, or rely on administrative decrees of uncertain long-term impact (Jones, 1988, p. 56; Portney, 1984, pp. 174–175; Stockman, 1986).

Mitterrand’s France

In the Mitterrand case, as in Thatcher’s, the economic crisis of the late 1970s produced a crisis-mandate effect sufficient to open a sizable window for reform. In fact, the window that opened in France in 1981 appeared (largely due to the results of the legislative elections discussed below) for a brief time to be far larger than the medium sort predicted in Figure 6. Within a few years, however, it was evident that the dynamics of the Mitterrand case would differ in at least two crucial respects from the experience across the channel. First, evidence that Socialist economic reforms were failing to resolve the crisis, negative signals repeatedly flashed by the electorate in local elections, and the absence of any Falklands-style political boost combined to diminish the government’s perceived authorization and thus to close the window for effective reforms. Second, a strong party pressure effect compelled the government to continue its innovation campaign in the face of waning authorization and dwindling resources, thus producing increasingly disappointing and politically counterproductive results.

The socioeconomic context of the 1981 French elections featured a crisis sufficient to discredit the incumbent Giscard d’Estaing-Raymond Barre administration and thus make a good number of French electors willing to risk testing the efficacy of the program long advocated by the Left. Years of stagflation and rising unemployment in the wake of the oil shocks of the 1970s created dissatisfaction so widespread that, by 1979, Barre was receiving the worst approval ratings ever recorded by a Fifth Republic prime minister. By 1980 a vast majority of habitual supporters of Giscard’s own party were willing to admit to pollsters that
“his policies to deal with unemployment and price increases had been failures.” In that same poll, 88% of all those queried deemed the government’s anti-inflation program ineffective, and 78% viewed the antiunemployment effort in the same light (Hayward, 1986, pp. 202–203; McCarthy, 1990).

Against this backdrop, Francois Mitterrand managed to win the second ballot of the May 10, 1981 presidential election with 52% of the vote. That slim victory was dramatically reinforced when, in the legislative elections of June that followed Mitterrand’s dissolution of the National Assembly, the voters handed the Left a landslide majority. For the first time ever, Mitterrand’s Socialist Party alone achieved an absolute majority of seats in the Assembly and, together with the Communist Party and smaller allies, controlled fully two-thirds of the Assembly’s seats. As Figure 9 shows, the presidential and legislative election results together produced the highest mandate score to date in the Fifth Republic; moreover, if measured solely in terms of the legislative figures, the mandate score (31.4) nearly matched the Attlee Government’s smashing achievement of 1945. “Jubilant, still incredulous, the Socialists saw themselves the masters of France, carried along by a wave of support they had long hoped for” (Friend, 1989, p. 42).

**Figure 9:** Mandates of French governments, 1965–88
Overwhelmingly empowered, the new Socialist administration was predictably convinced that it also possessed unquestionable authorization. President Mitterrand argued in July 1981 that the elections represented a “contract” with the people to carry out the Left’s extensive reform program, and Prime Minister Pierre Mauroy followed by proclaiming that rarely “has a majority been, in such difficult times, the representative of such great hope” (Journal Officiel, 1981, p. 46). The administration thus quickly set to work “combating the crisis” with scores of refl ationary measures, largely implemented by decree, while also beginning to steward through parliament an unprecedented number of major reforms long anticipated by party activists of the Left. Many such bills (e.g., one nationalizing 12 industrial groups and 36 banks, and several changing the structure of industrial relations) related to the Socialists’ plan for economic recovery, while dozens of others dealt with a vast array of issues from governmental decentralization to the abolition of the death penalty (Favier & Martin-Roland, 1990; Ross et al., 1987; Friend, 1989).

Significant though the Socialists efforts were in some respects, by early 1982 it was clear that the “great hope” of the postelection period was already eroding. The policy of “redistributive Keynesianism” in the face of global recession produced short-lived gains followed swiftly by an exacerbated economic crisis. The years 1982–1983 thus featured a relentless series of window-closing political and economic events for the Left: by-election losses in January 1982; cantonal election losses in March 1982; announcement of an austerity program in June 1982; municipal election losses in March 1983 (bad enough this time to be deemed “10 May in reverse”); intensified austerity (or rigeur) measures in June 1983.

By June 1983, even President Mitterrand felt compelled to admit candidly that “perhaps we were dreaming in 1981” (Hall, 1987, pp. 54–58; Lancelot & Lancelot, 1987, pp. 77–84; Friend, 1989, p. 69).

By mid-1983, therefore, the window for Socialist economic reforms had decisively closed, and government policy – especially from 1984 on – officially acknowledged that fact. Given a multitude of signs that the government’s mandate of 1981 no longer entailed public authorization for reform, combined with periodic demonstrations illustrating that the “social” opposition in various sectors was both embittered and emboldened, it appeared that the window for innovation in social policy had closed as well. However, the Socialist government – eager to raise morale on the Left and pressured by party activists to ensure the implementation of long-promised reforms – continued to press its agenda from 1983 to 1985 (Bell & Criddle, 1988, p. 174). The key policy struggles of 1984 most vividly manifested how counterproductive it can be to continue pushing for reform long after the window has closed. When Prime Minister Mauroy responded to pressure from the public school and anticlerical lobbies in the Socialist Party by attempting to pass the Savary Law, a controversial reform of the state’s relationship with private (mainly Catholic) schools, the opposition twice mounted massive protests – the second involving more than a million demonstrators in Paris – and forced Mitterrand to withdraw the bill (Savary, 1985; Pfister, 1985). A bill advertised as encouraging more “pluralism” in the press, but clearly intended primarily to force dismantlement of the press empire owned by staunch conservative Robert Hersant, also aroused tremendous controversy even within the Socialist Party; this bill was put into effect, but many of its central provisions were eventually...
overturned in embarrassing fashion by the Constitutional Council (Keeler & Stone, 1987). Public disapproval of these bills further undermined support for the Left, helped unite the Right in a campaign against liberticide, and combined with economic problems to pave the way for the 1986 electoral defeat of the Socialists and the “counter-reform” government of new Prime Minister Jacques Chirac (see Friend, 1989, chap. 5).

Small Windows

Blum’s Popular Front

As in most of the other RG cases analyzed here, the window for reform opened for the French Popular Front government in 1936 in part due to a crisis-mandate effect. This case stands apart from the others, however, in one vital respect: The urgency and fear mechanisms were by far the most important factors in the window-opening process. A government with a mandate modest by RG standards (and much less imposing at close inspection than the mandate score would imply) was thus presented with a window that opened wide for the briefest of times, allowing for an unprecedented burst of reform, only to close in dramatic fashion little more than a year later.

The French elections of 1936 took place in a context of severe socioeconomic and political crisis. The Depression arrived relatively late in France, reaching its deepest point in the spring of 1935. The situation improved slightly between then and early 1936, but unemployment remained at nearly half a million and France was “an unhappy island of economic stagnation in a world on the road to recovery” (Jackson, 1985, pp. 100, 201). The series of Center-Right governments that served in the years following the 1932 elections suffered repeated policy setbacks and at times seemed to have “practically given up the attempt to cope with the internal social and economic problems of France” (Colton, 1966, p. 92). The last major government of this era, led by Pierre Laval, pursued a thoroughgoing policy of deflation that discredited the Center-Right coalition by increasing unemployment, decreasing the wages of the employed, and disillusioning “even many of the small property-owners who were the natural electoral clientele of the right” (Cobban, 1970, pp. 145–148).

Meanwhile, international and domestic political developments served to unite the forces of the Left opposition. Against the backdrop of an increasing threat posed by Mussolini and Hitler, a day of bloody antiparliamentary riots in February 1934 was interpreted by the Left as “an assault on the republic and a harbinger of a fascist triumph in France” (Colton, 1966, p. 93). This shock prompted Socialist and Communist leaders to mobilize immediately a spectacular counter-demonstration that reflected a degree of Left unity unprecedented over the past 14 years. During the next 2 years the Communists, prompted by Soviet anxiety over the Third Reich, continued to work with the Socialists and (somewhat later) the Radicals to develop the organizational basis and common program for what became known as the Popular Front. This coalition was essentially defensive, and the parties within it remained divided over many key issues, but it “carried with it an electric atmosphere” and its “program sounded a keynote of social and economic reform, civil rights, and peace.” The unity and appeal of the new
coalition were given an additional boost by two events of early 1936. In February, Socialist leader Leon Blum was assaulted by a group of rightist students; the attack not only led to another massive demonstration of the Left, but also created “widespread public indignation and sympathy toward Blum” that aided the Popular Front’s election campaign (Colton, 1966, p. 117). And in March, Hitler’s troops violated the Versailles Treaty by marching into the Rhineland, an event that not only underscored the Nazi threat but also made the French government’s foreign policy appear as “a landscape of ruins” (Jackson, 1988, p. 280).

When elections were held in April–May 1936, the coherence of the Left and the disarray within the Right produced what seemed an impressive victory for the Popular Front. The parties of the Left coalition won 12% more seats than they had captured in the 1932 elections, thus achieving a large majority of 376–220 in the Chamber of Deputies. Within the coalition, moreover, the shift in seats greatly strengthened the more progressive parties. The Communists scored the most spectacular gain, increasing their seats from 11 to 72. Blum’s Socialists gained 16 seats, and with a total of 147 became the leading party in the Chamber. The one element of the coalition that lost seats (falling from 157 to 106) was the centrist Radical party, some of whose key members had participated in the Center-Right governments of the 1930s (Jackson, 1988, p. 8; Cobban, 1970, p. 149; Colton, 1966, p. 125; Greene, 1969).

On our mandate index the Popular Front thus scored 16.5, a high Figure for French governments of the era. The new governing coalition seemed authorized to launch its program, as the election reflected “a widespread desire for action and innovation” (Colton, 1966, p. 130). However, the Popular Front’s mandate was relatively modest by RG standards and, in retrospect at least, clearly represented less than seemed to meet the eye in May 1936. Despite its common program, the Popular Front was a coalition united mainly by “the negative slogan of anti-fascism”; only 21 of the 106 Radicals elected openly supported the Popular Front during the election campaign (Jackson, 1988, pp. 49–50). Moreover, the Communists agreed to lend support in parliament but refused to participate in the cabinet. They claimed that this position was based on a desire to avoid provoking reactionary elements within the country, but it also seemed calculated to preserve party independence and thus allow the Communists to “exert pressure on the government from the outside – as a ‘ministry of the masses’ “(Colton, 1966, p. 133).

Under the best of circumstances, therefore, it appeared that Blum – the first Socialist Prime Minister of France – would face formidable intracoalition challenges. Another potential problem was posed by the fact that, empowered though it was in the Chamber, the new government faced the possibility of obstruction by a Senate that retained a solid Center-Right majority.

Although the elections had thus seemed to open a significant but relatively modest window for reform, events during the month between the second ballot (May 4) and the formal establishment of the new government dramatically altered the policy-making context. Panic in financial circles led to capital flight and a weakening of the franc, prompting Blum to issue reassuring statements regarding his moderate intentions. At the same time, however, the extreme left of Blum’s coalition began to apply pressure in the opposite direction, demanding that the new government assume power immediately and launch “a sweeping reform program boldly and rapidly” (Colton, 1966, p. 131), Blum resisted such party pressures for the moment, but the demands for drastic action soon increased enormously with
the onset of an unprecedented wave of strikes and factory occupations. By the
time the Popular Front government assumed power on June 4, “France was
paralyzed by an almost total general strike, with thousands of factories occupied”
all around the country. Even more than in the New Deal case, therefore, the
urgency and fear mechanisms reinforced the mandate effects to make sweeping re-
forms not only possible but unavoidable (Jackson, 1988, pp. 9–10 and chap. 3).

The “social explosion” or “Great Fear” of 1936 not only emboldened the gov-
ernment, but forced most of the political and social opposition to lend reluctant
support to the central components of the Popular Front’s program. Before par-
liament adjourned for the summer, 24 major reforms – from the institution of a
40-hour work week and mandatory paid vacations to collective bargaining and
the nationalization of munitions factories – had been voted with “unprecedented
speed” (Jackson, 1988, chap. 6 and p. 272; Colton, 1966, chaps. 5–6). The Right-
dominated Senate was “forced to bow to the popular will as expressed in the strikes,”
and the staunchly conservative employers federation was so “apprehensive over
the threat to private property and capitalism” that it signed the Matignon Agree-
ments granting unprecedented wage increases as well as vast extensions of union
rights. Although Blum resisted pressure from the Left to exploit the crisis to the
fullest, it should be noted that the Matignon Agreements did institute important
reforms not originally included in the Popular Front’s program (Colton, 1966,

Blum’s government had thus been pushed “farther and faster than it wished
to go” in the summer of 1936, and it ultimately paid a great political price
(Gourevitch, 1986, p. 155). As economic problems worsened (in large part due
to the 40-hour work week and other reforms) and the political opposition be-
came more assertive, the window for reform shut tight. “Not a single important
new reform was adopted after the first exciting weeks. Instead the government
found itself on the defensive, facing insoluble currency and Treasury problems,
a counteroffensive launched against the labor laws by industry, the hostility
of financial circles, an economy that refused to revive, renewed labor unrest,
and . . . rising international tension” (Colton, 1966, p. 177). In February 1937
Blum proclaimed the need for a “pause” in the reform process, and in June
the government was forced to resign – after only 380 days in office – when the
Senate rejected its request for emergency decree powers to handle the economic
crisis. By 1938 the 40-hour week reform, “the symbol of the Popular Front”
(p. 183, emphasis in the original) had been rolled back, and by June 1940 the
Third Republic itself had collapsed and the authoritarian Vichy State installed

Allende’s Via Chilena

A glance at Figures 5 and 6 reveals the most striking feature of the Allende case:
This experiment with “the Chilean road to socialism” was undertaken on the
basis of a mandate minuscule by any measure and incredible by RG standards.
Nonmandate factors served to open a total window for Allende’s reforms that was
somewhat larger than Figure 6 predicts, but his Popular Unity (UP) government
faced constraints unparalleled among RGs even during its honeymoon period. The
government’s repeated attempts to circumvent or eliminate those constraints so as
to continue the pursuit of radical reform ultimately generated a backlash that not
only halted the UP experiment, but led to the overthrow of Chilean democracy.
One crucial factor that made the Allende experiment possible was the fact that, unlike any of the other cases examined here, it followed on the heels of a genuine (and more typical) reform government: Eduardo Frei’s “Revolution in Liberty.” As Figure 10 shows, Frei won the 1964 presidential election in a landslide, setting a post-1942 Chilean record for percentage of popular vote attained. In Rooseveltian fashion, this victory was followed by a “smashing victory” for Frei’s Christian Democratic Party (PDC) in the 1965 congressional elections (Caviedes, 1979, chap. 4 and pp. 229–238; Sigmund, 1977, pp. 37–38). As one would have predicted on the basis of the theory presented in Section 1, Frei’s mandate translated into a large window of reform and his first years in office were even “compared . . . to the early days of the New Deal” (Sigmund, 1977, p. 45).

Among the major reforms implemented by the Frei government were the “Chileanization” of the copper industry and a controversial agrarian reform law. Both of these measures served to stimulate pressures for further reform to which the Christian Democratic government, beset by economic problems and political polarization, was unwilling or unable to respond in the last few years of Frei’s 6-year term. In the provinces, especially, Frei’s agrarian reforms and encouragement of unionization created a “potentially explosive” situation by mobilizing the peasants, raising expectations, and then failing to deliver on key promises (Feinberg, 1972, pp. 72–78). Meanwhile, large landowners increasingly viewed the Frei reforms as a threat and began to push for the abandonment

![Figure 10: Presidential mandates in Chile: Margin and popular vote, 1942–70](image-url)
of reform and the restoration of order. From 1969 through 1970 Chile’s growing economic and social problems translated into a spiral of social unrest and violence: urban and rural guerrilla operations, strikes, student protests, an army uprising and frequent confrontations between the police and demonstrators (De Vylder, 1976, pp. 24–27; Fleet, 1985, pp. 103–112; Morris, 1973, pp. 80–89).

As Frei prepared to leave office in 1970 (the Chilean constitution disallowed a bid for immediate reelection), therefore, his government seemed to have set the stage for either another burst of reform or a period of rollback and repression. The former seemed more likely, however, as Chilean party politics during the Frei era had manifested not only polarization but also “a significant swing to the Left” (De Vylder, 1976, p. 25). This fact was apparent in the programs of the three presidential candidates in 1970. Even the candidate of the Right, Jorge Alessandri, spoke of the need for reform, but he promised mainly conservative economic policies and the return of strong government. The other two candidates both criticized the Frei reforms from the Left. Socialist Salvador Allende and his Popular Unity coalition (which included the Socialists, Communists, Radicals, and three smaller parties) called for a democratic “revolution” featuring accelerated land reform, the nationalization of key industries, a vast expansion of social programs to reduce inequalities, and a wide variety of institutional reforms. The representative of Frei’s own PDC, Radomiro Tomic, argued that it “was necessary to go further, and deeper” with the reform process and stressed themes almost identical to those of Allende’s campaign (Sigmund, 1977, pp. 92–97; Fleet, 1985, pp. 113–114; Feinberg, 1972, pp. 96–104; Allende, 1973).

The dynamics of the electoral contest (especially the three-way race and the absence of a discredited incumbent) precluded a crisis-mandate effect in favor of a single candidate, but the context of socioeconomic and political crisis doubtless contributed to the outcome on September 4: 64.1% of the voters supported the two candidates calling for an extension or radicalization of Frei’s reforms, with Allende receiving 36.3% of the vote and Tomic 27.8%, while Alessandri came in second with 34.9%. Allende’s slim plurality did not guarantee his election, however, as the Chilean constitution required the national congress to choose between the two leading candidates if no one received more than 50% of the vote. Normally this was a mere formality, as the congress had always accepted the leading candidate, but on this occasion opposition to Allende was sufficient to generate doubt about the outcome (Sigmund, 1977, pp. 106–110; Caviedes, 1979, pp. 250–259; De Vylder, 1976, pp. 27–29).

Events between September and the congressional vote in late October included a variety of secret negotiations and conspiracies (as well as covert pressure by the United States) intended to prevent Allende’s election, but the most important developments actually served to solidify Allende’s position. First, the PDC agreed to vote for Allende in the October ballot in exchange for his acceptance of a “Statute of Democratic Guarantees” that would be added to the constitution as a set of amendments. Allende’s commitment to honor this strengthened bill of rights – including safeguards for political parties, the media, Catholic schools and the armed forces – greatly reassured those in the PDC who favored social change but were fearful that the UP might be bent on launching a Cuban-style revolution (Davis, 1985, pp. 14–15; Sigmund, 1977, pp. 118–120). Second, right-wing extremists shocked the nation by murdering the Chilean military chief
consequences of crisis and crisis management

(René Schneider), who had supported the constitutional process by rebuffing overtures for an anti-Allende coup. The major effect of this move was to discredit Allende’s most vocal critics on the Right and to split the anti-UP coalition. By the time Allende received the approval of the congress (by a 153–35 vote) on October 24, therefore, his perceived degree of authorization had been enhanced and his opposition weakened (Sigmund, 1977, pp. 120–123; De Vylder, 1976, p. 32; Morris, 1973, pp. 115–116).

Allende’s government thus assumed office in November 1970 with improved prospects of effectively implementing at least some of its program, but it was still handicapped severely by a lack of legislative empowerment unparalleled among RGs. Whereas Reagan suffered from the Republicans’ minority status in the House and Blum from the Popular Front’s weakness in the Senate, Allende was forced to cope with a UP minority in both houses. Given the Chilean system of staggered elections, Allende inherited the congress elected in 1969 in which the UP had only 57 of 150 seats in the Chamber and 18 of 50 Senate seats (Sigmund, 1977, p. 133). The government’s electoral program had included a potential legal solution to this problem: The president could use his authority under Article 109 of the constitution to call for a plebiscite proposing replacement of the traditional bicameral legislature by a new “people’s assembly.” Allende decided not to exercise this option in this early period, however, given the strong possibility that the plebiscite would fail and be taken as repudiation of the government (Davis, 1985, pp. 116–118). The government thus had to choose between one of the remaining strategies for achieving its policy objectives: (1) accept compromises with the legislative opposition sufficient to assure passage of high-priority laws, or (2) exploit “legal loopholes,” elements of decrees and laws already on the books that could be expansively interpreted by the executive, so as to implement reforms without the necessity of congressional cooperation.

Despite opposition from the extreme Left within the UP coalition, Allende did employ the compromise strategy to a significant extent during his honeymoon period. On one key issue, the nationalization of the copper mines, Allende actually accommodated the opposition enough to achieve unanimous congressional support for a constitutional amendment adopted in July 1971. However, this proved to be the only major UP reform attained in conventional legislative fashion (Sigmund, 1977, pp. 133–141; Fleet, 1985, p. 141; Kaufman, 1988, p. 196). Initially, at least, it appeared that other key reforms might be passed on the basis of Christian Democratic support; the Tomic faction of the PDC strongly backed many UP objectives, and others were willing to provide at least reluctant support out of fear that failure of the UP might usher in an era of right-wing dictatorship. However, pressures from the anti-PDC UP Left proved difficult for Allende to control, concessions to the PDC were seldom made, and by September 1971 the Christian Democrats had abandoned their stance of “constructive opposition” and joined with the rest of the opposition in a political offensive against the alleged “totalitarian designs” of the government (Fleet, 1985, chap. 4; Kaufman, 1988, pp. 144–151).

Growing congressional opposition was predicated in large part on the government’s relentless pursuit of reform through reliance on legal loopholes of dubious legitimacy. Most prominently, a variety of old decree laws dating back to the 1930s were used to “intervene” (take temporary control over) and in effect nationalize
scores of banks and industries, and key articles of Frei’s agrarian reform law were interpreted loosely enough to allow for what even moderates within the UP considered “illegal expropriations of property in the south of Chile” (Sigmund, 1977, pp. 133–134; Kaufman, 1988, p. 208). The application of such measures was dramatically widened after the April 1971 municipal elections, which yielded a 51% vote for the UP. For Allende and others who wished to control the process of change so as to avoid alienating the opposition, the effect of these elections was highly problematic: The local elections did not increase the legislative empowerment of the UP, yet the appearance of a growing “mandate” generated a “surge of revolutionary euphoria.” As land seizures and factory “liberations” by the masses proliferated, the “moderates of November” felt compelled, against their better judgment, to sanction actions of the “maximalists of April” (Winn, 1986, pp. 143–144; Sigmund, 1977, p. 148). By November 1971, therefore, Allende was able to boast that the UP’s first year had brought 90% of the banks and more than 70 industries under state control, and in the countryside more land had been redistributed than during Frei’s entire 6 year term. But it had also served to unite and embitter an opposition that was prepared to launch a counter-offensive (Winn, 1986, pp. 227–228; Sigmund, 1977).

The final 2 years of the Allende government thus featured a reprise, but with much more intensity, of the sort of economic crises and violent confrontations that had marked the end of the Frei government. As the UP continued to press for structural reform, the congressional opposition fought back with denunciations, ministerial impeachments, and a series of restrictive amendments. Meanwhile, forces of the social opposition mounted scores of demonstrations. The most spectacular occurred in October 1972, when a truckers’ strike triggered demonstrations and other strikes involving more than 600,000 protesters. On this occasion, the scale of disorder and economic disruption forced Allende to seek calm by bringing military officials into the government. The confrontational climate failed to dissipate, however, and was exacerbated again when – in the wake of the 1973 congressional elections – the government announced a controversial reform of the educational system. With Church officials (concerned about the threat to their schools) and the army now joining the opposition, the stage was set for the coup of September 1973 that toppled the government and replaced it with a military dictatorship that soon reversed the “irreversible changes” of the Allende era (Sigmund, 1977; Winn, 1986, chap. 18).

**Conclusion**

The central thesis of this article is that extraordinary policy-making generally becomes possible only when a macro-window for reform is opened by a combination of window-opening mechanisms, most prominently those related to size of mandate and severity of crisis. It has been shown that mandate size alone – reflecting the degree to which a government will seem authorized, be empowered, and feel party pressure for the fulfillment of commitments – is a very useful predictor of window size and hence scope of legislative achievement. Not only do the correlations of Section 2 support this contention in general terms, but the case studies of Section 3 – viewed against the backdrop of the mandate data in Figures 7–10 – demonstrate more specifically that governments entering
office with unusually impressive scores on the mandate index are indeed likely to face macro-windows and to exploit them so as to produce extraordinary levels of reform. In the American case, the highest mandate scores since 1932 were registered by FDR and LBJ for the Democrats and Reagan for the Republicans. In Britain, the highest mandate scores since 1945 were achieved by the Attlee and Thatcher-governments. In Fifth-Republic France, the record mandate score was achieved by Mitterrand and the Socialists. In Chile, Frei recorded the highest popular vote margin achieved since 1942 in a presidential election and his Christian Democrats won a smashing victory in congressional elections less than a year later. And all of these administrations clearly classify as reform governments, according to the definition employed here.

Mandate size does not, of course, explain all of the variance in window size and legislative achievement. As theorized in Section 1 and illustrated in the case studies, severity of crisis is another independent variable with a significant degree of bearing on the window opening process. A crisis may serve – through the urgency and/or fear mechanisms – to reinforce powerful mandate mechanisms (as in the New Deal case) or even to pry open a substantial window in cases featuring meager mandates. As shown in Section 3, however, the windows opened principally by crisis effects – in the Blum and Allende cases – tend to feature a perilous context for reform. The problems of governance within such a context may be exacerbated, as the Allende case illustrates most vividly, by the achievement of what might be termed a hollow mandate: a type of electoral victory – such as the UP obtained in the 1971 municipal elections – that provides partisans with a sense of authorization and thus heightens party pressure, but fails to enhance legislative empowerment at the national level.

Beyond the cases addressed here, it is worth noting that evidence in support of our theory of the window-opening process can be found in recent studies dealing with settings ranging from the Third World to Japan. In an influential volume on Third World responses to the economic crisis of the 1980s, for example, Nelson (1990, pp. 328–329; see also Haggard & Kaufman, 1992, pp. 30–31) notes that only 6 of 19 governments examined were found to have adopted “broad programs of structural change.” Of those 6 cases, 5 “took office after periods of acute political turbulence in which the previous government was increasingly isolated or ineffective or, alternatively, the polity as a whole was polarized to or beyond the brink of civil war,” and all of the three governments within multiparty democratic systems “were voted into office with massive public support.” By the same token, Calder (1988, chaps. 4, 11, appendix 2) argues that in Japan “surges in policy innovation” have tended “to follow the onset of political crisis,” and his data show that in both the early 1960s and early 1970s those surges were triggered by elections producing mandate scores unusually high in the national context.9

To what extent do the findings of this study provide a basis for predicting the legislative achievements of future governments? Perilous though such exercises in prediction are, there would seem to be solid grounds for expecting that record mandate scores of the future are likely – especially when accompanied by crises – to usher in new reform governments. The only exception to the high mandate-reform government rule in the data presented here is that of Pompidou’s election in France in 1969, and that exception is not difficult to explain (see note 6). In searching for other exceptions beyond the data cited here, the most dramatic case that I could find was that of Harding and the Republicans in 1920. In this instance,
a remarkable mandate score of 26.5 was achieved on the basis of disillusionment with the Democrats and the call for a “return to normalcy” by Republicans “not interested in changing policy” (Brady, 1988, p. 84; Key, 1964, pp. 182–183). If ever there were a case that perfectly illustrates the limits to the applicability of a parsimonious theory, this is it! As acknowledged in Figure 1, any rough-cut prediction based on mandate size can, of course, be rendered far more accurate if some consideration is given to other variables ranging from agenda size to the will and skill of leaders.

It also seems evident that governments elected with small mandate scores are unlikely – in the absence of a context of crisis or, as in the case of the Swedish Social Democrats, extraordinary longevity – to achieve substantial reform. Our data feature only a few modest exceptions to the low mandate-meager innovation rule, most notably the Kennedy-1960 case for the United States, the Giscard-1974 case for France (see Keeler, in press), and the Wilson-1974 case for Britain. Bunce (1981, pp. 78–79) has argued that small mandates may tend to yield substantial innovation in cases featuring intense party competition, and that argument helps to explain these exceptions. In the Kennedy case, his efforts were arguably aided by the context of the Cold War crisis, but nonetheless his reform record paled compared to that of Johnson and it has been argued that his top-priority education bill failed to pass in part due to the fact that he “could scarcely claim a ringing mandate” (Kellerman, 1984, p. 58). It is worth noting that the most recent American case has developed in a fashion perfectly predictable in terms of the theory presented here. The Bush administration, which has been strongly criticized by some for its lack of legislative initiatives, came to power with the lowest mandate score recorded in the 56 years since Roosevelt's first election. One might argue, in comparative context, that Bush’s reticence has in part reflected a healthy appreciation of the structural determinants of success on which this article has focused.

To the extent that this study has demonstrated the importance of mandates in shaping the policy-making process, it has also underscored a broader point made recently by “historical institutionalist” scholars: Institutions have a profound effect on political behavior and often play a key role in producing policy variation across nations (Steinmo, Thelen, & Longstreth, 1992). For constitutional architects, a choice of electoral institutions prone to yield high mandate scores represents, among other things, a choice to maximize the chances of inspiring visions of social transformation through legislation and of periodically experiencing the dramatic achievements – and sometimes acute disillusionment – associated with reform governments.

**Author's Note**

This article was produced on the basis of research supported by the German Marshall Fund of the United States. Much of the research was conducted while I was an Academic Visitor in the Government Department at the London School of Economics and Political Science and a Research Associate at both the Centre de Sociologie des Organisations (Paris) and the Institut d’Etudes Politiques de Paris; I gratefully acknowledge the assistance of these institutions. I would also like to thank the following individuals for comments on an earlier draft of the article: Frank Baumgartner, Valerie Bunce, James Caporaso, Peter Hall, Stanley Hoffmann, George Jones, Dennis Kavanagh, Desmond King, Atul Kohli, Joel Krieger, Gerhard Lehmbruch,
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Margaret Levi, Donald McCrone, Joel Migdal, Peter Morris, Richard Rose, Bo Rothstein, Jean Schroedel, Herman Schwartz, Ezra Suleiman, Kathleen Thelen, Margaret Weir, the other contributors to this issue, and participants in colloquia at NYU, Princeton, Harvard, and the University of Nottingham.

Notes

1. Since the first draft of this article was written, at least one very ambitious effort has been made to subject both democratic and nondemocratic reform governments to comparative analysis – see Oksenberg and Dickson (1991).

2. Established democratic system is defined here as a political system whose essential governmental structures have been in place for at least 2 decades. It is clear that the window for reform opens in a very different fashion in cases featuring governments that arrive in power in the wake of system-toppling wars (e.g., many cases after World Wars I and II) or during system-altering crises (e.g., De Gaulle in 1958). RGs within such contexts do not emerge through normal electoral processes and obviously face fewer institutional constraints.

3. It might be argued that, in regard to the United States, Britain, and France from the 1930s to the mid-1980s, these cases represent not a selection but the entire “universe” of what are generally considered to be RGs; Chirac’s government in France from 1986 to 1987, whose central mission was to roll back changes put in place by the Socialists from 1981 to 1985, certainly approached RG standards by some measures. A list of second-tier reform experiments would include the Giscard case in France, the Truman and Kennedy cases in the United States, and the Wilson and Heath cases in Britain.

4. Such party pressure was mentioned often in interviews conducted by the author with individuals who had participated in the Mitterrand government from 1981 to 1985 (see also Bell & Criddle, 1988, chap. 6).

5. Lewis-Beck (1988) provides reason to believe that the crisis-mandate mechanism will generally function less dramatically in party systems featuring coalition governments; with several parties sharing power there is a “diffusion of government responsibility” and it is difficult for voters “to pin the blame for economic difficulties on any one party” (p. 108).

6. Mayhew’s first sweep evaluates the importance of laws on the basis of contemporary judgments by journalists, whereas his second sweep is based on retrospective judgments by policy specialists. Of the 211 laws that made the sweep one list, 147 were deemed important by sweep two as well; 19 were deemed to be “historically important.” Mayhew’s was the only data source on any of the three national cases discussed here that allowed for differentiation between important and historic laws (HLs). It clearly made sense to weight the HLs more heavily, even if the degree of weighting might seem arbitrary. As reported in the text, the correlation between scores on the mandate index and number of important laws – with each HL counted as 5 rather than 1 – was .763. The correlation was .692 when HLs were weighted by a factor of only 3, and it was .503 when the HLs were not weighted at all. The leading producers of HLs in the periods considered here were LBJ (3 in 1965–66), Reagan (2 in 1981–82), and Truman (2 in 1949–50). For details, see chapters 3 and 4 in Mayhew (1991).

7. The Pompidou case represents an interesting exception to the high-mandate/high-innovation rule. Although Pompidou won the second ballot of the 1969 presidential election by a large margin, this figure was achieved in unusual circumstances. With the parties of the Left divided in the wake of the events of May-June 1968, several weak Left candidates ran on the first ballot and – for the only time since direct presidential elections began in 1965 – no Left candidate made it to the second ballot run-off. Pompidou’s seemingly impressive “mandate” was subsequently achieved in competition with a centrist of relatively limited public stature whose program did not differ dramatically from his own. As a conservative former prime minister whose coalition had been in power for over a decade, Pompidou’s policy innovation agenda was not the extensive sort usually associated with a high mandate (Quermonne, 1983, pp. 116–117; see also Keeler, in press).

8. Reagan’s mandate score, like that of the other Republican presidents since Eisenhower, is relatively low largely due to the GOP’s minority status in the House. For an excellent explanation of why even a popular Republican president such as Reagan now has such short
“coattails” – and is thus “denied the sustained institutional control necessary for legislative success” – see Brady and Fiorina (1990). One can infer from data that they provide (p. 281) that if the “swing ratio” of Reagan’s time had equaled that of FDR’s era, GOP House victories would have given Reagan a mandate score of 13.1 in 1980 – not impressive by Roosevelt’s standards, but better than any postwar president except LBJ.

9. By my calculation, based on data in Calder’s (1988) Appendix 2, the highest mandate scores from 1958 to 1979 were achieved in 1960 (15) and 1969 (11.3), compared with 9.8 for 1958, 8.4 for 1963, 6 for 1967, 2.3 for 1972, –5.2 for 1976 and –1.3 for 1979; the “surges of legislative activity” are illustrated in a chart on Calder’s p. 216.

References


consequences of crisis and crisis management


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Political Responsibility for Bureaucratic Incompetence: Tragedy at Cave Creek
Robert Gregory


Introduction

On 28 April 1995, in a wilderness area of New Zealand’s South Island, 18 people were standing on a viewing platform when it collapsed, plummeting them 30 metres below on to rocks in a cavern-like resurgence known as Cave Creek. Fourteen of them died, 10 almost immediately. Another was left a paraplegic, and the other three survived with only moderate injuries. All but one of those on the platform at the time of its collapse were members of a polytechnic outdoor recreation course, on a geology field trip. The other was a Department of Conservation (DOC) staff member. The ages of those killed ranged from 17 to 31.

The three-metres square wooden platform had been built by the Department of Conservation about a year earlier. DOC itself had been established in 1987, as part of a major reorganization of environmental administration, a component of the far-reaching state sector reforms carried out by the fourth Labour government, 1984–90. The department is required not only to preserve and enhance selected natural resources, but also to provide for the use of these resources by the public. It administers most of the Crown land in New Zealand that is protected for scenic, scientific, historic, or cultural reasons, or set aside for recreation. This comprises almost a third of New Zealand’s total land area, of about 266,000 square kilometres, including national and forest parks, with some 900 huts, and about 10,000 kilometres of tracks.

A commission of inquiry into what has become known as the Cave Creek tragedy reported late in 1995. It found that, the ‘proximate or dominant cause’ of the collapse was the failure to build the platform in accordance with sound building practice; and that DOC’s failure to maintain an adequate project management system was ‘the most significant secondary cause.’ The victims were in no way responsible for their fate.

This article examines this case in the light of some of the ideas developed by writers on public policy failures and accidents, notably Perrow (1984) and Bovens and ‘tHart (1996). It will connect these insights to issues of accountability and responsibility in public organizations, especially government departments that operate within the so-called Westminster tradition. It will argue that in answering the question posed by Bovens and ‘tHart, ‘Who is to pay?’ (1996, p. 141), the Cave Creek case shows why accountability and responsibility are related though differing ideas, and why the broader notion of responsibility requires that someone be seen to pay publicly for administrative failures that produce such tragic, unintended consequences.
Cave Creek was an example of what Bovens and ‘tHart (1996, p. 135) call an ‘instant failure’ – an episode ‘concentrated in place and time where the evidence of failure is immediate and unmistakable, such as industrial accidents, mass transportation disasters, and social breakdowns such as street riots and prison revolts.’ The commission of inquiry, conducted by a district court judge (G.S. Noble), found that the platform failed because it had been incompetently constructed by a group of local DOC workers (Noble 1995). The commission also found ‘substantial systemic failure’ within the department: procedures that would have ensured the platform was properly built were either not in place or had not been followed. According to the commission, DOC had been ‘malformed at birth’, and while a lack of funds was not a cause of the tragedy, the platform had been ‘conceived and built within a [departmental] culture developed to do more with less’ (Noble 1995, p. 74).

Bovens and ‘tHart (1996, pp. 62–3) offer two main ways of reconstructing policy events: forward-mapping and backward-mapping approaches. The former starts from the policy conception stage and traces events through to implementation ‘on the ground’, highlighting any mismatch between intentions and outcomes. The latter, which according to Bovens and ‘tHart has gained prominence since the late 1970s, also identifies any such mismatches, but focuses on how problems faced at the implementation stage might have their origins earlier in the policy process. The backward-mapping approach ‘is more likely to be sympathetic to the lower levels of the policymaking machinery, highlighting as it does the constraints on their actions by circumstances not of their own making and decisions taken by higher-ups’ (p. 69).

At the time of the tragedy, DOC was a highly devolved organization, comprising 14 regional conservancies. The department’s establishment had brought together virtually all of the government’s conservation functions, earlier distributed across six departments and agencies. The commission of inquiry’s forward-mapping view pointed out that the tragedy would not have occurred if the four DOC workers who built the platform had noticed that its construction required much higher levels of geo-technical expertise than they themselves were able to offer. Forward-mapping highlighted the failure of their immediate superiors in the conservancy to ensure that the design and construction of the platform followed the provisions of the Building Act. (These required DOC to have gained design and building approval from the local territorial authority, but it failed to do so.) Forward-mapping perspectives tended to down-play the responsibility of head office personnel, including the chief executive, and of the government of the day, in particular the Minister of Conservation. Had the Building Act been complied with before, during, and after its construction then the platform would have been safe.

A backward-mapping view was also given by the commission of inquiry. This highlighted the so-called ‘systemic failure’ to ensure that such constructions complied with the Building Act (and the Health and Safety in Employment Act). This view also pointed up what the commission considered to be ‘faults in the process of government departmental reforms’ (Noble 1995, p. 159). Judge Noble argued that
'something was lost in the transfer of responsibility from the old departments to the new' (p. 26). Some of the functions of the former New Zealand Forest Service had been incorporated into DOC in 1987, but these did not include the service’s ‘carefully structured system using appropriately skilled employees for designing and building quality structures’ (p. 26). Whereas forward-mapping presented the West Coast conservancy as almost solely delinquent in this regard, backward-mapping revealed that there were similar management failures in other conservancies as well, and that DOC’s head office had to accept responsibility for these shortcomings. Backward-mapping also raised questions about the minister’s responsibility for alleged under-funding of the department. In Judge Noble’s words, ‘Here, the evidence is clear that [DOC] lacked and continues to lack those resources’ (p. 159). Backward-mapping also linked the tragedy to the previous Labour government, which as part of its state sector reforms abolished the Ministry of Works and Development, a powerful agency responsible for, among other things, advising government on technical and safety standards on public sector building construction. Arguably, the Cave Creek platform would never have been built the way it was under the regime of this former ministry (see, for example, McRae 1986; Norman 1988). As Bovens and ‘tHart (p. 141) point out, ‘The use of the term fiasco implies that someone ought to pay for a failure, and the prefix of “policy” implies that the bill should be sent to the government.’ As it turned out, however, neither forward-mapping nor backward-mapping answered the question, ‘what went wrong?’, provided any firm conclusions as to who in the government should pay. The commission found that while ‘the department’ had been negligent, it could not apportion blame among any individuals within it. As a crown agency, DOC could not be prosecuted for criminal negligence. The commission argued that the four people who had built the platform had not been negligent in doing so to the extent that would render them liable to prosecution. No charges of criminal negligence were brought against any individual. Although the commission found that DOC had failed to comply with the Building Act and the Health and Safety in Employment Act it was exempt from prosecution under these Acts (a situation that Noble recommended be changed). However, ‘the government’ did agree to pay compensatory damages to the families of those who died and to injured victims. In sum, unlike many other fiascos/tragedies involving large bureaucratic organizations (see Bovens and ‘tHart 1996; Perrow 1984; Reason 1990; Shiels 1991), in the case of Cave Creek the commission of inquiry’s forensic analysis clearly identified the causes of the disaster. Despite this, clear answers to the question of who should pay remained politically elusive.

Mapping ‘Accountability’

In view of the great public attention paid to such an ‘instant failure’, answers to the question of who should pay were intensely political; and as Bovens and ‘tHart (1996, p. 141) suggest, discussion of them demands ‘a sensitivity to the uses of political symbols’. In New Zealand, the state sector reforms of the late 1980s and the rhetoric surrounding them had invoked four main sets of symbolic constructions addressing ‘accountability’ issues.
The Theory of Ministerial Responsibility

One symbol was ‘ministerial responsibility’. The reforms had been intended, in part, to dissipate the ‘enveloping haze’ that according to one of their architects had come to surround this doctrine in New Zealand (Palmer 1987, p. 56). If such a haze could not be dispelled in the case of Cave Creek, unprecedented as it was in New Zealand public administration in terms of the stark causal relationship between departmental failure and citizen deaths, when could it be? But there was no clearing of the haze. The forward-mapping interpretation of ministerial responsibility attributed blame away from the Minister of Conservation. In this view, under the terms of the contractual relationship between a minister and his/her chief executive, based on a reassertion of the old ‘policy/administration’ dichotomy, the minister could not be held responsible for the failure of DOC’s chief executive and his staff to ensure that systems were in place to guarantee that the platform was correctly and safely built (Capper, Crook and Wilson 1996; Hunt 1996). On the other hand, the backward-mapping view stressed that while the minister was accountable to Parliament and the public for the actions of his departmental staff, he also had to accept responsibility for the tragedy, if only on the grounds that inadequate funding of DOC had reinforced a culture of trying to do more with less (Brett 1996).

Both forward and backward-mapping interpretations of the theory of ministerial responsibility evoked widespread calls for retribution. When Judge Noble’s report was released the Minister of Conservation publicly expressed his ‘profound sorrow’ for what had happened. He resigned from his conservation portfolio more than a year after the tragedy, to ‘express my sorrow for what happened that fateful day at Cave Creek’. He assured the public that he had taken steps to put things right in the department. However, as his resignation came only four months before a general election it was seen by many as a cynical ploy, particularly as he remained a full member of Cabinet in another portfolio. Palmer and Palmer (1997, p. 74) have described it as ‘a puzzling addition to the annals of ministerial responsibility in New Zealand’. For his part, at the time of the tragedy, DOC’s chief executive (a long-standing career public servant) accepted full departmental responsibility for it, an action justly commended by one major newspaper as ‘an example of public service probity that deserves to be emulated’ (The Dominion, 4 May 1995). He resigned nearly two years after the tragedy, when his contract still had a year to run.

Both men had argued strongly that the doctrine of ministerial responsibility required them to stay in their jobs to see that managerial systems, and funding levels, were improved lest such a disaster recur. This forwardmapping interpretation thus placed rectification ahead of resignation. Putting things right was seen to be the prime responsibility of those who exercised vicarious responsibility for the actions or inactions of subordinates (Stone 1995).

The ‘decoupling’ philosophy that had been at the centre of the state sector reforms, placing ministers and chief executives in a more ‘arms-length’ relationship, seemed to justify the minister’s stance rather than the chief executive’s. In both cases, however, the rectification argument appeared to be self-serving rather than public-serving. The only principal to make an almost immediate public gesture of responsibility was the relevant regional conservator, who resigned his position not long after the disaster, as a ‘gesture of reconciliation’.
Outputs and Outcomes

Neither the terms nor language of the two principal pieces of legislation underpinning the state sector reforms offered conclusive resolution, despite their promise of enhancing ‘accountability’ (Boston et al. 1996; Scott 1995; Scott and Gorringe 1989). The Public Finance Act distinguishes between the goods and services produced by a department (outputs) and the effects of those outputs on the community (outcomes).

However, about the only certainty was that the platform was an output that produced a precise outcome: 14 dead and four injured. But should the minister pay because he purchased a lethal platform? (In the words of one Member of Parliament, DOC had built a death-trap but called it a viewing platform.) Should the chief executive pay because he was responsible for the production of this ‘output’? As Schick (1996, p. 62) later observed, ‘The output-outcome nexus . . . bifurcates government into two compartments: management and politics.’ Cave Creek has shown that the resurrection of the politics/administration dichotomy in the language of modern managerialism has been no more successful in apportioning blame than recourse to the theory of ministerial responsibility.

Agency Theory

The New Zealand reforms have drawn heavily on agency theory (see, for example, Moe 1984, 1990, 1991) as a means of enhancing accountability. Formal contractual relationships are now used to ensure that bureaucratic ‘agents’ do the bidding of their political ‘principals’, that bureaucratic subordinates comply with their superiors, and that the ‘contracting out’ of governmental services takes place in line with the purchasers’ interests (Boston (ed.) 1995; Boston et al. 1996).

Departmental chief executives are appointed on renewable contracts of up to five years. These appointments are the responsibility of the State Services Commission (SSC), a central agency which assesses the performance of chief executives each year, in terms of the performance agreements they have with their portfolio ministers.

DOC’s chief executive, who had been in his position for five years before the tragedy, had a clear duty under his contract to ensure not only the efficient management of his department but also the safety of people on the department’s premises (Laking 1996). Despite this, agency theory was unable to deliver a clear answer to the question, ‘who should pay?’ The reviews of his performance that had been carried out by the SSC prior to the tragedy found that DOC’s chief executive had been doing a good job, especially in improving the department’s systems of financial management. State Services Commission reviews of DOC and its chief executive after the release of Judge Noble’s report found no grounds for seeking the departmental head’s resignation:

In the State Service Commissioner’s assessment [the chief executive] has either exceeded or met the performance required of an able and competent Public Service Chief Executive . . . We believe he has performed well and endorse [the Commissioner’s] assessment. Nevertheless, as noted in this report, there are some areas where a more proactive or strategic approach could have been more effective . . . (State Services Commission 1995, p. 33).
Mary Douglas has argued of contemporary political discourse:

The language of risk is reserved as a specialized lexical register for political talk about the undesirable outcomes. Risk is invoked for a modern-styled riposte against abuse of power. The charge of causing risk is a stick to beat authority, to make lazy bureaucrats sit up, to exact restitution for victims. For those purposes danger would once have been the right word, but plain danger does not have the aura of science or afford the pretension of a possible precise calculation (Douglas 1992, pp. 24–5).

In providing the ‘output’ of public access to wilderness areas DOC ‘produced’ such risk (the danger of negative outcomes) to its own staff and to members of the public. DOC’s senior management’s task was to keep this risk to a minimum, by ensuring as far as possible that potentially dangerous contingencies were foreseen and circumvented. The Minister of Conservation on the other hand was responsible for ensuring that the ‘outputs’ that he purchased would meet a standard of safety sufficient to guarantee that the policy outcomes were not ‘negative’.

DOC is, in Perrow’s terms (1984, p. 332), a multi-goal, interactively complex, and loosely coupled organization (see his matrix, reproduced in Figure 1 below). Loose coupling means that if something goes wrong – such as the failure to seek proper building approval – later correction remains possible. As Perrow points out, ‘nor do

![Figure 1: Perrow's interactions/coupling chart](source: C. Perrow. 1984. *Normal accidents: living with high-risk technologies*. New York: Basic Books.)
things have to be in a precise order’ (1984, p. 98). Interactive complexity refers to the lack of a tight linear structure and the high probability of unexpected synergistic (possibly negative) interactions among component parts. In DOC, for example, regional conservancy staff were required to administer a wide range of diverse departmental functions, including land and resource management, wildlife and plant conservation, pest control, and recreation facilities and services; and a group of local staffers, all incompetent in the task, had proceeded to build the platform at Cave Creek.

There was much that had the potential to go wrong. Accordingly, there were strong managerial incentives – in theory at least – to ensure that control systems were working to reduce to a minimum the potential for failure. But even had DOC management done everything to make sure that the systems were in place to maximize safety, such is the nature of a loosely coupled interactively complex organization that something is always likely to go awry. Unlike the situation in a tightly coupled interactively linear organization there is usually the time and means of correcting it if it does. Those who hold the top positions of responsibility in organizations like DOC therefore face higher levels of uncertainty, in terms of their capacities to control behaviour and events; but against this they have greater means of ensuring that potential problems, disasters, or fiascos can be avoided once they begin to transpire.

Seen in this light the tragedy of Cave Creek is a dramatic failure of organizational management at both the central and regional levels. Over a two-year period steps could have been taken at any time to correct the design and construction errors that had already been committed. The commission of inquiry pointed to at least two opportunities for corrective action. On a visit to the site nine months before the tragedy DOC’s regional head asked his subordinates to check that the necessary building consents had been obtained. These instructions were not followed up, and the commission observed that the need for a building consent was regarded as an administrative issue rather than one of safety. Further, a day before the platform collapsed, a DOC officer who was standing on it with another group of students felt it move. She notified a colleague of this (who died in the collapse the following day) but because she was not versed in construction matters never thought that the platform was unsafe. (She later received an honours award in recognition of her presence of mind immediately after the platform collapsed, when she was standing nearby and took action to help organize rescue services.)

High public officials may be willing to accept responsibility only for those consequences that they intend to happen, and may try to evade it when they are faced with negative unintended consequences. However, the political risk of undesirable and even unforeseeable consequences is always present, given the nature of the tasks undertaken by public organizations like DOC.

When the field-trip group stood on the viewing platform at Cave Creek their physical safety was clearly at great risk; but they were entitled to believe that DOC would have ensured that the platform was safe. Subsequent events showed no correlation between the perilous position in which they unknowingly placed their lives and the willingness of either the minister or the chief executive to knowingly accept the risks of office that their respective tenures entailed. Their reluctance to pay any personal price for the tragedy suggested little appreciation of the fact that the powers of high office are risk-laden, and that the financial and other rewards of office mark not only the degree of responsibility but also the scope of the risk.
Systemic Failure or Bureaucratic Incompetence?

The case of Cave Creek has assumed an almost bizarre character. In finding that no one individual’s performance had fallen below the duty of care required by either the Building Act or the Crimes Act, Judge Noble seemed to unwittingly introduce into the bureaucratic lexicon the notion of ‘careful incompetence’.

The concept is absurd and of no use in addressing issues of accountability and responsibility. When people make a journey by aircraft, for example, they rightfully expect that the flight-crew in whom they tacitly place their trust will have been appointed to their positions on the basis of their professional competence, and they will do their job with care and diligence. Passengers do not want to fly with a flight-crew that is competent but careless (let alone with one that is careless and incompetent). Nor do they wish to take off with a flight-crew that is careful but does not know how to fly the plane, even though it is careful to do the best it can. The 18 people who walked on to the platform at Cave Creek undoubtedly had the same tacit trust in DOC’s competence. So the idea of ‘careful competence’ (see Figure 2 below) is the only valid standard against which to gauge the actions of those directly implicated in the tragedy at Cave Creek. The platform could only have been built the way it was by people described by Lucas (1993, p. 201) as ‘well-meaning incompetents.’

Ott and Shafritz (1994) argue that organizational incompetence stems from and is sustained by organizational culture, and is changed by altering this culture, rather than individuals. DOC’s culture of ‘doing more with less’ may have been a source of more widespread organizational incompetence than was revealed by the single example of Cave Creek. The evidence was that such ‘systemic failure’ was not confined to one regional conservancy, and that the safety of other DOC constructions may also have warranted closer scrutiny. The department carried out such inspections after Cave Creek, but the full results are not publicly known.

So what does ‘systemic failure’ actually mean? There are three possible interpretations. One is that a system of procedural and technical controls is faulty in design, and therefore inadequate in preventing undesirable outcomes. Another is that although such a control system is adequately designed, operators fail to comply with it. And lastly, ‘systemic failure’ may mean that an adequate control system has not been put in place at all, so in its absence operators have nothing to comply with. Only the first of these can rightly be regarded as genuine systemic failure. In the other two cases it is really human error or malfecance that is at issue – in the last instance because managers, for example, have failed to put the

![Figure 2: Care and competence](image-url)
The commission of inquiry’s finding of ‘systemic failure’ promoted a reified conception of responsibility borne by an impersonal entity. Such interpretations reinforce the tendency to see large organizations as abstract entities with a life of their own. Clearly, however, it was a failure of individual performance that lay at the heart of this disaster. Those people who actually built the platform were not competent to do so; but nor had their superiors, both in the region and at head office, displayed competence in ensuring through adequate systemic design that the constructions complied with the Building Act. In this case it is almost as if the viewing platform designed and built itself. This sort of conceptualization fudges rather than clarifies issues of accountability and responsibility.

Accountable but Not Responsible

Bureaucracies, in Arendt’s (1963, p. 289) words, constitute the ‘rule of Nobody’, if left to their own devices. The political community must strive to ensure that in a democratic society bureaucratic power is exercised both accountably and responsibly. The two ideas, though interconnected, are not synonymous. As the author has argued elsewhere, ‘Accountability is the need to account for – to explain, justify, or tell a story about – one’s actions to one’s superiors in the hierarchical chain of command’ (Gregory 1995, p. 19; Gregory 1995a). Accountability is answerability; but the story that one tells one’s superiors may be either true or false, which means that many organizations – especially where the nature of the job gives operatives considerable discretionary authority – face major monitoring problems (Kaufman 1973). This is the ‘moral hazard’ which occupies the minds of agency theorists. If the account is true then we may speak of accountability as truth-telling; if false, then we are likely to be speaking of accountability as self-protection.

In a hierarchical context a person is required to provide an account of those duties they are entrusted to carry out. Among these duties may be the need to see that subordinates carry out their duties as well. In this sense a superior must accept responsibility for the (in)actions of his or her subordinates. Thus, responsibility is a duty of obligation; but it may involve conflicting duties of obligation, that is, responsibilities not just for carrying out allotted duties, but also for considering how these may impinge upon a sense of personal obligation which pulls in other directions: to one’s conscience, moral code, to ‘the public interest’, and so on. This is the stuff of moral dilemmas.

As Stone (1995) argues, accountability is about legitimizing the use of administrative discretion. Those who built the Cave Creek viewing platform were exercising their discretion in the field, beyond any close managerial supervision. Had they followed the necessary (but virtually nonexistent) control procedures the tragedy would not have occurred (Capper, Crook and Wilson 1996); but it was not bound to occur in the absence of those procedures or as a result of any failure to comply with them. The collapse occurred because DOC officers, both top management and those who actually built the platform, were accountable but not responsible. This distinction was largely overlooked in the public debate, which generally bemoaned a lack of public ‘accountability’ for the event (see for example, Hunt 1996).
Accountability requirements, as truth-telling rather than self-protection, were well fulfilled after the tragedy occurred. The fact that control procedures were not followed before the disaster was a failure of accountability, inevitable to the extent that such procedures were not in place to begin with. No account of the design and building actions would be given, true or otherwise, if it was not required. It must be noted too that at least one important account given was false. The commission of inquiry disclosed that when local DOC officers considered applying for a retrospective building permit they were working with plans that did not accurately describe how the platform had been built.

The degree of responsibility exhibited by the principals was much less convincing than their willingness to be accountable. In Lucas’s words:

A responsible person is one who can be left in charge, who can be relied upon to cope, who will not slope off, leaving the job undone, or switch off, leaving the business unattended to. So long as a responsible person is responsible, you can sleep easy, knowing that no extra vigilance on your part is called for, and that he will see to it that all goes well.

‘Responsible’ in this sense is an adjective, denoting a quality of character and mind, not a position within a web of dialectical obligation. . . . It is a term of high commendation, though from an external point of view. We want to have responsible people about in positions of authority, performing their duties reliably and well (Lucas 1993, p. 11).

When set against this interpretation, accountability – the need to answer for one’s (in)actions – is best understood as a necessary but not a sufficient condition of responsibility. As in Cave Creek, it is entirely possible for public officials (and others) to be accountable but not responsible, to be accountable but irresponsible.

Hence, four DOC workers came together for the job as part of an allhands-to-the-wheel culture, in which staff members moved beyond their main duties to assist others as and when necessary. This particular working party acted collegially, with no-one clearly in charge. A bag of bolts intended for the job was discovered after the collapse, in bush near the site. A length of steel that was to have been used to secure the platform to concrete steps acting as a counterweight was not taken to the site, and the platform was never bound to the counterweight. The four men built a cantilevered platform without stopping to think that this construction was unlike others they were familiar with which stood four-square on firm ground. According to Judge Noble, in reference to the 30-metre drop over which the platform was erected, ‘Experienced staff saw what they expected to be there, not what was there’. This was a failure to engage in what Schon (1983) has called ‘reflection-in-action’. Or in Perrow’s terms, their ‘rational’ decisions were based on a wrong a priori contextualization; ‘If a situation is ambiguous, without thinking about it or deciding upon it, we sometimes pick what seems to be the most familiar context, and only then do we begin to consciously reason’ (1984, p. 318. Emphasis in original). In failing to think adequately, especially in circumstances where the realities of the situation ought to have been clearly evident to them, those who built the platform acted irresponsibly, individually and collectively.

DOC’s chief executive and certain of his senior managers were also accountable but not responsible in their inactions. Less clear, perhaps, was the extent of
the minister’s failure to act responsibly. On the one hand, under the terms of the State Sector Act and the Public Finance Act, the job of ensuring safety standards in DOC constructions had been handed over to the chief executive, who should have ensured that no such death-trap would have been built (regardless of low or inadequate departmental funding). On the other hand, under a literal interpretation of the Public Finance Act the minister was irresponsible in the sense that he could not be trusted not to ‘purchase’ a highly unsafe viewing platform as a departmental ‘output’.

**Vindicative Political Responsibility**

Political responsibility remained inadequately fulfilled since there was no gesture made that could demonstrate with sufficient symbolic force that at least one principal in this major public drama was willingly prepared to pay a major price. As it was, the pleas by the minister and the chief executive that they were acting responsibly by staying on to make sure that things were put right could be seen as self-serving rather than public-serving. Why can their response be considered inadequate?

**The Uncaring Nature of Impersonal Systems**

The impression that large governmental bureaucracies are effectively beyond anyone’s control is not without substance, but at the same time the need for political legitimacy demands that at least a symbolic level of democratic control is maintained. At Cave Creek a department of state killed and injured a group of citizens. While many other governmental acts of commission or omission may seriously harm, even kill, citizens, here it was clear and unambiguous. In such a case the duty of official responsibility is in the first instance to take steps to ensure as far as possible that there can be no recurrence. In the second it should be about demonstrating with symbolic force that impersonal governmental systems are guided ultimately by standards of justice and fairness, and remain in sympathetic touch with the real feelings of the citizens they are supposed to serve. In failing to resign promptly and convincingly the minister and the chief executive only reinforced the perception that dehumanized systems may work competently or incompetently but to the extent that they are dehumanized they are therefore to that degree incapable of caring.

‘The Necessary Myth of Guilt at the Top’

Allied to the above is what Bovens and ‘tHart call ‘the political paradox of achievement’ (1996, pp. 37–9): the fact that especially since the Second World War societal demands on governments have carried with them increasingly high standards for judging their actual performance. Politicians and bureaucrats help foster these expectations by sustaining the myth of ‘rational, just, and omnipotent governance’ (p. 39). This has clear implications for official responsibility. Either politicians and officials must be prepared to admit failure and accept the consequences when things go manifestly wrong, since failure is by definition a mark of their incompetence, or they may seek to lower expectations of governmental capabilities, and so reduce
the risk to their own personal interests. They cannot have their cake and eat it too, which is to say that there can be no valid justification for accepting the rewards when things go well and evading the sanctions when they go badly.

Because much policy making and implementation is about avoiding undesirable outcomes rather than achieving desirable ones public officials often find themselves on ‘a hiding to nothing’. As Lucas (1993, p. 206) points out, ‘... there is nothing most office-holders can show as an achievement they can be proud of. The fact that during their tenure of office they saw to it that no disasters happened escapes notice’. A related point is made by James Q. Wilson (1989), whose concept of organizational ‘learned vulnerabilities’ is relevant to DOC’s experience with Cave Creek. In Wilson’s words (pp. 191–2): ‘When something goes badly wrong at high political cost the incident enters the agency’s memory as a legendary horror story. A great deal of the time and energy of agency officials is devoted to creating mechanisms designed to ensure that the horror never recurs.’ When such ‘horror stories’ occur, as with Cave Creek, it may be that some politicians and officials are literally caught in the wrong place at the wrong time. However, the risk they run as holders of high public office is that their personal interests will need to be sacrificed in the interests of the greater public good. Again, quoting Lucas (1993 p. 188), ‘If I undertake responsibility, then not only is it my duty to see to it that bad things do not happen, but I carry the can, despite my efforts, they do.’

Although (as Max Weber said) modern bureaucracy is the most rational known means of exercising imperative control over human beings, it does so imperfectly. If bosses often find it difficult to ensure that operators do what is expected or commanded of them this is because the latter exercise more discretionary authority than the ‘ideal’ model might allow. The converse, of course, is that the bosses may not be directly blameworthy when things go wrong. But in the relative absence of non-hierarchical means of executing complex, large-scale tasks, hierarchical principles can be sustained only by what Shklar calls the ‘necessary myth’ of ‘guilt at the top’ (1990, pp. 63–4).

‘Efficiency’ was one of the two main symbols (‘accountability’ was the other) invoked in shaping New Zealand’s state sector reforms. But the symbolic force of the quest for greater ‘efficiency’ can only be sustained if those who live by the sword of efficiency are willing also to die by it. There was nothing efficient about the failure to ensure that the Cave Creek platform was built safely.

Vindicative Personal Responsibility

Much of the public demand for ‘accountability’ in the case of Cave Creek was driven by a desire for retribution, satiable by the dismissal of one or both of the most visible and senior principals, the minister and the chief executive. However, the questions ‘who is to pay, and why?’ are not necessarily about the imposition of sanctions. Although dismissal may have satisfied retributive instincts it may also have denied the opportunity for the sort of genuinely responsible action necessary to reaffirm symbolically the integrity of governmental institutions. Such action must be voluntary not imposed. Its imposition may serve only to reinforce perceptions that governmental officials are more concerned with salvaging their own reputations than with serving the broader public interest.
When all is said and done the manifest integrity of governmental systems can be sustained only by the sense of responsibility displayed by those officials, elected and appointed, who lead them. Essential to this is what Lucas (1993, p. 95) calls a ‘vindicative account’ as distinct from a ‘vindictive account’. The former is a communicative rather than a consequentialist action. Because punishment – by way of resignation, for example – is voluntary and not imposed it is for that reason more symbolically efficacious in vindicating ‘the community’s system of values’ (p. 98). In his words:

> If I pay out I make it clear to everyone that wrongdoing did not pay: my bad decision has cost me dear. No king would naturally and unconstrainedly submit to flagellation, and if a king does so as a penance, it is very clear to all his subjects that he would not now, in the light of these adventitiously annexed consequences, have made the same decision as he originally did. It is an emphatic disavowal of his deed, and its meaning, thus underscored, cannot be gainsaid by anyone (Lucas 1993, pp. 97–8).

A vindicative account clearly confirms, at least symbolically, that a governmental system is actually capable of caring about those who are victimized by its failings. All this is not to deny that vindictive punishment in the circumstances discussed here may not serve ‘pour encourager les autres’, but it cannot serve as the primary means of affirming a sense that governmental institutions actually care. Because it creates in itself an incentive for individuals to evade legitimate responsibility it tends therefore to undermine such a sense.

Clearly, no-one intended that people should die at Cave Creek. But as Lucas (1993, p. 277) points out: ‘. . . responsibility is not just a physical concept subject to the standard physical constraints of locality and temporal antecedence, but is, rather, concerned with the significance of actions and their interpretation, where it is perfectly possible for the meaning to be altered ex post facto’. Cave Creek would have had little or no meaning if the department’s compliance systems had remained deficient even though, perhaps by good fortune, no disastrous consequences flowed from this inadequacy. Senior management would have been responsible for this deficiency but would not have been required to give a publicly vindicative account of their responsibility. (Similarly, had the officer who detected movement in the platform the day before it collapsed been able to ensure that access to it was closed off, she would probably not subsequently have received an honours award.) While it would have been unreasonable to expect resignations at a higher level immediately after the platform collapse – while the picture of what happened was still emerging – the appropriate time should have been when the commission of inquiry’s report was released. The failure on the part of Cave Creek principals to say sorry in a way that was unmistakably sincere, because they did not believe that their (in)actions directly caused the tragedy, in a real sense enhanced rather than diminished their responsibility for it.

Lastly, vindicative responsibility is not to be confused with cynical scapegoating. Rather, it is the middle-way espoused by Shklar (1990) between that on the one hand, and on the other the no-fault determinism of advanced technological society on the other. As she observes, ‘. . . public agents should not be encouraged to feel
that they are in the grip of necessity and personally powerless. They can usually perform better and more responsibly than they do and at the very least be guilty of only passive injustice’ (Shklar 1990, p. 65).

Punishment and Remedy

Much of the above argument reverberates in the Westminster doctrine of ministerial responsibility. Ministers are obliged to accept personal responsibility under some circumstances and vicarious responsibility under others; and the trick is to know what can be accepted politically as the difference between the two. In public debates that attend such decisions in New Zealand, Bagehot’s view that ministerial dismissal ‘may not be a remedy at all; it may be only a punishment’ (1963, p. 288) has tended to prevail. Ministers meet the generally accepted requirements of ministerial responsibility by accounting to Parliament and by ensuring rectification rather than by offering their resignations (Martin 1991, 1994; Palmer 1987; Palmer and Palmer 1997; Roberts 1987). In what is arguably the *locus classicus* discussion of New Zealand’s constitution, Scott (1962, p. 130) argues that, ‘Resignation performs a useful function only in cases of misconduct and gross incompetence’. And no minister of the crown has resigned for reasons of personal or vicarious responsibility since 1934.

Cave Creek gives cause to reflect on that position, and as a case will almost certainly excite as much scholarly interpretation as has the argument by a minister in 1944, who insisted that he was ‘responsible but not to blame’ for his department’s laxity on major tunnel construction projects. The notion of vindicative responsibility suggests that there may be exceptional cases, like Cave Creek, where contrary to Bagehot, resignation is a punishment and a remedy simultaneously, and is warranted in cases other than those involving Scott’s ‘misconduct and gross incompetence’. The remedy required is not just a restoration of public confidence in the competence of its governmental agencies, critical though this is, it is equally about restoring its trust in their fairness, compassion, and therefore their legitimacy. The failure of political responsibility over Cave Creek has done nothing to reduce the high levels of public cynicism that already existed in New Zealand towards politics, politicians, and political institutions (see, for example, Denemark 1987; Lamare 1991; Kelsey 1995).

For its part the State Services Commission has sought to clarify the responsibility and accountability expectations placed on departmental chief executives (State Services Commission 1997), in the light of Cave Creek. It has suggested that they could opt to resign in cases of ‘performance failure’ even though they themselves were not at fault. ‘The chief executive may consider that in those circumstances the appropriate decision is resignation on the basis that although there is no legal obligation to do so, that course will serve a greater public interest’ (p. 10).

This suggestion has not met with approval from some commentators who argue that it does not place sufficient weight on ministerial responsibility, which according to Palmer (1997) ‘still drives this [New Zealand] system’. Ironically, because of the exceptional circumstances of this particular tragedy it may be that the State Services Commission had been unwise in generalizing from it in its suggested reframing of ministerial responsibility.
Conclusion: A Wider Sense of Proportion

Cave Creek offers what is arguably a worst-case scenario in the study of governmental accountability and responsibility: the failings of governmental employees directly and unambiguously resulted in death and injury to a group of citizens. Because such cases are exceptional they require exceptional responses. They demand the demonstration of a wider sense of proportion than that which is normally provided for in debate over the meaning of ministerial responsibility. But their very starkness may make such a response less rather than more likely.

Since Cave Creek, official responses like those of the State Services Commission (1997) indicate that a sensible accommodation between traditional conventions of ministerial responsibility and the conceptual framework underpinning the state sector reforms has still to be worked through. This will not be easy. It is impossible to know whether the responsibility outcomes would have been any different had such a tragedy occurred before the state sector reforms. They probably would not have been, given the ‘non-resignatory’ ethos spoken of above. Notwithstanding that, the reforms, driven by economistic assumptions of self-interested political and bureaucratic behaviour, may tend to reproduce such behaviour in a self-fulfilling way, at the expense of more public-spirited attitudes and values. Some empirical research indicates, for example, that in New Zealand a more legalistic mentality might be emerging among senior public servants, possibly due to the introduction of contractualism in its various forms, and that an increase in the numbers of officials educated in commerce may weaken commitment to traditional conventions of ministerial responsibility (Gregory 1995b).

A wider sense of proportion must entail an appreciation of the nature of public responsibility, as distinct from managerial accountability. Notwithstanding the rhetoric of greater managerial autonomy which surrounded them, the reforms were driven by the desire to enhance bureaucratic control, the better to ensure the efficient use of resources. On his retirement, before the Cave Creek tragedy occurred, a former New Zealand chief ombudsman publicly commented on what he saw as the impact of

new executives bringing with them practices from the private sector . . . the increase in the percentage of complaints resolved in favour of complainants during the reform period suggests, perhaps, that all this frenetic activity in search of efficiency and effectiveness has somehow partly desensitised the administrators to the human aspects of public administration (The Evening Post, 12 December 1994).

A preoccupation with technical competence and efficiency arguably tends to venerate the need for accountability as organizational control rather than promote the likelihood of responsibility as individual integrity. It conceptualizes in ways that tend to be disconnected from the vital and fluid world of experience, and is not well suited to fostering the moral and ethical competence necessary to serve higher, less measurable, values. It may foster efficiency, gauged in monetary terms; but it is no guarantor of good political and social judgement on the part of individual governmental officials. Such judgement, however, is essential in securing genuine political responsibility for the humanity and justice of governmental institutions and processes.
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Can governments learn? The title of an influential monograph by a leading political psychologist (Etheredge, 1985) posed this seemingly simplistic question. At first glance, the obvious answer to such a blunt question would appear to be ‘of course’. Governments (and government agencies) persist in spite of, or in some cases because of, dynamic and often hostile political environments. This would seem to indicate that a significant degree of learning is taking place. Yet many scholars, including Etheredge 1985 himself, are markedly skeptical about the learning capacity of policy-makers and governmental organizations and argue that governments learn poorly or slowly at best (Sabatier, 1987; Lebovic, 1995:835). How can this be? Is this apparent paradox an artefact of the ways in which scholars define and operationalize the concept of learning?

Part one of the article will present a brief and selective survey of the diverse interdisciplinary literature on policy and political learning. This preliminary conceptual analysis identifies several difficult issues. Among the most serious is the ontological question (who or what learns?) and the problem of distinguishing learning from other types of political change, which raises thorny normative and methodological questions.

The second part of the article brings the concept of crisis into the learning equation. It has been hypothesized by a number of scholars (George, 1980; Goldmann, 1988; Young, 1989; Olsen, 1992) that conditions associated with policy crises, and their aftermath, may facilitate learning and change and contribute to overcoming governmental inertia and political dynamics which often inhibit learning under ‘normal’ conditions. For example, it is argued that the experience of crises may contribute to a posture of cognitive openness conducive to individual and collective learning. Crisis experiences tend to re-order the political agenda, stimulate an appetite for change and reform on the part of the electorate and the mass media and, thus, create moments of political possibility, ‘policy windows’ (Kingdon, 1984), which create opportunities for agile reformers before they close. A ‘balance-sheet’ approach is used in order to examine the plausibility of the crisis-learning hypothesis. This entails posing twin questions. First, what are the characteristics of crisis situations (or political systems which have experienced crises) likely to promote governmental learning? Secondly, what are the characteristics of crisis situations (or political systems which have experienced crises) likely to create obstacles to learning?

Some preliminary thoughts on how to go about conducting empirical research in this area, and some reflections upon the results of the conceptual analysis, are presented in the last two sections of the article.
Conceptualizing Learning and Change

Any analyst contemplating employing the notion of political or policy learning must be sensitive to a cluster of conceptual issues which inevitably arise in its application and which have led a recent observer to refer to learning as a ‘conceptual minefield’ (Levy, 1994). Most approaches to learning view the phenomenon as generating acquisition of new knowledge, skills, ways of thinking or modes of social organization (Etheredge, 1981; Nicolini and Meznar, 1995). However, that minimalist consensus camouflages a hot-bed of dissensus. Learning is a concept which cuts across virtually all of the major theoretical and meta-theoretical cleavages in the social sciences. A broad range of positions on questions such as the locus of social learning (who or what learns?); the nature of and ‘motors’ driving such learning; developing corresponding criteria for distinguishing between learning and non-learning-based change phenomena; and the relationship between power and learning are visible in a diverse body of literature devoted to the concept.

The locus of learning (also known as the ontological problem) has to do with the question of at what level of social aggregation learning takes place. In other words, who or what learns? A number of schools of thought take it as axiomatic that learning occurs only in individuals, as envisioned in the developmental learning approaches associated with Piaget and Kohlberg. From such perspectives, collective learning is ‘metaphorical’ (Sabatier, 1987:671, 685).

Other scholars take a radically different point of departure (Modelski, 1990:7), positing ‘systemic’ learning in very large-scale social formations, such as the international system. To such scholars, individual learning is far removed from their focus of attention. From a policy perspective, the most interesting approaches to social learning are at intermediate (or meso) levels of analysis (March and Olsen, 1989; Lebovic, 1995), where individuals linked in smaller-scale social structures, such as groups, networks and organizations, think and learn collectively through communicative interaction. A prime example of such an approach is Argyris and Schon’s (1978) theory of organizational learning:

Organizations are not merely collections of individuals, yet there is not organization without such collections. Similarly, organizational learning is not merely individual learning, yet organizations learn only through the experience and actions of individuals.

It has recently been suggested that the small group or work team is replacing the individual as the fundamental learning unit in the modern organization (Senge, 1990). Other analysts (Ciborra, 1992:94–98) posit inter-organizational networks as basic learning units particularly well suited to innovation in dynamic, competitive environments. In a classic monograph, Etheredge (1981) reviews and synthesizes individual and organizational learning theories impacting on government (executive branch) learning. All of these ‘institutional’ approaches emphasize the importance of communicative processes in contributing to collective learning.

The deployment of the learning concept from an institutional perspective often focuses on the development of roles, rules and routines through social experience. Experience of particular social problems may reveal gaps in the technical infrastructure or action repertoires of individuals and institutions. Conscious attempts to fill such gaps by (re-)designing rules and organizational procedures
to cope with future instances of the problem may be considered attempts at experience-based learning.

A key pre-requisite for experience-based learning is the extent to which institutional memory is cultivated and accessible to participating actors (Etheredge, 1981:83). Unfortunately, governmental (and many other kinds of organizations tend to be weak in this area. Systematic efforts to maintain and make organizational experience available to current decision-makers are unusual. Valuable competence and stores of experience are routinely lost through staff attrition. As a result, organizations forget, as well as learn. Over the long-term, differences in the rate of learning or forgetting are influential in determining whether competence-building or competence-decline is taking place.

An important question is the extent to which it is possible for such learning to take place vicariously, through the observation of the experiences of others. Clearly, this strategy promises a potentially economical alternative. By emulating the successes and avoiding the failures of others, one should be able to garner the benefits of experience without paying the costs entailed by the more negative experience. The experiences of others are often imported into the analysis of current policy problems via analogical reasoning. Analogical reasoning may facilitate the development of more nuanced images of the social and material environment, while avoiding some of the costs of learning by trial-and-error based exclusively on first hand experience (Comfort, 1994:157, Khong, 1992). Some of the difficulties associated with direct and vicarious learning will be discussed below.

Experience-based learning may be seen as a broad category of learning which covers a number of sub-types.7 These include: explanation-based learning; cognitive differentiation and integration; competence acquisition; and moral learning.8

Explanation-based learning: This type of learning results from the application of reason and reflection to direct, vicarious or virtual (see below) experience (Hermann, 1990:11) The analysis and interpretation of past experiences may generate new understandings of ‘causal’ processes which have generated previous favorable or unfavorable outcomes. Attempts to understand the constellations of factors producing a particular result, may lead to heightened consciousness of potentially obscure or counter-intuitive relationships and which may inform subsequent decisions.9 Explanation-based learning attempts often entail the use of implicit counter-factual reasoning. This, generally, takes the following form: if a given factor or variable had been different, the course of events would have taken a different turn and negative consequences could have been avoided. Of course, alternative explanations may lead to multiple, and quite possibly conflicting, prescriptions for policy learning.

In the wake of the 1994 M.S. Estonia ferry accident, for example, a number of competing or complementary explanations for the disaster have surfaced. Initially, the Swedish seaman’s union suggested personnel practices (for example, the use of an allegedly inexperienced, ill-trained and non-Swedish crew) as a possible contributing factor. Subsequently, other commentators have focused upon factors such as competence of command (such as the alleged excessive speed of the vessel given the poor weather conditions), deficiencies in the ship’s design, decentralization and lack of accountability in the over-sight regime and many other alleged inadequacies. The various explanations are amenable, to varying degrees, to the various stakeholders and have different implications for proposed reforms.
designed to minimize the likelihood of future ferry accidents at sea (Hellberg and Jörle, 1996).

**Cognitive differentiation and integration:** One of Etheredge’s (1981) dual criteria for the identification of learning is increased intelligence and sophistication of thought. Making use of this criterion implies a comparative assessment of a social actor or set of actors over time. Does it (or do they) exhibit a greater degree of conceptual differentiation, leading to more sophisticated analysis and explanation in the later period than in the previous one? In assessing the hierarchical integration of thought processes, one asks whether the individual or collective in question demonstrates an enhanced ability to ‘...coherently pull together and systematize all the complexity, relate parts of the problem to each other, relate parts to wholes, to evidence and inference?’ (Etheredge, 1981). In other words, are the decision-makers exhibiting a progressively more sophisticated understanding of the problem facing them, as time goes on?10

The notion of sustainable development may serve as an illustration of this kind of learning. Traditional approaches to economic development tended to neglect the environmental impacts of alternative development strategies. In particular, resource conservation and the long-term effects of industrial pollution were often seen as irrelevant to economic planning decisions. The formulation of the concept of sustainable development may be seen as an attempt to integrate environmental considerations into the development planning process. Arguably, this conceptual innovation is indicative of an increase in integrative complexity in this issue area.

**Competence Acquisition:** Learning has often been conceptualized as the mastery of increasingly complex tasks. Breslauer and Tetlock (1991:6) term this variant ‘learning how’. Thus, the changes in the level of skill exhibited by the actor in question between two or more points in time becomes a key indicator of the degree of learning which has taken place. Etheredge (1981:81) too posits skill as an important dimension of learning. Skill refers to the capacity, given adequate resources, to translate intentions into successful outcomes. It is engineering knowledge, applied practical knowledge about how to make things happen. Closely related to the development of competence is the development or redeployment of material resources which may facilitate task achievement, such as acquisition of improved tools or infrastructure.

A good example of this type of learning is the Swedish experience with the Ebola virus. In the late 1980s, a case of the virus was discovered at a Swedish hospital. At that time, the Swedish medical establishment had little readiness for dealing with infectious diseases of this type. It was deemed necessary to draw upon foreign expertise and equipment; specialized medical teams from the United States were brought in. That experience led to a decision to develop the relevant competence in Sweden. Doctors were sent abroad for training; the necessary equipment was purchased. Readiness was enhanced to such an extent that when an outbreak of the virus occurred in the Kikwit area of Zaire in 1995, the World Health Organization requested the Swedish team to provide on-site assistance, which they did, performing well by most accounts.

Another kind of competence is emphasized by Onuf (1989), who focuses on the social competence stemming from mastery of rules. He argues that such mastery is not the product of successful internalization of rules but, rather, derives from the combination of knowledge of social rules and the development of judgment
in their selective application. While the lawyer may be the most obvious example of an individual who has devoted his or her life to such learning, the cunning bureaucrat, who is at home in the corridors of power, has developed a similar competence in navigating the potentially hazardous waters of government. Such players usually have a finely honed sense of the formal and informal rules of the political game and know when such rules may best be invoked, stretched or ignored to best advantage.

Not only direct and vicarious experience of real-life events can drive learning processes. Virtual experience, such as that generated through training drills, simulations, role play, scenario and case exercises, may stimulate learning at relatively low cost compared to trial and error (Sagan, 1993). The several variants of experiential learning discussed above capture important dimensions of policy learning processes in government. Yet, they do not adequately highlight the importance of debate and competitive communication as a ‘motor’ for learning in political and governmental settings.

The so-called dialectical learning perspective (Argyris and Schön, 1978:42–43; Etheredge, 1981:107) brings that aspect to the fore. It emphasizes the possibility that public (and behind-the-scenes) debate may reveal tacit assumptions, uncover value conflicts previously submerged and subject propositions about the environment and other social actors to active scrutiny. Debate can serve to increase the level of cognitive differentiation and integration brought to bear in dealing with complex policy issues. In fact, debate may contribute to identifying and selecting among alternative explanations, providing a firmer basis for explanation-based learning. Sabatier (1987) suggests that competition among advocacy coalitions, made up of individuals with compatible or shared views of the nature of a policy problem and the most promising lines of action to deal with that problem, is an important source of policy learning for individuals under certain circumstances.

Sabatier (1987) submits that moderate levels of conflict are most conducive to learning. Extreme levels of conflict inhibit communication and open-mindedness as advocates become over-committed to their positions. Absence of conflict, by definition, implies an absence of the competitive dynamism which drives dialectical processes. Competitive debate has been shown to be an important source of insight into issues clouded by uncertainty and value complexity, such as risk assessment with regard to complex technologies, such as nuclear power (Stern, 1991).

The main learning processes identified, thus far, are listed in Table 1. The figure is intended to illustrate the fact that the variants of learning are driven and affected by combinations of experience and debate.

An important conceptual problem which must be recognized is the difficulty of distinguishing learning from other kinds of political or policy change, change

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which may be produced by other kinds of social dynamics. The criteria which may be employed in this task may vary with the various conceptualizations of learning as a social phenomenon and with the chosen learning units described above. Accordingly, a number of approaches to the question exist.\(^{11}\)

For example, if, as has been noted above, a particular policy change is based upon shifts in the relative power positions of coalitions with varying policy outlooks and preferences, should that change be regarded as evidence of policy learning? From a competence acquisition perspective, for example, one would focus on the effects of the change with regard to increased or decreased levels of skill and coping capacity with respect to a policy problem or class of problems. From a dialectical learning perspective, on the other hand, the question becomes whether or not the shift resulted from a change of opinion generated by debate and critical analysis. In other words, one can make a distinction between process-based approaches to learning and consequence-based approaches. In the former case, the analyst evaluates the individual or collective decision processes which produced the change in question, employing some kind of rationalistic ‘quality’ criteria. For example, one could apply the criteria for a high quality decision process set out by George (1980:10) and by Janis and Mann (1977) and Janis (1989). Changes in policy deriving from a high quality process would then be identified as learning. Changes resulting from low quality processes would be viewed as the result of political expediency, misperception or accident and not qualify as learning.

Taking the consequentialist approach, one is led to ask whether the change in question has increased or decreased utility. This, of course, leaves open the question of how one should go about operationalizing an abstract aggregate concept, like utility. What criteria should be employed to determine whether a change is ‘positive’ or ‘deleterious’? Such judgments tend to be highly subjective in practice and are highly dependent upon the values and normative dispositions of the observer.

As a result, some scholars (Nye, 1987:379–380) explicitly recognize the possibility that both normatively positive and negative learning can take place: The question is whether the new information or skills have enabled the actors to achieve their purposes better, regardless of whether the observer likes those purposes or not.\(^{12}\) Thus, from this perspective, the terrorist, as well as the anti-terrorism units of the government, can become more effective in achieving their goals through learning processes. In fact, in such competitive situations, it may be differences in the rate of learning which prove decisive in affecting outcomes over the longer-term.\(^{12}\) Furthermore, extending the time perspective raises other difficulties for the consequentialist. It may be difficult to assess whether ‘utility’ has been served by a change until the next challenge emerges. Furthermore, the analyst should be sensitive to the possibility that the assessments may be revised over time on the basis of subsequent experience or, and less obviously, changes in the political context (see the Bush administration Gulf Crisis example below and Bovens and ‘t Hart, 1996).

**Bringing Crisis In**

Let one begin by noting that the escalation to crisis levels of stress by decision-makers and wider publics commonly brings about a number of changes in the state of the political arena and its actors (George, 1986; Post, 1991). The political
spotlight focuses on the crisis issue. Other issues may be eclipsed. This effect derives from the fact that there are finite limits to the attention spans of political actors and audiences. As a result, the crisis topic tends to ‘crowd out’ other potential foci of public, media and official attention. The mass media play an important role by providing interpretations of ongoing events, interpretations which influence, and are influenced by, practitioners and which highlight or draw attention away from particular social problems. In crisis, the actions or inactions of political actors are scrutinized with an intensity which surpasses the normal, largely due to the narrowed agenda. Attentive elites and publics receive a flood of information about the ongoing events. It seems plausible that normally less attentive publics become more attentive as the perception that great events are afoot mounts.

It is important to keep in mind that politics as usual does not grind to a halt during a crisis, especially a prolonged (gradually escalating or de-escalating) crisis: Lines of political conflict (even bureaucratic political conflict) which are more visible under more normal political conditions continue to exist despite a crisis atmosphere which tends to submerge them. Political actors may attempt to exploit the banner of crisis solidarity in the domestic arena so as to diffuse political tensions, to disarm revisionist coalitions and to defend the status quo. Alternatively, revisionist actors may construct interpretations of the crisis in terms which reinforce their claims for change and reform. Thus, crisis may present opportunity, as well as threat, to engaged actors (Goldmann, 1988; Bovens and ‘t Hart, 1996). Ironically, perceived opportunity, as well as perceived threat, can be a source of stress for crisis participants.

These attention and political effects help to explain the ‘catalytic’ impact ascribed to crises by many scholars. Political learning and change processes which take place at a slower rate under normal circumstances may be radically accelerated under crisis conditions. As a result, the normal inertia and resistance to change is often overcome by these societal and political dynamics.

It is worth looking more closely at some of the sources of the long-term effects of crisis experience by looking at an eclectic selection of literature which considers the subject from several separate, but clearly inter-related, points of departure. These are the impact of crisis on individual thinking, on political debate and on institutional change.

Crisis and Individual Thinking

Experiencing crisis tends to change the way people think, in important ways. Crisis experience often entails the challenging of tacit or explicit beliefs about adversary actors, the character of the environment (social and physical) and the adequacy of existing organizational and political arrangements designed to cope with that environment.

Political opponents, both at home and abroad, may behave in unexpected ways in the stress of the crisis situation. In moments of truth, strongly held expectations may be confounded by behaviours interpreted as sudden betrayal or striking solidarity and good-will on the part of other actors. As Lebow (1981:309) observes:

Acute crises . . . produce a kind of collective trauma in that they confront leaders on both sides with serious threats to their personal and national interests and are likely to leave them somewhat shaken even after the successful mastery of such challenges.
In crises characterized by confrontation among social actors, there is a potential both for intensification of hostility (Oneal, 1982:303) and for the development of enhanced empathy and understanding of the predicaments faced by rival actors. In an early recognition of the positive potential of international crises, Bell (1971:116) asserts that:

Crisis provides a situation in which political resolution and military capabilities are measured against each other, to dramatize an act of choice, without war necessarily eventuating. Properly managed, it may ultimately enable states to write the peace treaties without first fighting the wars.

For example, in a recent work based on an exhaustive empirical study of previously unavailable material, Blight (1990:7) argues that intense fear and elaborately visualized scenarios of nuclear holocaust on the part of the participants of the Cuban Missile Crisis ‘...produced the learning which was required to escape the predicament without a war...fear in the leaders of the super-powers was both profound and adaptive’ [emphasis original]. He submits that:

people are necessarily profoundly changed by participating in terrifying crises. The missile crisis marked the end of the most dangerous phase of the Cold War, after which relations between the superpowers improved dramatically. The participants seemed to have learned that deep crises between them simply had to be avoided. The profundity of the learning from that nuclear crisis has matched the profundity of the fear which gave rise to it (Blight, 1990:7).

Blight and Welch (1990:319) have described these changes as so profound as to constitute a radical re-framing of the participants’ understanding of the superpower relationship. While all of these authors’ remarks are in reference to military-security crisis, the attribution of psychological trauma, potentially heightened insight17 and resulting changes in world view seem equally suitable for describing the results of contending with natural disaster or with large-scale technologies run amuck.

As a result, crisis experience may have important implications for the realignment of threat images or scenarios in the cognitive worlds of decision-makers and mass publics. Actors or structural processes traditionally deemed benign can be perceived as malignant or dangerous as the dust of crisis settles.18 Threats which had been previously considered marginal may take-over central positions on the political stage, for a time.19 For example, prior to the Chernobyl crisis, most experts and senior decision-makers in Western Europe were inclined to dismiss the risk of nuclear contamination as a result of nuclear accidents in other countries, except where nuclear plants were located immediately adjacent to international borders. Chernobyl led to a radical change in this regard; nuclear safety in what was then Eastern Europe and the Soviet Union became a high priority issue for Western decision-makers, experts and mass publics alike.

Oneal’s (1982:309) major study of crisis decision-making in foreign policy found that ‘a crisis will almost certainly focus concern on the region surrounding the site of the crisis concern’. New kinds of expertise are likely to be in demand.20 Those ‘Cassandras’ who had foreseen the eventuality may enjoy new credibility
and their proposals a warmer reception than before events ‘vindicated’ their fears. Evidence from other policy sectors seems to suggest that Oneal’s observations hold for non-military types of crises as well (Comfort, 1988; Rosenthal, ‘t Hart and Charles, 1989).

The tendency for the attention of decision-making elites and mass publics to focus on the crisis issue has important implications for policy learning. Sabatier (1987:650) has suggested that policy learning normally takes place at a slow rate, driven by policy advocacy dialectics, the effects of which are manifested in ‘long term, diffuse effects on policy-makers’ perceptions of causal relationships and states of the world (that is, their belief systems)’. While this may be the case under normal periods of policy-making activity, it is important to consider the potential impact of crisis experience on policy learning processes.

There is good reason to believe that crisis has the potential to speed up learning and diffusion processes due to a number of the situational attributes outlined above, such as the focusing of political attention and broadening of attentive publics, both of which are likely to produce political and psychological accountability effects (see below). Kingdon (1984:99–100) notes that policy ‘problems are not self-evident . . . They need a little push to get the attention of people in and around government. That push is sometimes provided by a focusing event like a crisis or disaster that comes along to call attention to the problem’. Furthermore, the intensified patterns of interaction in crisis often produce situations where propositions about actors and situations held by decision-makers are put to the test. A crisis adversary behaves in the manner expected or confounds expectations; in either case, feedback tends to be more rapidly forthcoming than in many other types of social problem settings. This seems to be one of the unusual characteristics associated with crisis, as opposed to other kinds of policy situations. More common is the problem which Senge (1990:23) identifies as a learning dilemma: ‘we learn best from experience, but we never experience directly the consequences of many of our most important decisions’.

In addition, it has been argued (Oneal, 1982) that crisis stress may force decision-makers to confront issues of value complexity and face trade-offs which, under other circumstances, they might prefer to avoid. As a result, decision-makers may succeed in establishing clear value hierarchies which may facilitate the strategic realignment of policy. According to Etheredge (1981:77–78), this is indicative of learning processes at work.

Recent findings from social psychology help us to understand why crisis may, under certain contextual conditions, have beneficial impacts on encouraging rigorous thinking and rethinking on the part of policy practitioners. Experimental evidence, with a high degree of common sense appeal, suggests that individuals are more likely to devote attention and cognitive effort to problems for which the decision-makers perceive a high level of accountability to key constituencies. In a series of articles, Tetlock (1983; 1985; 1987:706) reports findings which suggest that ‘social pressures for accountability can, under certain conditions, motivate people to become more vigilant, thorough and self-critical information processors’. Factors such as the magnitude of the stakes involved, the stage at which awareness of accountability occurs and the presence or absence of norms promoting critical thinking are thought to play an important role in determining to what extent heightened accountability will lead to enhanced cognitive complexity in decision-making.
It is important to keep in mind that change in individual thinking does not occur in a vacuum. Communicative processes at group (or network), organizational and societal levels (such as via mass media) structure individual learning in highly significant ways. Individual learning takes place against a communicative social backdrop which shapes cognitive processes and content. Innovations are formulated as a response to characteristics of the status quo. Political positions adopted by individuals (or collectivities) are positioned in relation to the constellation of political positions occupied by other actors (and the actor's own history of prior positions). Structural pressures toward continuity, change and differentiation affect the content of policy moves.

In order to understand a particular policy initiative, it is important to develop an understanding of the political (and intellectual) context which gave rise to the move in question. Political debate is ongoing and, commonly, highly competitive. Advocacy coalitions struggle to impose their frames of interpretation and matching policy proposals in policy debates. It has been argued (Sabatier, 1987) that such debates have the potential to promote learning by enhancing cognitive complexity, bringing value conflicts and trade-offs into the open, revealing and challenging buried assumptions. Stern (1991) suggests that such struggles contribute greatly to coping with scientific conflict and provide a pragmatic basis for managing risk assessments which are inevitably 'contaminated' by politics.

Policy struggles in the aftermath of crises have important political re-distributive effects. Advocacy coalitions are unequal in their skill and positioning to benefit from invoking interpretations of the crisis events and implications which favour their programs. Levels in the ability to rhetorically exploit the crisis in building support, may vary considerably. As a result, crisis experience tends to ‘shake-up’ the political balance of power and impact on ongoing political conflicts. Furthermore, there is no clear point at which a particular interpretation assumes a permanent privileged position. Such interpretations (with their associated political capital distributions) are negotiated and re-negotiated as the political context shifts over time.

The cycles of interpretation and re-interpretation of the Bush administration's handling of the Persian Gulf crisis serve as a good example of this process. The dominant interpretation in the US political arena, in the immediate post-crisis period, was of great effectiveness, courage and determination on the part of the administration – a combination which led to a positive result: the liberation of Kuwait and neutralization of ‘the Iraqi threat’. The President's public approval ratings soared; he received a standing ovation from Congress and was declared unbeatable in the 1992 election. However, as perceptions of a sluggish economy mounted throughout the run-up to the election, Bush's political opponents succeeded in reframing the administration's performance in that crisis. The attention devoted by the President to the Gulf Crisis was increasingly interpreted as evidence of disinterest in the problems on the domestic agenda. His record on domestic affairs was seen as falling far short of the ‘spectacular success’ in the Persian Gulf. Other observers questioned the interpretation of the crisis outcome as a success, pointing to Saddam Hussein's continued reign in Iraq. Still others blamed the administration for supporting Iraq in the pre-crisis period, encouraging
the invasion of Kuwait through unclear signaling and generally creating the very same mess that the administration was taking credit for cleaning up. There is reason to believe that Bush’s performance in the Gulf War ultimately became a political liability which contributed to his defeat in 1992.

Public expectations for decisive action in the wake of a crisis experience provide an incentive for policy-makers to take visible action. Such pressure is often fueled by the mass media. The result of such pressure may be ill-considered policy initiatives on the part of political actors who may perceive the costs of inaction to outweigh risks involved in taking bold steps. Actors may be particularly wary of public perceptions that they might have made the same mistake twice, a cardinal political sin. The US experience in Vietnam provides an illustration of the strength of that rule. Gelb and Betts (1979:79) point to the Kennedy administration’s fear of right-wing rhetoric to the effect that ‘the party that had sold out the West at Yalta and in China would do the same thing in South-East Asia’, as an important reason for the commitment to engagement in Vietnam. Alternatively, public pressure on decision makers may lead to symbolic actions which do little to address the core of the issue, but may serve to placate public opinion.

To the extent that a dominant interpretation of the origins and nature of the events in question prevails in central arenas for political debate (such as the major mass media), a foundation for coalition-building in the post-crisis period emerges. Thus, crises may contribute to the formation or the reinforcement of advocacy coalitions made up of:

people from a variety of positions (elected and agency officials, interest group leaders, researchers) who share a particular belief system – that is, a set of basic values, causal assumptions, and problem perceptions – and who show a non-trivial degree of coordinated activity over time (Sabatier, 1987:660).

In a world characterized by globalized mass media and crisis problems which commonly spill over national borders, such experiences can create convergent views among groups of relatively like-minded people in different countries.26

The common experience of crisis may produce convergence of lay and expert belief systems and provide an impetus to collective action in the domestic and international realms which may overcome tendencies toward inertia in variety of political settings. However, it is important to note that the enhanced potential for collective action in a post-crisis period is dependent upon convergent interpretations of the crisis experience and the prospects for ameliorating the situation through collective action.

To sum up this discussion, crisis experience has the potential to affect, dramatically, the policy agenda via impacts on the character of political debate. The legacy of crisis may be the opening of policy windows (Kingdon, 1984:99–103) deriving from changed political actors (Oneal, 1982); the formulation of new problems and policy proposals stimulated by, or justified in the name of, crisis experience; and heightened perceptions of issue salience generating public expectations of issue action.27 In other words, crisis creates psycho-political upheavals with the potential to transform the political landscape.
Crisis and Institutional Change

The impact of crisis on social institutions is by no means separate from crisis impacts on individual thinking and political debate. In fact, the three are intimately related. Changes in thinking and political debate, deriving from crisis experience, have the potential to facilitate realignments in the norms, rules, principles and decision-making procedures which govern a particular problem area: the problem or issue regime. Olsen (1992:16) links crisis experience with institutional change, by submitting that ‘radical and swift transformations are likely to be a result of comprehensive external shocks and performance crises’. Their success is linked to the inefficiency of more mundane processes of adaptation. Young (1989:371–372) submits the proposition that ‘for the most part, exogenous shocks or crises increase the probability of success in efforts to negotiate the terms of international regimes’.

A number of scholars maintain that it is useful to conceptualize institutionalized conflict between states as a conflict regime. Zartman (1988:200,222) argues for a conceptualization of conflict regimes among actors and within which crises emerge. Crises provide opportunities for transforming or replacing regime structures. George (1983) suggests that the superpowers internalized a series of de facto rules of prudence through a series of cold war crisis experiences. Like George, Nye (1987) explicitly applies the regime notion to the US-Soviet relationship in the nuclear era and argues that a differentiated security regime had emerged between the superpowers by the latter stages of the cold war. It is interesting to note that a radical change in the character of one of the actors in a conflict regime (such as, dissolution of the Soviet Union) may cause an informal de-institutionalization of the relationship. Such a de-institutionalization may generate high degrees of uncertainty for one or both of the actors and a potential (which may or may not be realized) for improvement of the relationship.

Let us look more closely at what is probably the classic example of a learning crisis in the military/security domain: the Cuban Missile Crisis. It has been argued that the experience had important effects on the institutionalized relationship between the crisis actors: the US and the USSR. A number of studies have suggested that the crisis paved the way for the détente which emerged in the wake of the confrontation. Particularly noteworthy is the impact of the crisis in facilitating an initial component of a cooperative regime for managing the nuclear arms race between the superpowers: The Partial Nuclear Test Ban Treaty of 1963. As Hopmann and King (1980:163) observe:

Although measures to limit the arms race had been discussed for almost a decade, no concrete results had been achieved prior to the outbreak of the Cuban Missile Crisis. However, only ten months after the crisis was resolved, the stalemate which had characterized all previous arms control negotiations was broken by the signing of the Partial Nuclear Test Ban Treaty.

Crisis experience often leads to changes in the existing communication regime among actors, regionally or globally. An important result of the Cuban Missile Crisis was the establishment of a rapid and direct system of communications between the superpowers. Apparently, leaders of both superpowers were deeply concerned by the delays caused by the lack of direct communications during
the crisis. In order to prevent such delays in the future, they negotiated the so-called ‘Hotline agreement’. During the course of the preparations for the Partial Test Ban Treaty, an unprecedented opening of communication took place between the Russian and American peoples: ‘for the first time in memory, they [the USSR] opened their airwaves to Western broadcasts by permitting the entire text of the President’s [Kennedy’s] speech to be broadcast, in Russian and unjammed, throughout the Soviet Union’ (Blight, 1990:144). The Chernobyl nuclear accident had similar effects. Not only did the crisis ultimately (after initial resistance) lead to an unprecedented openness on the part of the, traditionally secretive, Soviet authorities, but new channels for the international diffusion of operationally relevant intelligence on patterns of radiation contamination were opened, in large measure due to innovative efforts on the part of the International Atomic Energy Agency (Stern, 1993).

Crises commonly reveal gaps in coordination mechanisms among social actors. This is one of the issues which has been most heavily emphasized in the literature on military-security crisis management. Engaged organizations may demonstrate the robustness and adaptability of their planning routines, or a startling lack of flexibility when confronted by unanticipated demands. Post-hoc evaluations of the functioning of the organization under crisis-stress may lead to a questioning of organizational routines and practices. Organizations, or sub-units within organizations, may attempt to re-define their roles on the basis of the crisis experience. New types of organizational and inter-organizational coordination measures may be devised in response to perceived deficiencies in those in place during the crisis (Oneal, 1982:311–312).

**Obstacles and Hazards to Learning from Crisis**

Much of the preceding discussion has been geared towards identifying support for the crisis-learning hypothesis and, thus, has had a relatively optimistic tone. The context of crises and the post-crisis period have been explored with a mind to identifying the potential for learning which may be associated with crisis. While some of the difficulties which may prevent such potential from being realized have been noted in passing, the discussion has not dwelled upon such obstacles and pitfalls.

One potential difficulty is captured succinctly in the threat-rigidity hypothesis formulated by Staw, Sandelands and Dutton (1981). They review a wide body of interdisciplinary literature and identify a number of parallel, and mutually reinforcing, effects operating at the individual-, group- and organizational-levels. They argue that theoretical and empirical work done at each of these levels suggest that social actors tend to respond in a rigid and inflexible manner to adversity and threat. They suggest that the introduction of a heightened threat perception into decision-making processes is likely to produce two basic effects. The first is labelled restriction of information processing and refers to phenomena such as ‘narrowing of the field of attention, a simplification of information codes, or a reduction in the number of channels used’ (Staw, Sandelands and Dutton, 1981:502). The second basic effect they posit is a constriction in control, such that power and influence can become more concentrated or placed in higher levels of a hierarchy
stern  ■  crisis and learning  ■  299

(Staw, Sandelands and Dutton, 1981:502). These basic effects, it is argued, produce a pronounced tendency towards rigidity in response, characterized by reliance upon what they describe as ‘well-learned’ or ‘dominant’ modes of thought or action.

Given that crisis situations are commonly defined in terms of threat (Hermann, 1972; Holsti, 1972; Rosenthal, ‘t Hart and Charles, 1989), the threat-rigidity hypothesis would seem to suggest that the emergence of crisis conditions should serve to inhibit, rather than encourage, vigilant decision-making and policy learning.

Many analysts (Etheredge, 1985; Rosenthal, ‘t Hart and Charles, 1989; Sagan, 1993) are quite pessimistic about the capacity of decision-makers and governmental organizations to realize the learning potential inherent in their experience of crisis situations. The political character of most organizational contexts creates serious difficulties. For example, Lovell (1984:134; 1985) argues, convincingly, that:

organizational ‘lessons’ are formulated through a process of negotiation or bargaining ... the product of an organizational or political dynamic, rather than as the products of the application of logic and pure reason to the past (although logic and reason may be important parts of the process).

As a result, in the organizational setting, ‘learning is likely to be highly selective’ and driven by task orientations and performance indicators embedded in organizational subcultures (Lovell, 1984:139). In other words, important lessons are likely to be over-looked due to a lack of fit with prevailing organizational mind-sets or power structures. Political pressures for compromise may water-down ‘lessons’ to a degree that greatly diminishes their potential value and insight.

Enduring traits of the human psyche, organizations and the political-setting tend to work against learning, in various ways. Two of the most important are defensiveness and opportunism.

Defensiveness refers to tendencies to avoid or suppress information which suggests mal-adaptation or performance failure. At the individual level, this phenomenon has been conceptualized in terms such as ego-defense, self-image maintenance and impression management. Parallel defensive tendencies are thought to exist at the group and organizational levels. Bureaucratic political motives may generate efforts to protect the organization’s external image and share of governmental resources by covering up performance failures (Allison, 1971; George, 1980; Janis, 1982). Such cover-ups may take place even in organizations ostensibly dedicated to the ideal of high reliability and with responsibility for technologies with enormous destructive potential, as Sagan (1993) documented in his study of the safety record of the US military with regard to command and control of nuclear weapons.

From the perspective of the defensive organization, insiders who expose patterns of corruption or incompetence to outsiders are ‘traitors’. Yet, such whistle-blowers can have a constructive impact in the long-term by generating public debate, increasing the level of accountability to the broader community and subjecting organizational practices to scrutiny. To the extent that features of the organizational context tend to inhibit and discourage whistle-blowing (such as, by failing to protect such individuals from reprisals or dire consequences to their careers), the organizational climate may create further obstacles to learning.
In order to protect valued self-images or intra-psychic stability, an individual or collective may attempt to deny or disassociate himself, herself, or itself from responsibility for negative outcomes. This may be manifested at either the conscious or unconscious level. To the extent that such distortion is unconscious, it may be sustained by the mechanisms of motivated misperception and group-think, which have been exhaustively treated in the foreign policy and psychological literatures and need not be described in detail here. As a result, the individual or collective may attempt to deny responsibility for outcomes or shift the blame to others. Rosenthal, ‘t Hart and Charles (1989) contend that the so-called ‘blame game’ is a recurring feature in the aftermath of crises. Such defensive behavioural tendencies inhibit explanation-based learning by deflecting attention from explanations which might imply individual, group or organizational shortcomings. Similarly, the repression or suppression of self-incriminating information may short-circuit gains in cognitive complexity, pre-empt competence acquisition which might remedy performance failures and undermine the basis for critical debate, which is the driving force behind dialectical learning.

Unfortunately, accountability (the positive effects of which were noted above) also may serve as an obstacle to learning, in several ways. First, individuals or social actors may pander to the pre-conceptions and views of key constituencies with whom they are very familiar and avoid making the investment in time and energy necessary to analyze and learn from experience. Secondly, individuals who realize that they may be subject to high levels of accountability after making decisions and committing to courses of action, are likely to divert valuable time and energy to finding creative rationalizations and public defenses for their behaviour (Tetlock, 1985) instead of engaging in introspection and self-criticism, which might facilitate learning. This may be particularly likely to occur when crises develop in issue areas which had been treated as relatively low priority questions in the pre-crisis period. Decision-makers may feel a great deal of pressure to find justifications for decisions made in a relatively casual manner or for previous prioritizations which favored other issues or values than those highlighted by the crisis.

Opportunism refers to a related set of factors which may inhibit learning. To the same extent that actors may attempt to deny or disassociate themselves from perceived failures, they tend to exaggerate their role in bringing about, and the magnitude of, success. At the sub-conscious level, this can result in so-called egocentric biases which may lead them to over-estimate their importance in generating favorable outcomes (Lebow and Stein, 1994).

Furthermore, actors may consciously inflate their contribution for strategic reasons, in order to improve their position in competitive political contexts. Practitioners may be so busy patting themselves on the back that they may miss opportunities for analysis of the recent crisis experience which might lead to more appropriate and useful lessons (Rosenthal, ‘t Hart and Charles, 1989). In fact, most crises (including those generally regarded as successes) are characterized by differential levels of performance with regard to various aspects of the crisis problem. This author’s previous studies of cases, such as the U137 and Chernobyl crises, revealed a mixed record. In the U137 case, an outcome widely regarded as successful was obtained despite significant failures of coordination and communication (Stern, 1992; Stern and Sundelius, 1992). The Chernobyl case also revealed serious lapses in information-processing under stress on the part
of some administrative units, while others performed in an exemplary fashion. Thus, one may be able to learn both positive and negative lessons from either ‘successes’ or ‘failures’.

The discussion above emphasized the promise of experiential learning. However, neither learning from direct organizational (or institutional) experience nor from analogical reasoning are simple or straightforward matters. As Sabatier (1987:675) points out, experience tends to be ambiguous:

learning from experience is very difficult in a world where performance gaps are difficult to measure, well-developed causal theories are lacking, controlled experimentation is virtually impossible, opponents are doing everything possible to muddle the situation and otherwise impede one from learning and even allies’ motives are often suspect because of personal and organizational rivalries.

There are always many, and often conflicting, lessons to be drawn from crisis experience. This has not gone unnoticed by students of foreign policy-making. In fact, concern with the policy implications of practitioner attempts to learn from historical experience (such as of international crisis) has spawned an extensive literature (May, 1973; Neustadt and May, 1986; Vertzberger, 1990: 296–341; Khong, 1992).

That literature suggests that learning by analogy from one’s own experience, or the observed experience of others, is far more difficult than it might seem. When learning from the experience of another, one rarely has all, or most, of the relevant information at hand, which raises the risk that the prospective learner might be drawing lessons from a seriously flawed interpretation of the events in question. In fact, even when learning from one’s own experience, one rarely has complete information when others are involved. These difficulties are exacerbated when considering the experience of complex governmental organizations in which even senior participants may have great difficulty in keeping track of events taking place within vast political-administrative systems.

Learning from the experience of others may be complicated by tendencies to accept positive and reject negative lessons learned by others. It is easy to dismiss the failures of others when in an optimistic frame of mind by focusing on real or imagined differences between one’s self and the other. For example, US decision-makers tended to reject the relevance of the French experience in Indochina when making decisions about escalating the Vietnam War (Khong, 1992). Similarly, when in a confident mood, it may be tempting to assume that emulating the success of others is a simple matter, when, in fact, that success may have been due to rigorous preparation or, even, to fortuitous circumstance (see the discussion of explanation-based learning, above). Several major studies have found that policymakers have a tendency to gravitate quickly and in a relatively unreflective way towards a particular analogy, disregarding alternative analogies which might be as or more relevant and disregarding contextual or situational differences which might make the analogy a misleading guide for action (Jervis, 1976; Neustadt and May, 1986; Vertzberger, 1990).

Finally, it should be noted that while convergent interpretations of a crisis may contribute to creating a basis for post-crisis reform, excessive convergence
may lead to an inadequate intra-governmental and societal debate on the events experienced. As a result, ‘group-think’-like phenomena can emerge among decision-makers and/or excessive conformity among those taking part in elite and mass debate. Excessive conformity and insufficient diversity of analytical perspectives can seriously undermine attempts at learning from, and acting on, the basis of crisis experience.

The discussion in this and the previous section are summarized in Table 2. Counter-intuitively, the bulk of the critical factors noted in the literature turn up on both sides of the balance sheet. Crisis-related learning ‘facilitators’ can manifest themselves in configurations in which they serve as ‘inhibitors’ (Lebovic, 1995).

<table>
<thead>
<tr>
<th>Factor</th>
<th>Potential positive effects</th>
<th>Potential negative effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heightened Accountability and Attentiveness</td>
<td>*Vigilant decisionmaking and post-crisis evaluation</td>
<td>*Defensiveness</td>
</tr>
<tr>
<td></td>
<td>*Opens policy ‘windows’</td>
<td>*Rationalization</td>
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<tr>
<td></td>
<td></td>
<td>*Credit-seeking</td>
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<tr>
<td></td>
<td></td>
<td>*Hasty reforms</td>
</tr>
<tr>
<td>‘Own’ Experience</td>
<td>*Reform motivator</td>
<td>*Biased interpretations</td>
</tr>
<tr>
<td></td>
<td>*Convergent interpretations</td>
<td>*Divergent interpretations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Ambiguous feedback</td>
</tr>
<tr>
<td>Vicarious and Virtual Experience</td>
<td>*Cheaper than trial and error</td>
<td>*Easy to dismiss</td>
</tr>
<tr>
<td></td>
<td>*Reform motivator (weaker)</td>
<td>*May not overcome political inertia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Ambiguity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Incomplete information</td>
</tr>
<tr>
<td>Historical Analogy</td>
<td>*Structures situation</td>
<td>Risks of</td>
</tr>
<tr>
<td></td>
<td>*Helps to go beyond the information given</td>
<td>*Adopting ‘wrong’ analogy</td>
</tr>
<tr>
<td></td>
<td>*Heuristic value</td>
<td>*Fixation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Overgeneralization</td>
</tr>
<tr>
<td>Cooperation/Consensus ‘Rally Around the Flag’</td>
<td>*Facilitates coalition building and reform</td>
<td>*Risk of excessive conformity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(e.g. Groupthink)</td>
</tr>
<tr>
<td>Conflict</td>
<td>[Moderate levels]</td>
<td>[High levels]</td>
</tr>
<tr>
<td></td>
<td>*Promotes dialectical learning via critical assessment of experience</td>
<td>*Polemic debate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Paralysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Lack of consensual basis for action</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Unhappy compromise</td>
</tr>
</tbody>
</table>

**Toward Case Analysis**

It is now appropriate to consider some of the steps necessary to make use of the conceptual points raised above, in order to proceed to the investigation of historical cases. The point of departure is identifying a relevant issue for study. Such an issue should exhibit several characteristics. First, given the interest in the effects of crisis experience, one or more crisis episodes should have taken place. Secondly, one needs to survey the ‘state of the political-administrative game’ prior to the crisis. In particular, one should be attentive to the various proposals for policy change which may have been on the table, including those which were dismissed as politically or organizationally marginal. Similarly, efforts should be made to develop an understanding of the nature and level of political or organizational rivalry among the key ‘players’. Thirdly, one should closely examine the acute phase of the crisis in order to understand the mind-sets of participants and observers in the immediate post-crisis period. While not immune to re-interpretation, as noted above, initial interpretations of the nature of the crisis and the calibre of
the organizational performance set the stage for post-crisis political and bureau-
political manoeuvring. Fourthly, it is necessary to compare the pre- and post-
crisis states of the organization or inter-organizational system with respect to
the bureau-political game and the level of readiness. With respect to the level
of readiness, the results of simulations or exercises which may have taken place
since the last crisis may provide some (admittedly imperfect) indications of the
extent to which learning has taken place. Later experience of quasi-crises, such as
false alarms, may be particularly useful for the analyst, as such incidents provide
the most realistic crisis ‘exercises’. Where possible, performance in subsequent
comparable crises may be examined for indications of learning.

In keeping with the approach presented above, a three-level analysis of crisis,
learning and change, focusing on individuals, institutions and political debates,
is proposed. When studying individuals, it is necessary to focus on those in key
positions of responsibility for the management of the issue in question. These
might include governmental officials, politicians (including opposition leaders)
and, possibly, those in semi-private or private positions of authority. By compar-
ing statements and behaviour prior to, during, and subsequent to exposure to
crisis stress, one can make assessments as to the plausibility of the proposition
that significant change in individual belief systems may have occurred as a result
of the crisis experience.

At the institutional level, the analyst compares pre- and post-crisis constella-
tions of organizational structure and practices. Following Lovell (1984:134–135),
the analyst may seek discernible effects of crisis experience, including:

- modifications of the doctrine and ‘conventional wisdom’ that provide in-
stitutionalized guideposts for action;
- changes of policy procedures and processes in ways which acknowledge
  the ‘lessons’ of experience;
- an alteration of policy structures to reflect such lessons; and
- a revision of policy commitments and budgetary commitments on the basis
  of experience.

Moreover, the analyst should be sensitive to shifts in the allocation of oper-
ational responsibility among central decision roles, such as moves toward cen-
tralization or decentralization or shifts among ministries or agencies with rival
claims of authority over the issue in question.18

Finally, the individual and institutional level changes should be placed in
context, via an analysis of the terms of the broader political conversation. Exami-
nation of the ongoing, issue-relevant debate taking place on the opinion and
editorial pages of the major newspapers and in other elite mass media, in parlia-
ment and via major political speeches by top-level political figures, can provide
the analyst with a sense of the extent to which a consensus interpretation of the
crisis and the performance of the engaged governmental authorities has emerged.
Particular attention should be devoted to tracking the various alternative ex-
planations of crisis phenomena which emerge, their political or organizational
implications and the extent to which they are adopted by major constituencies.

At each of these levels, the analysis should consider the extent to which learning
processes may have prevailed over the various obstacles discussed in this paper.
Comparative analysis of a number of carefully chosen cases promises to result in
the specification of contextual conditions supportive of, or inconducive to, policy learning. It may also provide insight into the relative importance of the different types of learning identified in the discussed literature. (For a partial empirical application of this approach see Stern and Sundelius, 1997).

**Reflections**

To the extent that policy learning is hindered by general tendencies toward governmental inertia and agenda overload, the experience of crisis situations does seem likely to facilitate efforts at organizational and policy reform. In an important sense, crises are real-life experiments which test the robustness and flexibility of decision-makers and governmental institutions under adverse conditions of stress and threat and provide potentially useful feedback to unusually attentive decision-makers, the mass media and the public at large. The notion that crises tend to have a ‘catalytic’ effect, in the sense of speeding-up psychological and political-administrative processes, which often occur at a relatively slow rate, seems a reasonable one. Thus, crises can provide the political momentum necessary to overcome governmental inertia and bring about change.

However, it is important to keep in mind that the momentum produced by crisis situations may have negative, as well as positive, consequences. Momentum deriving from, or facilitated by, the experience of crisis can produce not only learning, but also ‘over-learning’ and over-generalization. The intense demand for rapid change in response to perceived performance deficiencies may result in the adoption of ill-considered initiatives which could, perhaps, have been improved in a ‘cooler’ political climate. The vividness of crisis experiences and the desire to avoid making the same mistake twice may lead to distortions of the crisis planning process. A retrospective logic geared toward avoiding the mistakes of the past may sometimes crowd-out a prospective logic which attempts to identify the most likely scenarios for future crisis situations. In dynamic social environments, learned skills may easily become impediments to future adaptation. Unlearning (Bierly and Hämäläinen, 1995:216) may be an even more difficult task than learning itself.

Ironically, the powerful psycho-political forces unleashed during and in the wake of crisis experiences, which create the potential for learning, may also lead to a wide range of ego- and interest-serving behaviours. These behaviours may profoundly affect the lessons drawn from crisis experience and undermine the crisis-learning effort. In this article, a number of serious psychological, organizational and political obstacles and hazards which make learning from experience difficult, have been identified.

Furthermore, even when individual participants or outside observers are able to draw clear lessons from their experiences, persuading others that organizational changes are required may be very difficult. In other words, the road from individual insight via coalition-building and ratification, to implementation and maintenance of change is often a long and difficult one. In fact, given the varying interests and vantage points of political actors, they are likely to draw rather different lessons from the experience. Depending upon contextual factors, these divergent interpretations may either provide the basis for a constructive policy
dialogue, conducive to collective learning, or a polemical exchange which does not contribute to policy learning.

Crisis events commonly have a dramatic impact on participants and observers alike, as well as upon the political and organizational environments in which they take place. These impacts may be obvious and immediate or more subtle and manifest themselves years or decades later. Ironically, it is often not until the next crisis comes that it is possible to evaluate the extent to which changes associated with the experience of the last crisis have contributed to enhancing or detracting from crisis-coping capacity.

Notes

1. A similar notion is associated with High Reliability Theory in the study of large-scale technical systems. This perspective suggests that, given a high reliability organizational culture, experience of accidents and crises is likely to produce trial-and-error learning (La Porte and Consolini, 1991; Sagan, 1993).

2. This approach coincides with, but was not inspired by, a track taken in several recently published contributions to the learning literature, such as Bierly and Hamäläinen (1995) and Lebovic (1995). Those studies do not focus upon the relationship between crisis and learning, however.

3. Previous drafts of, or precursors to, this article have been presented at ISA West Meeting Phoenix (1992), the Peace Studies Seminar, Cornell University (1993), the Conference on Crisis Management and Institutional Resilience (Garderen, the Netherlands, 1995) and the working seminar on International Politics at Stockholm University (1996). The author is indebted to many of the participants in these sessions for insightful and useful comments. Particular thanks go to Bengt Sundelius, Alexander George, Uriel Rosenthal, Paul 't Hart, Mark Bovens, Peter Katzenstein, Judith Reppy, Yaacov Vertzberger, Bert Pynenburg, Menno van Duin, Michael Karlsson, Kjell Engelbrekt, Peg Hermann, Steve Walker, Lotta Wagnsson, Mats Blomberg and Lucas Petterson.


5. See Onuf (1989:110–120) for a constructivist critique of these perspectives.

6. A common notion in this literature is that learning is often stimulated by failure. See, for example, Argyris and Schön (1978:2), Hermann (1990:10) and Olsen (1992).

7. The literature is full of alternative learning typologies. For example, Etheredge (1981:79–82) submits the following list of learning types: scientific learning; intuitive understanding; creativity; skill; and wisdom.

8. Moral learning will not be treated further in this paper, due to space considerations. This choice should not be construed as reflecting negatively on its importance. In fact, the issue is so important that it should be set aside for more serious treatment than is possible there. For a brief but insightful treatment of ‘wisdom’ and moral learning in the governmental context, see Etheredge (1981: 81–82).

9. For example, Senge (1990) advocates ‘systems thinking’ as a powerful tool promoting deeper explanation-based learning which can bring such hidden, but potentially crucial, relationships to light.

10. Note that increased complexity is not always beneficial to problem-solving, particularly where time constraints are an important factor. On the one hand, over-simplicity may lead to performance failures based on incomplete understanding of the problem and the context (Janis and Mann, 1977; Janis, 1982). On the other hand, high levels of cognitive complexity may make it difficult to reach closure, achieve decisive action and may serve to increase personal decisional stress (Tetlock, 1992; McGrath, 1993).

11. A controversial issue in this literature is the magnitude of the change required to justify an attribution of learning. Some scholars, such as Haas (1991), reserve the term ‘learning’ for
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extremely dramatic shifts and prefer the term ‘adaptation’ to describe more incremental adjustments. See Argyris and Schön (1978) for a similar distinction between single-and double-loop learning. Alexander George (personal communication, 17 January 1996) proposes using the term ‘adaptation’ for policy adjustments derived from perception of new developments in the policy environment and ‘learning’ for lessons drawn from previous experience. George also argues persuasively for a conceptualization in which policy change is treated as the dependent variable and learning as an independent variable which may (or may not) produce change. This draws the analyst’s attention to the possibility that learning may occur in the absence of policy change.

12. See Rosenthal and ‘t Hart’s (1989) case study of the South Moluccan terrorist crises in the Netherlands for an example of learning by terrorists which proved detrimental to governmental crisis management.


14. For example, Blight (1990: 5–6) describes the intense emotional involvement and active monitoring of the unfolding Cuban missile crisis by ‘ordinary Americans’. This phenomenon is equally relevant to the Swedish context. The massive media coverage of the Estonia ferry catastrophe is a recent example of the tendency to focus public attention on crisis events and their aftermath.

15. The following discussion does not emphasize the literature on rational choice, which can be interpreted as supporting the proposition that high-stakes events, such as crises, tend to be associated with attentiveness and particularly rationalistic decision making (Brecher, 1993:520).

16. A classic case of a decision maker experiencing cognitive shock as result of an opponent’s actions is President Carter’s reaction to the Soviet invasion of Afghanistan. See Hart (1982:181) and Lebow and Stein (1994).

17. In actor-confrontation crises, the insights commonly take the form of heightened empathy. In other kinds of crisis/disaster situations, the result may be increased insight into the linkages between parts of inter-dependent societal or ecological systems (Perrow, 1984). See Senge (1990:21) for a discussion of events and understanding of systemic phenomena. Note that Senge warns that a fixation on events rather than processes may also inhibit learning by diverting attention away from deeper systemic properties.


19. One need only compare the status accorded to Saddam Hussein’s Iraq (and the threat posed by that regime’s nuclear and chemical weapons development programs) in the pre-Persian Gulf crisis period to the centrality of that problem complex after the invasion of Kuwait in order to appreciate the magnitude of the shift. This recent experience reinforces Oneal’s (1982) findings of this effect in the aftermath of the early superpower crises of the post-war period.

20. One can note, it seems plausibly, that some crisis experiences might lead to a decreased level of interest in the area in question. For example, a case where a voluntary engagement leads to high costs or performance failures may lead to a dis-engagement mentality. Cases such as the US experiences in Vietnam and, to a lesser extent, in Somalia, might well result in diminished interest in, and resources devoted to, competence building focused on the country or region.

21. This is not meant to imply that interpreting such feedback is straightforward. In fact, attribution theory (George, 1980: 58–61; Jönsson, 1990) suggests that systematic biases in interpreting the motivations behind rival actors’ behaviour are to be expected.

22. Etheredge (1981:143) suggests that within the US executive branch, institutionalized accountability for governmental learning is under-developed: ‘Until there are institutions and practices to hold the executive branch accountable for its long-term learning, performance will fall short of capacity’.

23. While ‘people use different processing rules when the stakes are high as opposed to low ...’, stress deriving from perceptions of high stakes involved may lead to defensive reactions inhibiting cognitively sophisticated information processing (Tetlock, 1987: 706–7).
24. Tetlock (1987:707) reports that: ‘Accountability is more effective in preventing than in reversing judgemental biases. Once subjects have assimilated or integrated information into their impressions of a person or an event, they have a hard time reinterpreting that information. Accountability has a marked impact on the initial impression-formation process (it places subjects in a vigilant mental set that confers some protection from certain inferential biases), but it has little impact after the initial processing has occurred (accountability cannot undo biased processing at an earlier analytic stage).’

25. For an instructive example of such debate, one may look to the debate on the implications and consequences of Chernobyl which took place in the Swedish Parliament on 12 May, 1986, roughly two weeks after the nuclear accident. Several advocacy coalitions are identifiable; each interprets the incident in a fashion which supports their pre-existing political programs and commitments. Opponents of nuclear power (for example, the Centre Party) see the incident as the final indictment of a dangerous technology. Supporters of nuclear power (such as the Moderates) focus on the corrupt and inefficient nature of the Soviet System. Middle of the roaders (like the Social Democrats) emphasize the need for more information and study of the incident and its implications for the Swedish nuclear power program and planned denuclearization.


27. Etheredge (1981:115–116) reports findings supporting the parallel concept of national ‘action moods’ which may be produced by crisis consciousness. See also Drabek (1986: 364–366).

28. For a number of essays focusing on the somewhat controversial concept of international regimes, see Krasner (1983). For an attempt to transfer the regime concept to domestic decision making, see Kegley (1987).

29. See Nye (1987:392) for an assessment of the level of regime development for each of six security problem complexes in the superpower relationship.

30. One can, of course, also imagine situations where a change in one of the actors leads to a greatly deteriorated relationship. The Iranian revolution led to a marked downturn in the institutionalized relationship between Iran and Western countries, especially the United States.

31. For example, Hopmann and King (1980:163) argue that ‘the crisis spurred a reconsideration of those cold war policies that brought the world so close to nuclear destruction. It also provided an incentive for policymakers to develop innovative solutions to those problems which were perceived to be the root causes of the crisis, including the Soviet-US arms race.’ See also, Blight and Welch (1990:319–322).

32. The initial memorandum of understanding was signed on 20 June, 1963, less than a year after the Cuban Missile Crisis (SIPRI Yearbook, 1986:549).

33. George (1991) argues that the divergent logics driving military and diplomatic aspects of crisis coping tend to conflict, if not consciously managed by political authorities with an integrated crisis management strategy. For an exploration of that issue in the small state context, see Stern and Sundelius (1992).

34. These obstacles are at least as relevant to the enterprise of learning from virtual, as from direct or vicarious, experience. In fact, it is probably even easier for those with vested interests threatened by the results of a simulation or scenario to deny the relevance of the exercise.

35. The notion of defensive avoidance is often credited to Janis and Mann (1977).

36. Sagan particularly focused on the functioning of the command and control system under crisis stress. See also the various contributions to the Symposium on The Limits of Safety in the December, 1994 issue of the Journal of Contingencies and Crisis Management.

37. See ‘t Hart (1990) for a useful discussion of group and organizational pressures toward conformity which may inhibit whistle-blowing.

38. The analysis and recommendations of governmental or parliamentary commissions of inquiry may provide important clues. In particular, comparison of the recommendations made with the steps actually taken is likely to be instructive, generating insight into the broader political climate as well.
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Housing Issues after Disasters

Mary C. Comerio


Introduction

The disaster experiences in the United States, in the last decade, have forced researchers to rethink accepted models for disaster preparedness, hazards mitigation and recovery. Hurricane Hugo was followed, a month later, by the Loma Prieta Earthquake in 1989. In the Autumn of 1991, the Oakland Hills firestorm incinerated more than 3,000 houses in a matter of hours. In 1992, Hurricane Andrew devastated a 40 mile swath of South Dade County, Florida, while riots devastated parts of downtown Los Angeles. In 1993, there was a 500 year flood on the Mississippi river and more firestorms in Southern California. In 1994, the Northridge earthquake caused unprecedented damage in a relatively modern suburban section of Los Angeles.

Then, on the first anniversary of Northridge, an earthquake of similar magnitude struck Kobe, Japan, causing thousands of deaths and damaging US$150 billion worth of buildings and infrastructure, Kobe's experience brought home the lessons of vulnerability for cities around the globe. The large-scale urban disasters of the 1970s (Managua, Tangshan and Guatemala City) and the 1980s (Mexico City, San Salvador and Armenia) were no longer confined to developing countries, where the loss of poorly built slums and squatter settlements seemed inevitable (see Table 1). After a relatively quiet century, Americans were dumbstruck – not only by the magnitude and the frequency of the disasters in the US, but by the potential for financial loss in the housing sector. Nothing had prepared them for the problems they would confront in the aftermath of large-scale disasters in modern cities.

By the most traditional measures of disaster intensity; that is, by the number of casualties and the numbers left homeless, Northridge, and other the recent American disasters, were moderate in comparison to their international counterparts. Financially, however, the magnitude of these disasters was shocking. In the five-year period between 1989 and 1994, the value of the housing lost in just five disasters totaled more than US$75 billion. More than 200,000 housing units were completely destroyed or substantially damaged. An additional 600,000 housing units required significant repairs. The total housing losses are equivalent to the total number of housing units in metropolitan Seattle.

For over a century, Americans have relied on a combination of private insurance and limited government assistance to recover from the occasional destruction metered out by nature. Now, the insurance industry and the government appear to be searching for ways to control costs in future losses by limiting insurance policy coverage and curtailing some government programmes. While some
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The Northridge Earthquake Housing Losses

The Northridge earthquake was the first disaster in which systematic information on damaged buildings was compiled into a database and used by government officials to make sheltering and recovery policy decisions. This data, based on local building inspections, suggested that the Northridge earthquake seriously damaged about 60,000 housing units. The majority of these were in apartment buildings. In a period of a few days, inspectors had looked at nearly 100,000 structures, with more than 400,000 units and were confident that they understood the extent of the serious damage to residential structures (see Table 2).

Table 2: Northridge earthquake: Inspected residential structures and units by type

<table>
<thead>
<tr>
<th>Unit type</th>
<th>Inspected structures</th>
<th>Inspected units</th>
<th>Vacated units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% of total</td>
<td>Number</td>
</tr>
<tr>
<td>Single-family</td>
<td>64,405</td>
<td>72.6</td>
<td>64,405</td>
</tr>
<tr>
<td>Multi-family</td>
<td>21,400</td>
<td>24.1</td>
<td>376,234</td>
</tr>
<tr>
<td>Unknown</td>
<td>2,885</td>
<td>3.3</td>
<td>na</td>
</tr>
<tr>
<td>Total</td>
<td>88,690</td>
<td>100.0</td>
<td>440,639</td>
</tr>
</tbody>
</table>

Source: Comerio, 1995

The damage to housing appeared to be heavily concentrated in multi-family apartments in the San Fernando Valley of the City of Los Angeles. Only 38 census tracts had more than 100 vacant units and there were 15 neighbourhoods, dubbed ‘Ghost Towns’, where the majority of the heavily damaged and vacated units were located. In some of the Ghost Towns, typically an area several blocks
long and several blocks wide, as much as 90 per cent of the housing was vacated, but the average for all the Ghost Towns was 40 per cent. By contrast, severely damaged housing represented only 3 per cent of the housing in the San Fernando Valley and 1.5 per cent of the housing in the City of Los Angeles (Comerio with HR&A Inc., 1996).

**Impact on Tenants**

Because of the experience with severe housing problems after the Loma Prieta earthquake, federal and city officials were concerned that they would face similar problems in Los Angeles. The City of Los Angeles, in conjunction with federal officials from the Federal Emergency Management Agency (FEMA) and Housing and Urban Development (HUD), and with participation of the California Governors’ Office of Emergency Services (OES), used what they had learned from the damage data to expedite temporary housing assistance for tenants of damaged buildings and to enhance standard housing recovery programmes. Three years after the event, it is possible to look back at sheltering decisions, policies and programmes and to evaluate their effectiveness in re-housing a displaced population and re-building a damaged housing stock.

For victims displaced from their housing, the combination of FEMA short-term rental assistance and HUD Section 8 rent vouchers effectively and quickly re-housed 130,000 middle-class and low-income families. The majority of the victims found alternate housing within 2 months of the event, largely because there were extraordinarily high vacancy rates (over 8 per cent) in the rental housing market in the San Fernando Valley and in the City of Los Angeles at the time of the earthquake.

Why were 130,000 households provided with temporary housing assistance if 60,000 units were severely damaged and, of those, only 20,000 vacated? There are a number of explanations. For example, many of the vacated units were in large apartment complexes. Even if only some units, in some buildings, were rendered uninhabitable by the earthquake, many tenants were not willing to stay and owners may have preferred that tenants leave so that they could evaluate their buildings more carefully. In addition – some tenants and/or home-owners may have needed temporary shelter for a few months in order for repairs to be completed. In fact, buildings with non-structural damage are green-tagged (safe for occupancy), but fallen plaster, broken glass, stucco failure and other cosmetic damage can render a unit uninhabitable, even if it is technically listed as minor damaged.

All but 12,000 of the temporary housing recipients received a FEMA housing assistance check for 2–3 months rent. These could be extended for up to 18 months, but most were not. The 12,000 households who received HUD Section 8 rent vouchers were very low-income and these vouchers were good for 18 months. In fact, HUD extended the time frame twice, after the 18 month period, and about two-thirds of the original recipients have had their emergency vouchers converted to permanent housing assistance vouchers.

The majority of the households which received temporary housing assistance were low- and moderate-income. Most found alternative housing that was similar in size and rent to what they had before the earthquake. The HUD Section 8 recipients typically rented a larger unit, at a rent US$200–500 more than what
they paid before the earthquake. Given that these were very low-income families, often living in severely over-crowded conditions, it is not surprising that these households took advantage of the government assistance to improve their housing conditions.

Essentially, the combination of expedited temporary housing assistance and the availability of units on the market made the process of rehousing earthquake victims go smoothly in Los Angeles. In addition, the victims lost housing, but not jobs, as a result of the disaster. Still, there were groups of victims that were not well served by the traditional government assistance programmes. Because federal aid is not available to those who are not legal residents, many immigrant groups, including legal immigrants, did not seek assistance through the Disaster Application Centres, for fear of reprisals. These people turned to community organizations and charities for help with personal losses and housing problems. Although their numbers are not well documented, a Red Cross network of voluntary organizations estimates that about 450 non-profit agencies provided some type of disaster service to 160,000 victims seeking help outside the regular channels (Rabinowitz, HR&A Inc. and Comerio, 1996).

Impact on Multi-Family Owners

Owners of multi-family apartments did not fare as well as their tenants, after the quake. The economics of investor-owned housing offers little incentive for owners to rebuild damaged building, and government loan programmes (from the Small Business Administration (SBA) and special HUD allocations to the City of Los Angeles) reached less than half of the multifamily units that were significantly damaged. Most owners were forced to rely on personal finances to make repairs.

Ironically, the owners of the more affordable housing; that is, housing serving tenants whose income is less than 80 per cent of the area median, fared better than most landlords after the Northridge earthquake. These were, typically, small apartment buildings with less than 10 units, owned by a single individual, who may have lived in the building. These buildings had few amenities: no community or exercise rooms and no covered parking (conditions that constitute a soft first story). As a result, units in these buildings typically rented for less than the modern complexes. Because these were fully occupied, owners maintained positive cashflows. In addition, these buildings usually had minor damage and the repair costs were lower. These owners were able to qualify for SBA loans and they combined federal low interest loans with personal funds to complete repairs.

 Owners of large apartment buildings faced several problems. Those with weakened first stories faced very expensive repairs. These were the buildings which were in poor financial straits before the earthquake. The combination of high vacancies and declining property values, resulting from the southern Californian recession, meant that they had insufficient cash flows and insufficient equity to take on additional debt. Further, these large properties are rarely held by a single-owner. Typically, they are owned by investors in a limited partnership, so that any one investor may own parts of several properties. The Small Business Administration loan programmes limit the amount any individual can borrow and judge a loan application on the ability to repay. Thus, the complex ownership
and the poor financial conditions of the large apartment properties made them ineligible for government loans. These owners had to rely on forbearance from their lenders and private capital to make repairs. In all, very few apartment owners had any earthquake insurance.

The City of Los Angeles identified the financing problems faced by apartment owners early and petitioned HUD for special allocations of Community Development Block Grant and HOME Investment Partnership funds for earthquake repairs. These programmes typically grant funds to a city for the construction or rehabilitation of affordable housing. In this case, the City received a special appropriation of US$311 million and an advance on allocations for future years. In all, the city made loans to repair about 12,000 units that were not eligible for any other assistance (Comerio with HR&A Inc., 1996).

One year after the earthquake, 30 per cent of the apartment building owners completed repairs and 60 per cent claimed they had plans to make repairs. Three years after the event, the City of Los Angeles reports that three out of four vacated units had been repaired (Smith, 1997). This represents the repair of severely damaged units, where the counts are reasonably certain. Much of the minor damage was not well documented. One simply does not know the full extent of apartment buildings with minor damage, nor the extent of the repairs. There is no way to estimate the number of tenants living with a lower quality of housing as a result of the earthquake (Urban Institute and HR&A Inc., 1996).

**Impact on Single-Family Homeowners**

The most significant housing issue to emerge from the Northridge experience is the revision of the understanding of single-family housing losses. In the first three to six months after the event, city officials, housing experts and insurance companies reviewed the damage data and concluded that single-family losses were comparable to those after the Loma Prieta earthquake. Based on inspection data, the city estimated the total housing damages to be in the range of US$1.5 billion dollars, while insurers estimated their losses at US$2.5 billion. Two years later, private insurance and government grants and loans have provided US$12.6 billion to more than 500,000 homeowners, largely for minor (non-structural, non-life-threatening) repairs (see Table 3).

During the post-disaster inspections, 64,000 homes were inspected and all but 7,000 were green-tagged. The inspected damaged homes constituted about 25 per cent of the housing stock within 20 km of the fault rupture plane. Officials assumed that because the pattern and proportion of damage was similar to that of previous earthquakes, these inspected houses were representative of the full extent of the single-family damage. However, an analysis of insurance claims and government assistance programmes suggests that there was much more damage than originally estimated and that the damage was distributed over a much wider area.

In fact, 265,000 homeowners received an average of US$30,000 in insurance payments; 74,000 homeowners obtained low interest loans from the Small Business Administration, averaging US$31,000; and 288,000 homeowners received an average of US$3,000 from the Federal Emergency Management Agency's Minimal Home Repair Program. There is some overlap between the insurance and the
### Table 3: Distribution of post-northridge rebuilding and repair funds

<table>
<thead>
<tr>
<th>Programme source</th>
<th>Fund use</th>
<th>Amount</th>
<th>Recipients</th>
<th>Average</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Insurance</td>
<td>Total</td>
<td>$12,254,600,000</td>
<td>333,214</td>
<td>$36,777</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>Residential Repair and Rebuilding</td>
<td>$7,808,000,000</td>
<td>265,116</td>
<td>$29,451</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commercial Repair and Rebuilding</td>
<td>$3,405,000,000</td>
<td>15,708</td>
<td>$216,769</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other Uses</td>
<td>$1,041,600,000</td>
<td>52,390</td>
<td>$19,882</td>
<td></td>
</tr>
<tr>
<td>Small Business Administration</td>
<td>Total</td>
<td>$3,929,887,000</td>
<td>120,783</td>
<td>$32,537</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>Loans to Homeowners and Renters</td>
<td>$2,480,973,000</td>
<td>98,847</td>
<td>$25,099</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loans to Businesses</td>
<td>$1,448,914,000</td>
<td>21,936</td>
<td>$66,052</td>
<td></td>
</tr>
<tr>
<td>FEMA</td>
<td>Total</td>
<td>$7,170,171,273</td>
<td>21,988</td>
<td>$121,362</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>Funds to State and Local Government</td>
<td>$2,668,508,735</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(includes infrastructure repair)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minimum Home Repair</td>
<td>$841,249,807</td>
<td>287,778</td>
<td>$2,923</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Individual Family Grant</td>
<td>$214,307,371</td>
<td>214,227</td>
<td>$1,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Temporary Housing</td>
<td>$380,757,856</td>
<td>119,583</td>
<td>$3,184</td>
<td></td>
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<tr>
<td></td>
<td>Hazard Mitigation</td>
<td>$124,347,504</td>
<td>423</td>
<td>$293,966</td>
<td></td>
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<td></td>
<td>Other Programmes and Administration</td>
<td>$2,941,000,000</td>
<td>n/a</td>
<td>n/a</td>
<td>(4)</td>
</tr>
<tr>
<td>Department of Housing and Urban Development</td>
<td>Total</td>
<td>$896,500,000</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
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<tr>
<td></td>
<td>Grants for housing reconstruction</td>
<td>$605,000,000</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
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<tr>
<td></td>
<td>Section 8</td>
<td>$200,000,000</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td></td>
<td>Other Programmes</td>
<td>$31,500,000</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>Other Federal and State Agencies</td>
<td>Various programmes and grants</td>
<td>$1,511,000,000</td>
<td>n/a</td>
<td>n/a</td>
<td>(5)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>$25,702,158,273</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

Data Sources and Notes:  
(1) California Department of Insurance tabulations as of August 1995  
(2) FEMA Situation Report, September 6, 1996  
(3) FEMA Status of Northridge Earthquake Recovery, September 6, 1996  
(4) The Urban Institute, March 1995  
SBA figures because owners could supplement insurance with SBA loans. Still, as many as 500,000 homeowners received compensation to repair damage, and these were distributed in areas as far as 50 km from the fault rupture (Comerio, Landis, Firpo, and Monzon, 1996).

Overall, the total expenditures on the Northridge earthquake by government agencies and private insurance was, approximately, US$25.5 billion. Of this total, half the funds came from private insurance; 40 per cent were from FEMA and SBA; and the remaining 10 per cent was spent by the Departments of Housing and Urban Development, Transportation and other federal and state agencies (see Figure 1).

![Figure 1: Distribution of northridge recovery and reconstruction funds by major source](image)

Sources: California Department of Insurance, U.S. Office of Management and the Budget, Governor’s Office of Emergency Services

How were government and insurance funds spent? Half went to temporary housing and residential repairs, one-quarter paid for local government and transportation needs and 20 per cent was spent on commercial repairs. Obviously, this total does not include expenditures by individuals or funds from private lenders for housing or business recovery. Private investment in post-disaster repairs is almost impossible to estimate, although some economists have suggested that private investment could be 2–3 times that of government and insurance expenditures (see Figure 2).

About US$12 billion was spent on residential re-construction. Of this amount, two-thirds came from private insurance and the remainder from government programmes (see Figure 3). Of the insurance funds, 50 per cent covered repairs to primary residential structures, 30 per cent was paid out to repair appurtenant structures, such as carports, driveways, swimming pools, garden walls and
other outbuildings, 10 per cent paid for loss of contents and 5 per cent paid for
homeowners temporary living expenses during the time they could not occupy
their dwellings (see Figure 4).
If one combines the US$4 billion in funds spent by insurers on repairs to the primary residence, with the US$4 billion spent by government programmes targeted specifically toward home repairs, then US$8 billion, or two-thirds of the total spent on residential recovery, went toward the repair of primary residential space. The financial cost to repair what was largely minor damage, shocked insurance companies and disaster researchers. At the time of the earthquake, inspection data suggested that the damage was concentrated (85 per cent) in multi-family apartments. Two years later, data from the insurance industry and government programmes funding repairs suggested that, at least, half the damage was in single-family structures. There are a number of explanations for the discrepancy.

In part, inspection data is always limited and incomplete. Inspectors concentrate on serious structural damage because of the obvious hazards to public safety. Windshield surveys are likely to overlook minor damage in single family homes because it may not be visible from the street. At the same time, multi-family owners or tenants are more likely to call the city for an inspection, even if damage appears to be minor, to clarify whether an apartment building can be occupied.

In part, homeowners are more likely to be insured and have better access to government assistance programmes, thus, expenditures for home repairs will be counted as part of disaster costs. Apartment owners are less likely to carry disaster insurance and many do not qualify for government loans. These owners are forced to use their personal resources or loans from banks to pay for repairs. As such, their costs are not included in disaster expenditures.

If one reviews the insurance claims as compared to the damage estimates in past disasters, one finds that insurance claims are consistently 3-4 times the number of single-family homes listed in the damage estimates (see Table 4). This suggests that the Northridge pattern is not unusual. Damage assessments regularly
Table 4: Residential losses in recent urban disasters in (US$)

<table>
<thead>
<tr>
<th>Disaster</th>
<th>Estimated Property Damage</th>
<th>Estimated Value of Residential Losses</th>
<th>Housing damage as share of total per cent</th>
<th>Damaged Housing Units</th>
<th>Destroyed and severely damaged housing units (per cent)</th>
<th>Number of Insurance Claims</th>
<th>Residential Insurance Payouts</th>
<th>Residential Vacancy Rate – per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hurricane Hugo</td>
<td>$6.4 Billion</td>
<td>$3 Billion</td>
<td>46</td>
<td>112,000</td>
<td>36,000</td>
<td>278,000</td>
<td>$1.5 Billion</td>
<td>8</td>
</tr>
<tr>
<td>Loma Prieta</td>
<td>$7.5 Billion</td>
<td>$2 Billion</td>
<td>26</td>
<td>43,000</td>
<td>11,500</td>
<td>45,000</td>
<td>$.6 Billion</td>
<td>1</td>
</tr>
<tr>
<td>Hur. Andrew</td>
<td>$22.6 Billion</td>
<td>$10.5 Billion</td>
<td>48</td>
<td>135,000</td>
<td>130,000</td>
<td>300,000</td>
<td>$1.2 Billion</td>
<td>10</td>
</tr>
<tr>
<td>Northridge</td>
<td>$25 Billion</td>
<td>$13 Billion</td>
<td>52</td>
<td>500,000</td>
<td>60,000</td>
<td>60,000</td>
<td>$10 Billion</td>
<td>9</td>
</tr>
<tr>
<td>Mexico City</td>
<td>$12.5 Billion</td>
<td>$4.2 Billion</td>
<td>33</td>
<td>180,000</td>
<td>11,000</td>
<td>280,000</td>
<td>0</td>
<td>&gt;1</td>
</tr>
<tr>
<td>Kobe, Japan</td>
<td>$90–150 Billion</td>
<td>$45–75 Billion</td>
<td>50</td>
<td>400,000</td>
<td>100,000</td>
<td>not available</td>
<td>6 Billion</td>
<td>&gt;1</td>
</tr>
</tbody>
</table>

Source: Comerio (forthcoming)
under-estimate the number of single-family homes with minor damage. Likewise, estimates of the value of residential losses probably under-estimate the total residential losses because they do not include significant private expenditures for multi-family building repairs. Overall, residential losses probably account for even more than a 50 per cent share of total disaster costs.

**Comparison to Other US Urban Disasters**

In September 1989, Hurricane Hugo destroyed, or substantially damaged, 36,000 units in three coastal counties near Charleston, South Carolina. The two most heavily impacted housing types were coastal vacation homes and condominiums, built of light-wood frame construction and developed in the largely *laissez-faire* regulatory context of the 1980s and sub-standard housing of the rural poor, typically mobile homes placed on un-cemented concrete blocks, without proper anchors and hold downs (Miller, 1991; Sparks, 1991; Monday 1992).

Despite the apparent concentration of damage, vacancy rates were high, particularly in coastal vacation units. As such, alternative shelter was not a significant issue and nearly half of the residential damage was paid for by insurance. Federal assistance was available for temporary rentals and Small Business Administration repair loans were available to homeowners. Although recovery was reported to be nearly complete within a year of the disaster, about one-quarter of those affected had little access to any rebuilding assistance. The rural poor, particularly those in mobile homes and marginal apartments, were dependent on private charities for repairs and reconstruction assistance.

One month after Hurricane Hugo, the 7.1 magnitude Loma Prieta earthquake struck in Northern California, about 100 kilometres southeast of San Francisco. The most visible losses were collapsed bridges and freeways. The housing damage was concentrated in the downtowns of San Francisco, Oakland, Santa Cruz and Watsonville. Although only 11,500 units were lost or significantly damaged, 60 per cent were rental and 40 per cent could be categorized as affordable that is, providing housing for individuals and families whose earnings were less than 80 per cent of the median income in the area (Bolin and Stanford, 1991; Phillips, 1993; Comerio, Landis and Rofe, 1994).

What kind of buildings were these? In Oakland, downtown San Francisco and Santa Cruz, the majority were four- to six-story, unreinforced masonry residential hotels and apartments. In Watsonville, all were pre-1940, wood-frame one- and two-story single-family homes. Most of the units were home to the elderly, the indigent and/or illegal immigrants. They were part of a concentration of run-down buildings that provide affordable housing, typical in older downtown districts. Despite the fact that the total number of units lost was small, in comparison to the total number of housing units in the region, the concentration in low rent units was significant.

Because the American system of disaster assistance was primarily designed for single-family homeowners, there were no assistance programmes to fit the needs of the victims. There was little alternative housing available at low rents, so the Red Cross and other agencies sheltered victims for record amounts of time: six months in Santa Cruz county, three years in Oakland and San Francisco, where emergency shelters were eventually converted into permanent homeless shelters. Repair
and reconstruction proceeded very slowly and depended on funds from affordable housing development programmes. While most of the damaged single-family homes were repaired or re-built in 1–2 years, only 50 per cent of the damaged affordable apartments have been completed in the 5 years that followed (Comerio, Landis and Rofe, 1994; Dietz, 1995).

Hurricane Andrew struck Florida in August of 1992, with winds up to 145 miles per hour. In South Dade County, just south of the City of Miami, 48,000 units were destroyed and over 100,000 units were damaged. Twenty five per cent of the destroyed units and 40 per cent of the damaged units were multi-family apartments near the Homestead Air Force Base. The remainder were single family homes (Metropolitan Dade County Planning Department, 1993). All were lightweight wood-frame of one- to three-story construction. Many were shoddily built and did not conform to building code standards, as these standards were not rigidly enforced.

The State of Florida and the local Red Cross were severely criticized in both their emergency response and their lack of recovery planning. At the same time, FEMA was criticized for not doing enough and the Army was brought in to construct large tent cities to shelter victims. Given the extent and concentration of damage, the short-term task of sheltering victims was enormous. In the longer-run, Dade County's 10 per cent rental vacancy rate helped in absorbing the majority of the displaced victims. Because the single-family homes were insured, most were re-built within two to three years. By contrast, little of the multi-family housing was re-built. Without the jobs provided by the airforce base, most renters simply left the area.

Northridge had more in common with Hurricanes Hugo and Andrew than with the Loma Prieta earthquake. In the first three disasters, high vacancy rates allowed victims to be easily re-settled into the existing housing stock, whilst homeowners quickly made repairs with insurance funds. By comparison, in the Loma Prieta earthquake, a small number of highly concentrated, low-income housing losses caused serious sheltering and repair problems.

**International Urban Disasters**

The common thread between recent American urban disaster losses and similar events around the globe is the combination of substantial housing loss with staggering economic loss. While the casualty rate in disasters in developing countries is a predominant concern, the impact of urban housing loss is an issue for rich and poor nations alike. The urban losses most comparable to the US experience were in 1985, in Mexico City, and 1995, in Kobe, Japan. The contrast in government policies implemented after these two disasters demonstrates the significance of government policies on private housing recovery.

**Mexico City, Mexico**

While the 1985 earthquake's epi-centre was 400 km from Mexico City, the soft soils of the lakebed underlying the city amplified the shock waves. Official estimates of 7,000 dead and 76,000 units destroyed (180,000 units damaged) were
certainly low. The majority of the damage was concentrated within three of the sixteen districts that comprise the Federal District. Although the damage represents only a tiny portion of the housing in Mexico City, the physical and social concentration of damage, combined with severe housing shortages, created difficult sheltering and recovery problems.

Two of the damaged areas, the Cuauhtemoc and V. Carranza wards, were filled with overcrowded tenements, housing working families at minimal (controlled) rents. Owners of the slum properties had no incentive to rebuild. When residents organized politically and refused to be moved to a new town site outside the city centre, the Mexican government, supported by a World Bank loan and concessions in the national debt re-structuring, decided to re-build and sell the subsidized units to disaster victims. Victims were temporarily housed in tin structures in the streets, land was expropriated and some 88,000 housing units were repaired or re-built in government sponsored programmes in a two-year period. An additional 7,400 units were repaired by private charities and Non-Governmental Organizations (DFF, 1986; 1987; SEDUE, 1987; Echeverria, 1991; Comerio, forthcoming).

Kobe, Japan

In Kobe, the epi-centre of the 7.2 Richter magnitude earthquake was directly beneath the city and 6,000 people died in the event. The damage to buildings and infrastructure, as well as the economic losses, dwarfed those of Mexico City and Northridge. Port facilities, freeways and railroads were extensively damaged. About 4,000 commercial, industrial and public buildings were heavily damaged or collapsed. In total, approximately 400,000 housing units in 190,000 buildings were damaged. According to government estimates, the cost of reconstruction is estimated at 15 trillion yen, or US$150 billion (EQE International, 1995; Funahashi, 1995; UNCRD, 1995; Comerio, forthcoming).

The displaced population lived in shelters for months and virtually every neighbourhood schoolyard or park is still crammed with temporary units (Asano, 1995; Eadie, 1996; Hyogo Cultural Center, 1996). What are the prospects for recovery? Access to private recovery funds is limited by a lack of insurance. Only about 7 per cent of Japanese homeowners carry an earthquake endorsement on their policy and the pay-out is capped at 50 per cent of the value of the structure (EQE International, 1995). Although the government has developed a three-year plan to build 125,000 units, and some land has been acquired, no construction has begun 2 years after the event nor have the bonds necessary to finance the construction been sold. It appears that housing recovery in the heavily damaged wards of central Kobe will take years (Tomioka, 1997; Comerio, forthcoming).

Can American and European cities expect the devastating losses experienced in Mexico City or Kobe? The answer is yes and no. Certainly, the financial and physical losses experienced in Andrew and Northridge are a fraction of what could happen in a slightly larger disaster, slightly closer to the urban core. Certainly, the older sections of European cities have building conditions and population densities that mirror those in Mexico City or Kobe. But to answer the question, will there be a crisis here?, cities need to take stock of the risks they face, the condition of their housing inventory and the state of their housing markets.
Urban Recovery Issues

The recent American disasters, like Mexico City and Kobe, have been perceived as individual and unique events and recovery planning has not taken advantage of the opportunity for comparative research on urban disasters. What can these recent urban disasters teach? First, traditional measures of geological or hydrometeorological intensity, casualty rates, even the numbers of people made homeless, are not the appropriate indicators of a need for outside aid. As Hurricane Andrew and the Northridge earthquake indicate, damage to large numbers of well-insured, single-family homes does not cause a recovery crisis. The losses may cause temporary housing shortages, if all the housing in a particularlocale is uninhabitable, as happened in Andrew, but if a disaster happens in a weak housing market, as in Northridge, then even temporary housing is not an issue.

Secondly, the concentration of housing losses in a particular market sector is a much more important indicator of a possible housing crisis than the number of housing units lost. What Mexico City, Loma Prieta and Kobe have in common is that, in each case, there were concentrated losses of multi-family housing in dense urban neighbourhoods. The fact that the losses represented only a tiny percentage of the total urban housing stock was irrelevant. In each of the cities, vacancy rates in rental housing were extremely low, crowding was common and choice was unheard of, particularly at the bottom of the housing market. In these earthquakes, the victims were predominantly low and moderate income renters or, as in Kobe, renters and homeowners without insurance. The victims were people whose lives were tied to an urban core, to jobs, to services and the social net that cities provide.

What distinguishes Mexico City, Loma Prieta and Kobe is that there was no alternative temporary housing for victims and there was no system of insurance or governmental aid in place to assist in the re-building of lost housing. By contrast, the hurricanes Hugo and Andrew occurred in metropolitan areas with high vacancy rates and victims found alternative temporary housing relatively quickly. The storms largely affected single-family homes with insurance and these were repaired quickly. But, even in these cases, rental housing was largely un-replaced and the un-insured owners of mobile homes and marginal dwellings relied on charities to help them rebuild.

What distinguishes Mexico City from the others is the unprecedented political commitment of the national government to rebuild. In the months immediately following the earthquake in 1985, displaced residents refused to be moved to new towns on the outskirts of Mexico City. Fearing political unrest, the President of Mexico used the special relationship between Mexico’s national government and Mexico City (one in which the Mayor is appointed by the President) to provide the funds and the operational structure to mount a re-building program. With a combination of World Bank loans and concessions on Mexico’s international debt structuring, the government used agencies in the Federal District, combined with the Ministry of Urban Development and Ecology and a newly created agency, Renovation, to expropriate land and oversee the construction of 48,000 new units and the repair of an additional 46,000 (DFF, 1986; 1987; SEDUE, 1987; Echeverria, 1991; Comerio, forthcoming).
The Northridge recovery is an interesting comparison because the housing losses were also concentrated in apartments, albeit, middle class apartments in a suburban section of Los Angeles. As in the hurricane cases, rental vacancy rates were high and alternative temporary housing was not difficult for victims to find. The federal government provided significant funds to assist victims in finding alternative shelter. Three weeks after the event, no one was camping in the parks or on the streets. Similar to the Mexico and Loma Prieta situations, losses were concentrated in apartments in a few neighbourhoods. The apartment buildings were, typically, uninsured and heavily leveraged, making the cost of additional financing to pay for reconstruction infeasible in a weak rental market. Clearly, the majority of the damaged apartments would not have been repaired had it not been for a proactive effort on the part of the City government to secure non-disaster federal housing loan funds and target them for repair programmes (Comerio with HR&A Inc., 1996; Smith, 1997).

At the same time, homeowners in the Los Angeles basin received billions of dollars in insurance settlements and government low-interest loans for repair of minor damages. Like hurricane area residents, many in the greater Los Angeles region took advantage of homeowners insurance and disaster assistance, not only to repair damage but to re-decorate and improve their properties (Comerio, Landis, Firpo and Monzon, 1996). The discrepancy between the recovery assistance available specifically for homeowners and the limited assistance for repairs in multi-family housing is both troubling and telling. In the American setting, where homeownership is perceived as the predominant and ideal form of housing, disaster policy follows general housing policy in favouring homeowners.

In reality, there are as many units of multi-family housing as there are single-family, detached homes. Even in Los Angeles, the land of the bungalow, 56 per cent of all housing is in multi-family buildings (HR&A, 1994). In California, nearly half of the housing units in the state are multi-family. Nationally, the number of multi-family units is about forty per cent (US Census, 1990; 1993). Such statistics are comparable, if not higher, in cities around the globe.

It is not surprising that, in a world where 75 per cent of the population of developed countries and 47 per cent of people in developing countries live in urban areas (UN, 1987), urban disasters in the last decade have damaged housing on an unprecedented scale. What is surprising is the lack of attention to the unique circumstances of urban housing recovery. In terms of damage, Northridge is the likely model for future urban disasters in developed countries. Although only a small per cent of a city’s total housing stock will be affected, in some neighbourhoods 50 to 80 per cent of housing will be uninhabitable and a majority of that will be in multi-family structures (Comerio, 1995; forthcoming). The capacity to re-house victims will depend entirely on the availability of undamaged housing at comparable rents.

In terms of recovery, the Kobe experience, not that of Mexico City, is the likely scenario. American insurance companies have stopped offering disaster insurance or have severely limited coverage in homeowner policies. At the same time, lenders appear to be willing to make loans on residential properties in high hazard areas without safety inspections or mitigation requirements. In future disasters, Americans are likely to find themselves in circumstances similar to those in other countries, with limited private insurance and limited access to capital
for post-disaster rebuilding. Unfortunately, public assistance for private housing repairs will also diminish as governments are unable to cope with the public, as well as the private, costs of recovery.

**Housing Policy Lessons**

The scale of the potential losses due to earthquakes or hurricanes in major urban centres is staggering. Recent urban disasters have made it clear that housing is the single greatest component of all losses in terms of economic value and in terms of buildings damaged. As a result, the potential for a major housing crisis exists if there is no mechanism to provide alternative housing for victims or if there is no capacity to finance the repair or re-construction of units lost in a reasonable time frame. While there is no question that government's primary role is the restoration of services and public infrastructure, the dramatic and significant housing losses in recent urban disasters raises questions about the need to improve conditions in the existing private housing stock, which represents about 70 per cent of the total building stock.

However, recent experience has also demonstrated that not every natural disaster in an urban area causes a housing crisis. Because the scale of metropolitan areas is large and housing resources are varied, one can no longer measure the magnitude of the disaster in terms of units affected or victims displaced. Instead, it is important to look at the loss in relation to existing housing resources and conditions in the housing market. If the number of units lost or rendered uninhabitable is very large, but represents only a small percentage of a particular housing type in a soft market, alternative housing may not pose significant problems. Whereas, even if the numbers lost are small, if they represent a majority of housing types in a limited price range, then shelter will be a critical issue.

There are eight important lessons that can be learned from recent urban disasters:

1. Damage to residential stock constitutes the majority of the damage;
2. The major structural damage commands media attention and often frames government response, but it is the minor damage that costs the most to repair;
3. Just as we have learned that there is a surprising amount of redundancy in the transportation infrastructure, so too is there redundancy in the housing stock;
4. Governments have made significant advances in improving emergency response but there has been little preparation for the much bigger task of coordinating and paying for post-disaster rebuilding;
5. Private insurance is, and will continue to be, the primary fund source for private rebuilding;
6. To maintain a functioning insurance market, governments need to improve loss estimation and rate setting models and to increase the level of research into the links between specific building designs, appropriate mitigation and retrofit steps and reconstruction costs;
7. Government re-building programs need to be more efficient and targeted to complement rather than substitute for insurance coverage; and
8. mitigation policies and programmes must be viewed as part of the funding for recovery and not simply as disaster preparedness.

Taken together, these lessons suggest that in future urban disasters, one can expect that life-threatening major structural damage will be confined to a small portion of the overall damage but that the cost of repairs for residential damage will be astronomical. Most important, neither the private insurance industry nor any national government is prepared to respond with re-building assistance comparable to that expended in Mexico City, even, Northridge. In this light, mitigation becomes an essential component of recovery because the best way to reduce the cost of post-earthquake rebuilding is through reduction of damages.

Although many cities in high-hazard regions are bolstering their building codes and improving infrastructure in anticipation of major earthquakes and hurricanes, codes for new construction or retro-fit codes applied to a narrow spectrum of building types (such as unreinforced masonry) are inadequate policy in the face of the potential for damage in the existing building stock. Best building practices, must be combined with strategies for hazard mitigation, improved lending practices, and an improved climate for private insurance. Finally, disasters must become an urban policy priority. With an increasingly urbanized population in high hazard zones in countries around the world, we literally cannot afford to do otherwise.

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On the early evening of October 4, 1992, an El Al Boeing 747 freighter crashed only a few minutes after take-off into a large apartment building in the Bijlmermeer, a suburb of Amsterdam, The Netherlands. The impact and ensuing fire killed 43 people, including the three crew members and the only passenger, injured several dozens on the ground, and left over 260 people homeless. The unexpected, uncontrollable, and destructive nature of disasters makes people lose their sense of safety and of the predictability of the environment. Apart from their physical injuries and loss of property, air-crash survivors may also suffer severe emotional consequences. Not only passengers and crew, but also those who are hit on the ground, the families and friends of both groups, rescue workers, and support personnel may be affected [Brooks & McKinlay, 1992]. Clearly, most of the survivors will be in need of material support, such as money and housing, and also psychosocial aid. This aid should include activities that help people to come to terms with the psychological aspects of the recovery process, and opportunities to satisfy their interpersonal needs [Garaventa Myers, 1989].

This article reviews the management of the psychosocial aid and aftercare provided for survivors in the context of the Bijlmermeer air disaster. The research on which it is based included an examination of all relevant city documents, interviews with some 40 city officials and representatives of other aid agencies, and a comprehensive media archive. We will explore how the local authorities coped with the organizational challenges involved in responding to the needs of survivors, and discuss the implications of the findings for preparing for and responding to other aircraft emergencies.

**Survivor Characteristics Influencing the Need for Psychosocial Care**

In disasters like this, ordinary people, those on the plane as well as people on the ground, suddenly become fatalities or survivors. Here, we will use the term “survivors” to characterize the surviving inhabitants of the stricken apartments, those present at the disaster site at the time of the crash, the families and friends of both groups, and the bereaved. Psychosocial care for disaster survivors requires a different approach than is used in treating the mentally ill [Hodgkinson & Stewart, 1991; Lebedun & Wilson, 1989; Tierney, 1989]. For one thing, survivors find it difficult to recognize their psychological reactions and are reluctant to
seek psychological and psychiatric help. This is generally attributed to their unfamiliarity with the symptoms of psychotrauma and with the kind of services provided by mental health agencies, and to the stigma associated with this form of aid [Gist & Stolz, 1982; Hodgkinson, 1989; Mangelsdorff, 1985; Mehta, 1991; Stewart, 1989 a, 1989 b; Williams et al., 1988; Yates et al., 1989]. In addition, the specific needs of survivors are influenced by demographic characteristics such as age, ethnic background, and socioeconomic status, and by previous traumatic experience [Garaventa Myers, 1989].

Survivors of the Bijlmermeer Air Disaster

Most survivors of the Bijlmermeer disaster were immigrants coming from the Dutch Antilles, Aruba, Surinam, Ghana and other parts of Africa, Turkey, India, Pakistan, and some Arabic-speaking and Spanish-speaking countries. There were only a few native Dutch people among them. The survivors had a relatively low socioeconomic status and level of acculturation, and there was a considerable number of illegal immigrants among them. Moreover, some had traumatic experiences in their home countries, such as political persecution, or involvement in the SLM air disaster at Zanderij airport, Surinam, in 1989. In short, the crash struck a socially vulnerable and multicultural community.

Functions and Use of Shelters

Temporary sheltering does much more than just provide physical shelter [Quarantelli, 1991]. Evacuees also have to be fed, and, especially if evacuation has been unexpected and the predisaster homes have been destroyed or damaged, need further material support such as clothing and financial aid. Mass shelters also serve as information centers and consultation sites. Meeting others similarly affected at the shelters may help survivors to make sense of the situation, evaluate their own reactions, and develop coping alternatives [see Buunk, 1992; Yates et al., 1989]. Furthermore, shelters seem to fulfill a symbolic function, signifying that the government cares about the survivors and is prepared to help them [‘t Hart, 1993].

Shelters serve to improve the efficiency and speed of the helping operation, since they allow access to many survivors at a time. Wartime experience has shown that the ideas of “immediacy,” “proximity,” and “expectancy” (of returning to normal functioning and to work) reduce the number of long-term wartime psychiatric casualties [Mangelsdorff, 1985]. With respect to disasters, Raphael [1986] cited studies indicating that evacuation of survivors to a place far from the disaster area has a negative effect on mental health. Timely, on-the-spot interventions and the expectation that psychological reactions are normal and will pass are generally advocated in postdisaster mental health care [Butcher & Hatcher, 1988; Jacobs et al., 1990; Mangelsdorff, 1985; Williams et al., 1988]. However, no long-term systematic studies using control group designs to assess the effectiveness of the mental health interventions after disasters have been reported [Mangelsdorff, 1985; Yates et al., 1989].

Disaster research consistently shows that public shelters are generally underutilized, because survivors prefer to seek refuge with relatives and friends.
However, the lower survivors are on the socioeconomic ladder, the more likely they are to use mass shelters [Drabek, 1986; Quarantelli, 1982, 1991; Tierney, 1989].

Shelter After the Bijlmermeer Air Disaster

In The Netherlands, it is standard practice to organize public shelters in the event of a disaster or major accident. Directly after the Bijlmermeer disaster, the local authorities set up three shelters, one in each of two sports centers and one in a school. In addition, there were several spontaneous initiatives to provide shelter by schools, churches, community centers, and private persons. In the course of the evening of the crash all the official shelters were centralized in the Bijlmermeer sports center. On the first night about 200 evacuees were accommodated, and 36 wounded were taken to hospital. In all, 266 apartments had been rendered uninhabitable by the crash. Estimating an average of three persons per apartment, and considering the fact that 43 bodies were eventually identified, we calculated that about one third of the people living in the disaster area initially went to the public shelters. This confirms the earlier finding that many homeless seek shelter elsewhere.

The use of the public shelters was undoubtedly reduced by the fact that many of the survivors were illegal immigrants, who feared the registration at the official shelters. The authorities, however, announced soon after the disaster that all survivors, regardless of their legal status, would be treated equally and given the help they needed. In this respect, it should be noted that the authorities were not solely concerned with giving aid. They also had an interest in determining the number and identity of the victims as accurately as possible. For that purpose, the assistance of the illegal immigrants was indispensable.

In the Bijlmermeer sports center, comprehensive care, i.e., material, legal, medical (first aid), and psychosocial aid, was provided under the same roof. Such a procedure saved the survivors the trouble of going from office to office. This policy seems to be commendable in general, but in this case it was especially beneficial. Considering the multicultural background and acculturation level of the survivors, many of them would probably have had difficulty finding their way in the Dutch bureaucratic system.

Different Locations

In addition to the Bijlmermeer sports center, where survivors could stay during the day, the city authorities set up night shelters in four different locations, i.e., two municipal buildings, a school, and a navy barracks. In contrast to the experiences reported in other disasters, there were no difficulties in getting these facilities opened, staffed, and supplied [see Quarantelli, 1984].

Using separate shelters for sleeping and day care can be practical, because both require a different infrastructure. However, the distance between the shelters in this case posed a number of difficulties. First of all, it complicated the coordination and exchange of information between the different organizations and services involved. On the first evening, this problem was made worse by the poor quality of the telephone connections, which quickly became overtaxed. The lack of communication resulted, for instance, in uncertainties at the night shelters about how many survivors had to be accommodated, when they would arrive, and
whether or not they would need meals. Furthermore, the dispersal of the survivors hindered registration, and impeded accurate dissemination of information about the fate of missing persons. Finally, the night shelters, which were located relatively far from the Bijlmermeer sports center, necessitated transportation by buses, which meant extra organization and an extra check-in point. To keep track of survivors and to preclude misuse of the services by fraudsters, the survivors had to check in every time they entered or left the shelters and buses. This procedure of course involved several registration checks a day, and was aggravating for survivors as well as disaster workers.

Registration of Survivors and Helpers

It is vitally important for postdisaster recovery that survivors, relatives, friends, and other interested parties be informed as quickly and accurately as possible about the fate of their missing loved ones. Therefore, every effort should be made to carefully register survivors and identify the dead [Raphael, 1986]. The helpers and counselors should also be registered, noting their names, credentials, times of arrival and departure, and the survivors they work with. In this way, their specific skills can be optimally tailored to the needs of the survivors, a certain amount of continuity in counseling can be provided, and helpers can be protected from working too many hours without rest [Jacobs et al., 1990].

Registration in the Bijlmermeer

Both of these requirements were poorly met after the Bijlmermeer air disaster. It should be noted, however, that accurate registration of survivors and identification of the dead were particularly difficult in this case. In most air disasters it is the passengers and crew who are the victims, and they have usually been registered by the airline or travel agency. In this case, however, because most of the victims were on the ground, the list of passengers and crew was of little help. Registration and identification was further complicated because the city’s data for the population in the affected neighborhood were seriously flawed as a result of the large number of subtenancies, which allowed many inhabitants to live there anonymously.

For these reasons, the authorities had to start practically from scratch in composing lists of survivors, missing persons, and fatalities. On the evening of the crash, the district authorities set up telephone lines for the reporting of missing persons. At the same time, the police had staffed a check-in point at the entrance of the Bijlmermeer sports center where survivors were registered and could also report people they were missing. Nevertheless, the registration procedure was initially inadequate due to the lack of standard forms specifying the data to be recorded and the use of unqualified personnel. At first there was no exchange of information between the different registration sites. Moreover, missing persons were often reported under different names, and the foreign names posed spelling difficulties. Last but not least, the illegal immigrants among the survivors were reluctant to report themselves or their missing relations and friends to the authorities. It took some time before the authorities mastered these difficulties.

The registration and identification of helpers also posed some problems. There was little control of credentials, allowing pseudo-helpers, some of whom
turned out to be drug dealers, to enter the shelters. It is difficult to check helpers’ credentials, since not all of them are professionals working in formal institutions. However, the fact that different forms of psychosocial aid, such as psychological counseling, ministerial work, and support by interest groups, were coordinated separately may have unnecessarily complicated control of the situation.

Survivors and Pseudo-survivors

In contrast to the normal finding that survivors prefer to avoid mass shelters, the number of people applying for shelter increased significantly in the days after the crash. The Salvation Army and the Social Security Service recognized several of their clients from non-affected parts of Amsterdam among the survivors. These developments made the authorities suspect that a number of people were taking advantage of the services for survivors. They introduced a more strict check-in procedure, and gave out identity cards to both survivors and disaster workers.

However, while this policy looked good on paper, in practice there were serious problems of implementation and control. First of all, it was difficult to formulate explicit criteria to determine who was entitled to aid. As noted before, population data concerning the affected community were flawed, so anyone could claim to have lived there. The lack of suitable equipment and personnel to produce large numbers of identity cards at short notice caused long queues of sometimes outraged survivors and helpers in front of the distribution office. Furthermore, there was some uncertainty about whether all survivors and helpers needed an identity card. Finally, since the registration procedure requested personal data, it kept illegal immigrants away from the shelters. This was not only against the official policy that all survivors, irrespective of their legal status, were entitled to aid, but also against the desire of the authorities to be accurate in determining the number and identity of the fatalities. Therefore, after a while the district authorities and the police issued special day tickets for the shelters as well, for which registration was not required.

Obviously, some form of control was necessary to counter improper use of services, and to keep track of clients [see Jacobs et al., 1990]. At the same time, any attempt to control and possibly exclude people from services was likely to encounter considerable opposition. Because the disaster struck an underprivileged district, it might have reinforced preexisting feelings of relative deprivation among the inhabitants. Furthermore, because of their common predicament, strong bonds between survivors often develop. Such high in-group cohesion can easily be accompanied by out-group hostility, especially when the out-group threatens to act against the in-group’s interests [see Brown, 1988]. The authorities clearly underestimated the difficulties of implementation and control involved in the check-in procedure. It reduced the number of people using the shelter facilities as intended, but it should have been prepared more carefully.

Planning and Coordinating Psychosocial Services

Although the psychosocial consequences of disaster are well documented [e.g., Gist & Lubin 1989; Raphael 1986], it has been found in the United States that airports and airlines often lack facilities for the organization and supply of psychological services to crash survivors and their relatives [Butcher & Hatcher, 1988;
Butcher & Dunn, 1989; Anderson, 1988]. The same holds for The Netherlands. At the time of the Bijlmermeer disaster, the Amsterdam Municipal Disaster Plan [1988] did not include psychosocial care for survivors. Schiphol airport has only recently (after the Bijlmermeer disaster) developed plans on psychosocial care for survivors and helpers [Schiphol Airport Emergency Plan, 1991/1993], and major Dutch carriers are currently developing such plans.

Providing shelter and support to disaster survivors requires an integrated effort by many different aid agencies. The diversity of the organizations involved in disaster relief, and the complexity and uncommonness of the situation, necessitate careful disaster planning and training. Participating organizations should be made familiar with each other’s activities, and there should be regular disaster drills [Garaventa Meyers, 1989; Quarantelli, 1980, 1984].

In the first few days after a disaster, coordination is usually facilitated by a high degree of solidarity among all those involved. However, over a longer period of time, ambiguity concerning roles and tasks, fatigue, and emotional strain will start taking their toll, and disputes of competence often arise [Hodgkinson, 1989; Quarantelli, 1984; Raphael, 1986; Tierney, 1989]. Coordination is further affected by the nature and strength of the interorganizational ties. It is not uncommon in disaster situations for new structures of authority to emerge. Organizations with relatively high levels of experience or information, such as the police, are usually accepted as coordinators by the other services involved [Quarantelli, 1980, 1984]. These processes were also visible in the aftermath of the Bijlmermeer disaster.

Coordination at the Bijlmermeer Sports Center

After the Bijlmermeer disaster, a variety of municipal and other organizations provided shelter and gave psychosocial aid. On the first evening, representatives from the helping organizations formed a coordinating committee. They met twice a day, with the police chairing the meetings. In addition, a committee of survivors was created, cochaired by a church representative and the manager of the Bijlmermeer sports center. Twelve different groups were represented: Africans, Antillians, Arabic-speaking people, Arubans, Cape Verdeans, Dutch, Ghanese, Israelis/Jews, Pakistanis/Indians, Spanish-speaking people, Surinamese, and Turks. This survivor committee dealt with language problems and requests for help. The chairpersons communicated these requests to the coordinating committee, of which they were also members.

The disaster plan for Amsterdam contains a detailed section on evacuation and sheltering, including specifications of the tasks and responsibilities of different municipal and other organizations. Nevertheless, the coordination in the shelters did not function as planned. The general coordination center at City Hall, headed by the Mayor, assigned responsibility for coordination in the sports center to the District Council of the affected area. In a recent reorganization of the administrative structure of Amsterdam, relatively autonomous Districts were formed. However, the role of the District authorities had not been formalized in the municipal disaster plan. When the District officials moved to take over command in the sports center, they found the police already firmly in charge. The formal authority given to the District Council by the coordination center at City Hall did not legitimize their taking control in the eyes of the different parties in the sports center. This remained so throughout the existence of the shelter,
and complicated the collaboration between the aid agencies at the shelters, as we will see next.

Collaboration between the Aid Agencies

Some days after the crash, controversies between the services began to arise. To begin with, different views developed on the sort of support survivors needed first. Was information on insurance matters and permanent housing required instantly, or did they just need a shoulder to cry on? Did the day shelter have a symbolic or a purely instrumental function? One faction, which included the City and District authorities and the mental health centers, stressed the importance of collective mourning and coping with grief. In their view, comprehensive care should be provided under one roof, by both black and white disaster workers. Other services, such as the Social Security Service, defined the day-care shelter more narrowly as an information center. They noted the development of isolated support factions within the Bijlmermeer sports center, and an increasing number of pseudo-victims illegitimately using the shelter’s facilities. A week after the crash, these differences of opinion culminated in a conflict about when to close down the services at the day shelter. Eventually, the coordination center at City Hall decided that the services would be gradually diminished in order to prevent survivors from feeling abandoned. This episode clearly illustrates the lack of actual authority the District authorities had over the City services, who only accepted orders to remain at the shelters from the City authorities.

Another controversial issue concerned how to deal with ethnic differences between the survivors. Should all survivors be treated as one group, or should differences in ethnic identity be considered? And could white disaster workers be of any help to black survivors? For some groups of survivors, any help was welcome, regardless of the color of the person who offered it. But others initially refused all contact with white helpers, and strongly distrusted the authorities. While these fears soon subsided, other problems stemming from cultural differences arose. For example, the Western type of psychosocial care was somewhat less tangible and prescriptive and used less outreach than some survivors were used to. Also, some bureaucratic practices, such as requesting survivors to fill in standard forms and to show their papers, even though their houses and possessions had been destroyed, met with disbelief and indignation. The help of representatives of the ethnic groups involved proved to be essential in bridging these cultural differences.

Dealing with the News Media

Air disasters typically receive a great deal of public attention and extensive media coverage. This may be attributable to their unpredictable and highly destructive nature, which allows the victims little chance of escape [Perrow, 1984]. The Bijlmermeer air crash, like the 1988 Lockerbie disaster, may have been even more shocking because not only passengers and crew fell victim to it, but also people on the ground. Passengers and crew can be assumed to be aware of the risks involved in flying before they board the airplane, while those on the ground are totally unprepared for their ordeal [Crisis Research Center, 1993; see also Gist & Stolz, 1982].
While the press can adversely affect a relief operation in various ways, such as by blocking the way of helpers, releasing unchecked, incorrect news, interviewing survivors, and obtaining confidential information from inexperienced relief workers and volunteers [Jacobs et al., 1990; Quarantelli, 1980], the media can also be a valuable source of information and advice on how to cope with the consequences of a disaster [Jacobs et al., 1990]. Successful partnerships between authorities and the media can develop, with the mental health authorities providing the media with valuable resources for stories, and the media ensuring broad and consistent coverage of the mental health messages [Gist & Stolz, 1982; Williams et al., 1988].

Media Policy after the Bijlmermeer Air Disaster

Large numbers of national and foreign media representatives converged early on the Bijlmermeer disaster site, the various coordination centers, and the shelters. In order to protect survivors from being troubled by journalists looking for sensational stories and pictures, the police kept the press out of the shelters. Unfortunately, the efforts to protect survivors in the shelters from media assaults had the side effect of discriminating against white survivors of the crash. Since most survivors were black, whites were often denied access to the Bijlmermeer sports center unless they could identify themselves as helpers.

Although the authorities responded adequately to the need to inform the public about the disaster and the relief operation, they seemed at least initially to regard the media as an enemy rather than an ally. The police treated media representatives brutally enough to make the Dutch Society of Journalists file a formal complaint. In the press conferences that were held two times a day by the Mayor, chief of police, and chief of the fire brigade, most attention was paid to the current state of affairs, such as giving updates on the numbers of casualties and fatalities. The authorities made less use of the media for disseminating information on the psychological reactions that survivors might experience following a disaster, how to cope with them, and what psychosocial services were available.

Aftercare for Survivors and Helpers

Since the municipal disaster plan did not contain a section on psychosocial aftercare for survivors and helpers, a plan was developed *ad hoc* by the municipal Mental Health Service, with the help of an external psychiatrist. The aftercare plan called for various forms of support, ranging from legal advice to psychotherapy, to be provided primarily within the survivors’ existing social networks. When professional mental health services were deemed necessary, the plan advised referring survivors to the existing mental health organizations, instead of establishing a special aftercare organization.

Relying on community support systems and social networks, and integrating aftercare in the ongoing, established mental health care structures are effective principles in several respects. First of all, as pointed out earlier, survivors generally do not see themselves as disturbed, and are reluctant to seek professional help [Hodgkinson, 1989; Yates et al., 1989]. Community participation is typically high in the aftermath of even the most severe disasters [Tierney, 1989], and
such participation can positively affect the coping process [Raphael, 1986]. Also, support by existing social networks prevents language problems and ensures that interventions are in accord with cultural customs. Finally, using the regular, established service channels ensures the continuity of mental health care for survivors [Garaventa Meyers, 1989]. Despite these advantages, however, some important caveats can be identified.

This decentralized way of providing aid to survivors involves many organizations and requires a large amount of coordination and monitoring. However, it is doubtful whether the organizations will continue such coordination over a long period of time. For instance, the Mental Health Services in The Netherlands are autonomous organizations and are not used to central coordination of their activities [Meijer, 1992]. Coordination and monitoring were further complicated by the fact that survivors moved to different parts of the city, or even to other cities. Moreover, not all of the community support groups and social networks were capable of playing an extended role, leaving some survivors with unreliable social networks. According to the aftercare plan, they should then be helped by the professional mental health services. To enhance the accessibility and acceptability of these services to the multiethnic group of survivors, professionals from different cultural backgrounds were employed. Nevertheless, there were many complaints about insufficient tailoring of mental health interventions to different cultural customs and needs [Task Force Bijlmer Air Disaster, 1993].

Aftercare for disaster workers was provided by their own organizations. However, there was no guarantee that all agencies could adequately care for their own disaster workers. For instance, debriefings were mandatory in some cases, but voluntary or even absent in others, and the extent to which disaster workers were rewarded for their efforts differed considerably. Also, this scheme of aftercare for helpers did not provide for the many volunteers who did not belong to any formal organization. Volunteers are confronted even more strongly with unfamiliar roles and tasks than professionals, and therefore may be more uncertain about the demands of their role. Such uncertainty is known to contribute to the stressfulness of the situation [Raphael, 1986].

Conclusions and Recommendations

What can be learned from the experiences of the Bijlmermeer air disaster about the management of psychosocial care in the aftermath of other emergencies? Evidently, the Bijlmermeer disaster was an unusual type of air disaster, with only a few victims among passengers and crew, and many more on the ground. It makes a considerable difference whether or not a disaster disrupts a local community, and whether people are caught up many miles from home, or are in a familiar environment. Thus, the recommendations that follow apply specifically to disasters affecting people in their own communities.

Concentration of the shelters improved the efficiency and manageability of the aid operation. When different shelters are necessary, they should preferably be located at close range. Furthermore, if possible, shelters should be located close to the survivor’s former homes, avoiding disruption of existing social networks and assisting survivors to regain their sense of normality. In order to facilitate disaster recovery, assistance policies and practices should be tailored
to the specific demographic, cultural, and psychological characteristics of the survivor population.

The difficulties of coordinating psychosocial services provided for survivors are well-known, but even so they are often insufficiently prepared for. After the Bijlmermeer disaster, too, coordination posed a number of difficulties, including conflicts between the aid agencies at the shelters and problems in the provision of aftercare. Careful planning and training is needed, so that roles and tasks have been delineated as clearly as possible in advance, and organizations are familiar with one another’s competencies and methods.

The registration of survivors proved to be very difficult in this disaster. This is a vital aspect of disaster relief, and deserves a corresponding amount of attention. Using standard registration forms from the very beginning, with rigorous procedures of signing in and out, are minimal requirements. This should apply to survivors and helpers alike; it serves to keep track of clients, and to hinder the improper use of the services for survivors.

The press is often considered a necessary evil in disaster relief. Care should be taken to protect survivors from unwanted intrusions by the media, and to check the broadcasting of rumors and misinformation. At the same time, good working relationships between the authorities and the media are desirable, so that the potential of the media as disseminators of information and mental health education can be exploited to the fullest extent.

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The Emotional Effects of Disaster on Children:
A Review of the Literature
L. Aptekar and J. Boore


Recently we visited a school-based mental health clinic that serves Hispanic and Asian children. Many of these children had been victims of political tragedies that had forced them to leave their parents and begin life anew in a foreign culture. We saw three young adolescents who had arrived in the United States within the last year; two of them were considerably withdrawn, whereas the third had already become integrated into a well-functioning multicultural sub-group. After we had reviewed the case reports on these children, we fell into a conversation with a colleague about our own pasts, the nature of trauma, its influence over time and generations, and its ripple effects through families and communities.

It became apparent to us that we were here encountering many of the problems associated with the mental health of child victims of disasters. Not only did the nature of the trauma and their contacts with it differ for each one but each adolescent was a member of a family that reacted to the stress and contributed to the adolescent’s experience of it. Perhaps in no other human experience does the weave between child and parent intertwine so strongly. How children cope with disasters influences their mental functioning as adults, which in turn influences how they rear their children, whose mental health, should they become victims of disasters, will greatly depend on how their parents respond. A loosening of a single thread can fray the whole fabric. Yet, some children, as the one Cambodian child in the clinic illustrated, are resilient in the face of unbearable sum. Why is this? Does a disaster impede a child’s opportunity for happiness forever? What is the prognosis for child victims? Can they be helped? In the following pages, we shall address these questions.

Methodological Issues

The literature on the effects of disasters on the mental health of children has been mixed. Almost all the work has indicated that immediately after a disaster, child victims are confused and anxious. Some researchers claim that children’s mental health is altered for at least two years, if not longer [1–141. Lifton & Olson have written that disasters produce trauma so intense that the emotional reactions will extend over generations, and that adverse effects of significant proportion can occur in children survivors even when the children are born some years after a particular disaster” [3. P. 14].
Other researchers [15–22] have taken the opposite position and agree with Breslau & Davis, who have stated, in a review of the literature, that “the preponderance of evidence from recent research does not support the proposition that disasters produce psychopathology in the majority of individuals” [23. P. 259]. A third position is that the “reactions of children to high degrees of stress is very variable and ranges from the mild and transient to an acute evolving psychopathology [24. P. 300]”. Although it is surprising to find such contradictions in the literature, the explanation probably lies in certain basic methodological difficulties that make widely acceptable conclusions problematic. One such difficulty is a lack of precision about what constitutes a “disaster.”

Here we shall focus on disasters that fall within the dimensions of unusual stress as defined within the criteria of post-traumatic stress disorder (PTSD) in the American Psychiatric Association’s Diagnostic and statistical manual of mental disorders (3rd ed., rev.) (DSM-III-R) [25]. The stressor has to be outside usual childhood events and be experienced as markedly distressing. Thus, we include natural and technological disasters, war, the child’s witnessing the accidental or violent death of a significant adult, being kidnapped, and other stressors of similar severity. This classification provides us with a common background, though such a wide range of precipitating stressors has accounted for some of the discrepancies in the literature. For example, Frederick [26] has claimed that victims react differently to man-made versus natural disasters. And Beigel & Berren [27] have suggested that different emotional reactions to different natural disasters depend on the victim’s belief about what caused the disaster, the degree of violence it produced, and the extent to which the victim was involved with its effects.

Also, certain additional factors have been offered as explanations for children’s very different responses to disasters. Two of these are intrapsychic: (1) the developmental level of the child [28, 29], and (2) the child’s premorbid mental health [29311, some children being resilient and others, vulnerable [24, 32, 33]. When stress-vulnerable children [321 were compared with stress-resilient children, researchers concluded that individual variability depended on biological and environmental differences [24, 32, 34–36].

Three others factors that have been hypothesized to account for the variability in children’s reactions to disasters are extrapsychic: (1) the ability of the community to offer support [371, (2) whether or not the child was separated from his or her parents, and (3) the reaction of significant adults. Freud & Burlingham [38], in their pioneer study of children’s reactions to World War II, showed that parental reactions were vital to how well their children fared. Later investigators have corroborated this “communicated anxiety” between parents and children.

Garmezy [33] has reviewed the methodology in the literature on the mental health of child victims of disasters. He classifies the research according to three methodological categories: clinical-descriptive, epidemiological, and quasi-experimental. The clinical-descriptive often uses single case histories, whereas the epidemiological collects several case studies and reflects on similar patterns in order to classify clinical syndromes. In disaster research, in which the disaster is the independent variable, it is difficult to meet the criteria for a true experimental design. Thus, the third approach, the quasi-experimental, uses ex post facto methods. In this case, the disaster has occurred before the researcher arrives on
the scene, which affords him or her no chance of obtaining predisaster base-level information and measures.

The quasi-experimental approach can be enhanced with control groups, although, because of the random nature of disasters, this is difficult. Smith and co-workers [39] were fortunate in having psychiatric evaluations of a community before two different types of disaster. Using postdisaster evaluations and control groups, they conclude that, for adults, disasters “contribute to the persistence or recurrence of previously existing disorders, but are not responsible for the genesis of new psychiatric symptoms or disorders” [P. 75]. It is unfortunate that their study did not include children. Gleser and associates [9] devised another way of making comparisons in a quasi-experimental design. They considered demographic variables such as age, gender, etc., and compared high-dose victims with low-dose victims in terms of these measures.

Another methodological problem is related to the effects of the high visibility of the victims’ suffering on the researchers. Researchers have tended to ignore individual children who have escaped without severe or enduring pathology. As Garmezy has pointed out the more horrifying a traumatic event to which children have been exposed, the more the danger of generalizing, rather than individualizing, its consequences” [33. P. 387]. In-depth ethnographic investigation of individual children could provide information about how children cope.

As a result of methodological difficulties, the question of whether children return to their premorbid level of high or low functioning following a disaster remains moot for two reasons. First, the severity of the trauma is so great that research has focused on the traumatic event as the cause of future behavior, ignoring how the child previously responded to stressful situations. Second, it is difficult to obtain more than anecdotal case history information about predisaster levels of functioning. It would be worth the effort to collect predisaster information in disaster-prone areas. In all probability, the effects of a disaster on experienced disaster-prone populations might well be different from the effects on a community that has experienced its first disaster.

Perry [40], in his review of the methodology of mental health disaster research, has noted that one reason for the inconsistent findings is the lack of theoretical breadth. Sociological studies using a survey technique have reported small correlations between mental health problems and disasters, whereas psychoanalytically oriented studies, which have relied on interviews, have found significant emotional impairment.

Little theoretical attention has been given to learning theory, which has a history of relating conditioning to phobias [41]. Learning theory has also been shown to be effective in clinically reconditioning clients with phobias and other anxiety disorders [42]. In studies by Dollinger and associates [43–45], fear was produced ‘in children by lightning, which presented an opportunity to test the classic learning paradigm. This suggests that children would be conditioned to respond fearfully to lightning and other similarly perceived stimuli and would be less fearful of unrelated stimuli, such as school. The authors found this to be true. Also, because the children’s fear was not being reinforced by more lightning, those who were fearful should, over time, have lost their fear. Two years after the disaster, a follow-up study indicated that all the children were less emotionally upset, although some were still fearful of storms.
Piotrowski & Dunham [46] used the locus-of-control concept to predict whether or not fifth-grade children with an internal locus of control would actually benefit from a low-dose experience of a hurricane. The authors hypothesized that an increase in the children’s coping abilities would result from an increased sense of self efficacy. This hypothesis was confirmed in the findings, and might help to explain why some children do better than others.

**Studies of Specific Disasters**

In 1956, children watching a movie in a Mississippi cinema became victims of a tornado that devastated the building, produced injuries, and made it impossible for their parents to reach them immediately. Two studies [47, 48] using unstructured interviews with the parents (the children were not interviewed) produced information about the children’s emotional reactions to disaster that set the research pattern for many future investigations. The authors concluded that the well-being of the children was the result of a combination of intrapsychic factors and how families and the community responded to their children. Being in the impact zone of the tornado, suffering an injury, and having an injured family member were significant variables that correlated with emotional disturbance. The authors recorded the children’s clinical symptoms, which included regressive dependency needs, enuresis, night terrors, and phobic and avoidant anxiety reactions. They also observed the children playing games repetitively, as if rehearsing ways to overcome their lost sense of a benign world.

The 1972 Buffalo Creek disaster yielded considerable research on children. Newman [4] studied 224 children by examining their projective drawings, using the Three Wishes Test, and having them tell stories. She noted that the children’s developmental level, their perceptions of their family’s reaction to the disaster, and the degree to which the children were exposed to the horrors of the event contributed to their emotional problems, which she claimed were considerable and enduring.

Titchener & Kapp [5] also studied Buffalo Creek victims. Eighty percent of them presented a “traumatic neurosis” with an enduring clinical picture of obsessive thinking, phobic and other anxiety responses, sleep disturbances, and grief reactions. By referring to recurring dreams that “no longer involved direct reliving the disaster but instead depicted stressful episodes that represented repetitions normal developmental crises such as separation, abandonment...” [P. 298], the authors called attention to the possibility that the emotional reactions to disaster not only affected children’s development but rekindled childhood anxieties adults. This helped to plain the interplay of parental and child reactions.

Terr’s research [7, 8, 12] on the mental health of 26 children who had been kidnapped gives a clearer picture of how PTSD is manifested in children. Unlike adults, the children did not use denial, nor did they have intrusive thoughts. Instead they interpreted unrelated events preceding the trauma as “omens” foretelling the kidnapping, so as to explain the trauma and to help themselves comprehend the incomprehensible. The children also played in a unique manner: whereas the psychological purpose of healthy children's play is to have the ego gain master through fantasy [49], in post-traumatic play children were observed to
play compulsively, reenacting a pattern that did not produce mastery, but actually increase anxiety.

Terr noted that the "psychic trauma in childhood exhibits a sameness among almost all the children despite obvious developmental differences, sociocultural, backgrounds, family psychopathology, previous vulnerabilities, and community bonding" [12. P. 823]. This conclusion was not corroborated by Furman's study, [501 of bereaved children who were not traumatized by violence, but who, before the age of thirteen, suffered the loss of a parent. These children's symptoms varied and there was "no syndrome that [told] the clinician, "This is a bereaved child"" [P 242]. Of course, the differences between these two studies might be due to the fact that bereavement without disaster produces different clinical symptoms than doe bereavement associated with disaster.

Ayalon [51], in a study of Israeli child hostages, has suggested that several factors have to be considered before predicting the inevitability of a clinical syndrome. These include the intensity of the stressor, the child's history of stress, the developmental period of the child, and the degree to which the child was able to be active (gain a sense of mastery) during his or her captivity.

It is also important to note that children's psychopathology is not evident, o easily seen, in all situations. For "ample, despite the fact that all the children in Terr's studies were badly affected, their pathology did not manifest itself in their schoolwork. Moreover, symptoms may not have an immediate onset; and when they do appear, they may have been triggered by a symbolic, seemingly neutral event [2, 52] that has activated a traumatic memory.

Sack and co-workers [53] and Kinzie and associates [54] studied Cambodian adolescents who were victims of the Pol Pot regime. They had suffered torture, loss of family members, and forced labor before coming to the United States. In both studies, the children were given the Schedule of Affective Disorder and Schizophrenia [55] and the Childhood Global Assessment Scale Score [56] by native speakers. These children had symptoms of PTSD and depression, but they were characterized as being "generally diligent and conscientious learners" [53. P. 377]. The authors attribute these children's adequate school performance to cultural factors that prize school success and to the help the children received from their ESL (English as a second language) teachers. In both Cambodian studies, the degree of emotional disturbance was not related to the amount of trauma the children had undergone, but to whether or not they had been reunited with a nuclear family member in the United States. This corroborates the importance of separation as a factor in a child's reaction to disaster.

Several studies [8, 53, 54, 57] have noted that parents seemed unaware of their children's emotional problems. Handford and colleagues [58] studied 35 children, from the ages of 6 to 19, who were affected by the Three Mile Island (TM[1] accident. The children were given the Behavior Problem Checklist, the Children's Manifest Anxiety Scale [59], interviews, and other measurements. The results indicated that the children reported more symptoms than their parents. The discrepancy between the children's symptoms and the parents' denial of those symptoms was correlated with increased emotional problems in the children. It was difficult to know if this was because the parents were using denial or if they simply failed to see the connection between their children's behavior and the trauma.

Dollinger and co-workers [43–45] found, in a series of studies resulting from a lightning storm that killed one child and injured several others, that mothers
were well aware of their children’s fears. Mothers whose children were especially fearful were even more aware of their children’s problems than mothers whose children were less affected; but the children’s fears were positively correlated with their mothers’ emotional problems. McFarlane [60, 61], in a longitudinal study of Australian primary-school fire victims, showed that the children’s emotional reactions had more to do with their family’s adverse responses than with the children’s actual experience of the fire.

**Clinical Issues**

The psychiatric nosology for children illustrates the importance of considering the general category *children* within a more specific and detailed developmental framework, defining the various symptoms in terms of different ages, and taking cultural variations into account.

Because all children experience stress, it is important to point out, as Horowitz and colleagues [62] have done, that there has been little empirical evidence to suggest that PTSD symptoms are related only to extreme stressors. Also, the key concept of re-experiencing the trauma, which is described only for PTSD in the DSM-III-R criteria, has been observed in children with anxiety and affective disorders [23]. Moreover, Rescorla [63] noted that anxiety, sadness, and aggression in preschool children were closely interrelated. Krener & Sabin [64], working with Asian refugee children, found that what the American therapist considered stressful was not viewed as such by the refugee children. This made the DSM-III-R stress criteria difficult to apply, because of the cultural differences.

Handford and co-workers [58], studying reactions to the Three Mile Island nuclear accident, correlated disaster symptoms in children with developmental level. Coping became more cognitively focused with age, although all the children seemed to regress in terms of the Piagetian scale of cognitive development. Below eight years of age, the children displayed no recognition of the danger, from 8 to 12 years of age, the children intertwined fantasy and reality. Denial occurred in one third of the sample, but no single coping mechanism was observed in most of the children.

Lystad [65] also noted that children’s reactions to disasters took different forms at different developmental levels. Comparing preschool, latency, and adolescent responses, Lystad found that, although children of all ages displayed confusion and other signs of anxiety, physical symptoms and depression did not appear until the latency period, and aggressive behaviors started in adolescence.

In children who have developed symptoms, studies have revealed that the immediate clinical picture includes several signs of anxiety. The longer-term clinical syndrome consists of intrusive thoughts of the stressful event both during the day, in traumatic related imagery [66], and in nightmares. Also observed are regression to an earlier level of dependency on parent figures, denial, and symptoms of anxiety, including hyperarousal (insomnia and startle responses). Children’s symptoms have been found to be dependent on how their significant adults react, and to be exaggerated when the children are separated from those adults. Their previous emotional health can be “of enormous help” [50, P. 243] to their ability to deal with a disaster. McFarlane and colleagues [67] determined that the strongest predictor of mental illness following a disaster was premorbid level of functioning.
Malmquist [68] demonstrated that when children experienced violence directly or through viewing the violence of or toward a loved one, their adverse reactions typically included a great deal of anxiety (hyperalertness, vigilance, trouble concentrating, and memory impairment). Several studies have shown that violence also contributes to the psychopathology by making it more enduring [9, 10, 69–71].

Stages of response by victims of disasters have been described. Horowitz [72], working with adults, noted that the first reaction was outcry, followed by denial, which was characterized by a cognitive withdrawal from the environment. This has often been described as “numbing.” In the next phase there may be intrusive thoughts characterized by hypervigilance. Personal variations in these phases are determined by underlying personality dynamics.

Because of the severity of what the children have lived through, the clinician may easily be drawn into a counter transference situation that impedes the child’s progress. Benedek [73] mentions denial by the clinician, who, like the parent, may be overwhelmed, tend to minimize the children’s problems, and inadvertently help the child avoid talking about the untalkable. A second problem is over identification with the child’s trauma. In this case the clinician experiences some of the same symptoms as the child: intrusive nightmares or repetitive thoughts during the day. A third clinical problem may be failure of the clinician to allow the children time to help themselves and thus gain a sense of self-efficacy, which has been shown to mediate stress caused by disasters [14]. It has been recommended that, because many clinicians may experience counter transference problems, peer counseling should be routine. (It should be noted that rescue personnel often suffer from the same types of problems [74] as clinicians.)

Terr [12] has suggested several therapeutic approaches to children and adolescents: psychopharmacology when appropriate, desensitization for fear responses, and abreactive techniques. Pynoos & Eth [75] developed a procedure that helped children from 3 to 16 years of age who had witnessed, or were directly involved in, violent acts to family members. The clinical procedure began with the child’s expressing the impact of the trauma through projective drawings and story-telling. Then, the therapist helped the child move away from fantasy to more direct expression of his pain. Eventually the child was asked to talk about the “worst moment” of the trauma. The authors agreed with Ayalon and others [51, 76, 77] that it was clinically helpful to be direct and open in discussing the trauma. In the sessions the therapist also rehearsed with the child the future situations that he or she might encounter as a result of the trauma.

The Function of the Community

The role of the community following a disaster has been shown to be so important that Erikson [2], referring to the Buffalo Creek tragedy, wrote that the clinical picture of the victims was “as much a reaction to the shock of being separated from meaningful community bases as to the actual disaster itself” [P. 302]. Galante & Foa [78] examined how different Italian communities responded to a devastating earthquake. The children fared better if their community was prepared and able to give support to the victims.
Because of the ever-present possibility of war, Israel has established preventive community measures for potential disaster victims [37]. Kaffman [79] has described Israeli children who were very near the front lines of war. The research indicated that the level of “emotional disturbance among these (kibbutz) children did not rise during the war or in the following two years” [P. 492]. The low incidence of mental health problems was attributed to the preservation of normal, daily, peacetime routines, the stability of the peer groups in which the children played, and the advance preparation for attack, including open, frank discussions of the inevitable deaths and injuries.

The greater the disaster, the more important community responses become, because resources will be drained, and those needing help will have to be subjected to triage. Lima and his colleagues [80] have pointed out that in this century, 86.4% of the world’s disasters have been in the developing world, where death and injury are more likely and where the population is younger than in industrialized countries. They [80, 81] have developed a modified version of the Self-reporting Questionnaire that can be used as a screening device for early detection of persons at risk for mental disorders following a disaster.

Lindy and co-workers [52, 82] have hypothesized that communities surround themselves with a “trauma membrane,” to screen out upsetting information. The permeability of the membrane varies among disasters, allowing easy access in Buffalo Creek but little access after the Beverly Hills Supper Club fire. In the latter case the trauma membrane not only protected the individual from more trauma but also tended to impede outside help and healing.

Because of the trauma membrane, many postdisaster communities do not ac help. Thus, outreach programs advocate an active approach that seeks out children and their parents, goes into schools, and works with the media [83]. Klingman [90] organized a community disaster program for Israeli children: he formed two teams, one to help teachers focus on the mental health of the children, and second to provide triage consultation to identify the children most in need of psychological services.

Blom has provided specific information, according to a time sequence, help teach parents and teachers to identify symptoms of stress in children at different developmental levels. Rigamer, working with a distressed American community in Afghanistan, placed particular emphasis on helping parents realize they needed to become available to their children. He taught parents that children between 5 and 7 years of age were concerned with separation anxiety, whereas children from 7 to 11 years of age were more troubled about bodily harm. He suggests that adolescents be told the truth about the danger and be enlisted as helpers. Both Blom and Rigamer comment on the value of immediately resuming normal routines, including returning to school.

Lystad [65] has prepared a variety of story-telling and drawing technique and has assisted others in developing school-based and community-help manuals.

**Conclusion**

We have examined the issues surrounding the mental health of children who are victims of disasters. We have reviewed the findings and the problems associated with (1) the nature and extent of the disaster trauma; (2) the influence of the
family and the community; (3) the resilience or vulnerability of the child; (4) the symptoms, their onset and duration; (5) the predisaster level of functioning; (6) cross-cultural differences; (7) therapeutic approaches; and (8) methodological considerations.

None of these issues is fully understood. But there can be no denying the immensity of horror to which some children have been subjected. As our visit to mental health clinic revealed, each disaster, no matter how it appeared to affect on a single person, spun a web that entangled family, friends, neighbors, and colleagues. Each one was affected in a different way, to a different degree, over different time periods—sometimes down through generations.

The psychological consequences for children are metaphorically like the v disasters from which they have sprung: they flood victims, carrying waters beyond what was once imaginable, leaving silt over children’s eyes through which they will have to seek their future. In the process, the stem of family may bend or break, an the shadow of community may give way or offer comfort.

As we left the clinic, we realized we did not know a great deal about why some children were still growing, whereas others had withered.

Many questions remain unanswered: the nature of resiliency and how it can be fostered in the vulnerable; the influence of family and how that influence can be enhanced; the significance of children’s age; the degree to which a community may mitigate the effects of disaster.

The solutions we learn from disasters may ultimately be applicable to other forms of psychosocial stress: physical and sexual abuse, violence, and the effects of dislocation and separation from family and culture dig so many immigrants and refugees are currently experiencing. We need better techniques for identifying and treating children, whose difficulties often go unnoticed, who suffer in silence, or who are outside our society’s cultural currents. The help we can give children now may obviate the need for later generations to bear their burdens, or those of their children. It may even help us to resolve the traumas we all once suffered as children.

References

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