

## Is the Worst Yet to Come?

By  
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Following the 9/11 terrorist attacks on New York and Washington, public officials pledged that the nation would rise to the challenge and ensure that the country would not suffer such a disaster again. Almost exactly four years later, however, Hurricane Katrina inflicted a devastating blow on the Gulf Coast. Many of the problems that surfaced during 9/11 returned yet again to plague the Katrina recovery efforts. Moreover, as bad as the problems were in the Gulf, they could have been even worse had the storm been stronger or had it scored a direct hit on New Orleans. More disasters—from earthquakes and floods to bird flu and terrorist attacks—are likely and perhaps inevitable. Unless we take to heart the lessons that Katrina teaches, especially improved systems for communication and coordination, we are likely to repeat the Katrina problems. The worst is yet to come, without a substantial investment of political capital.

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Following September 11, 2001, public officials everywhere promised that the nation would learn the painful lessons the terrorist attack taught. But Hurricane Katrina not only revealed that we have failed to learn, it also showed that we have yet to build the capacity to deal with costly, wicked problems that leave little time to react.

More crises like September 11 and Katrina are inevitable. The next event might be a major California earthquake or a nasty flu virus, a terrorist attack or a megastorm. We cannot be sure what will happen; we can be certain that something will. And what each of these problems

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share is a common feature: they slop over the boundaries, in both public policy and public organizations, that the nation has created to deal with them. Nevertheless, the instinct is the same: to repeatedly draw boxes around problems that defy boundaries. If the nation does not learn the lessons that both Katrina and September 11 teach, we will suffer the same consequences, over and over. In that case, the worst is yet to come.

### A Failure to Learn

When President Bush addressed the nation in the aftermath of Hurricane Katrina's devastating attack on the Gulf Coast, he promised the government would build on the lessons the storm taught, "This government will learn the lessons of Hurricane Katrina. We're going to review every action and make necessary changes, so that we are better prepared for any challenge of nature, or act of evil men, that could threaten our people" (Bush 2005b). Of course, after the September 11 terrorist attacks, top government officials also pledged that the nation would be far better prepared for crisis. Democrats pressed for the creation of a new department for homeland security. Bush embraced it and shaped it to his liking. Everyone promised the government would work better.

The 9/11 Commission, which spent months poring through the government's records on the attack, pointed to a "failure of imagination" as perhaps the most important underlying cause of the government's poor response to the attacks (National Commission on Terrorist Attacks 2004, 344, 350). Since then, that failure of imagination has continued. Top federal officials said in Katrina's wake that they had no idea that Katrina could cause such damage or that thousands of New Orleansians were marooned for days without food, water, shelter, or medical care. Local officials were marooned for days without telephone communication, while state officials could not connect to the federal officials about the help they needed.

The government's staggering recovery efforts in the Gulf raise deep, real worries about its ability to respond to other large-scale, high-consequence events. Disaster planners have a long list of possible events: a flu pandemic, a major California earthquake, a dirty bomb attack, a second megahurricane hit on the Gulf Coast or a major hurricane strike on Miami, or bioterrorism.

Some of these things are possibilities. Some are probable. But some major event like this is a certainty, and it is possible that the scale and impact could be even greater than for Katrina. Unless the nation, and especially its governments, quickly learn far better how to deal with such events, the consequences could well be even worse.

Think about the stress test that cardiologists administer to their patients. In day-to-day life, even diseased hearts often show little sign of problems. Cardiologists have discovered that, if they subject the heart to stress, they can discover—and treat—problems before they prove fatal. So the cardiologist wires up the patient with electrodes, fires up the treadmill, and gradually increases the speed and the incline to see how well the patient's heart responds to stress. If the patient fails the

test—if it reveals blockages that weaken the heart's response—the doctor stops the test and prescribes treatment. If the patient collapses, there is nurse, a stretcher, and a bottle of oxygen at the ready.

Twice, the nation's homeland security system has been subjected to a stress test. Twice—first with September 11, second with Katrina—the patient has collapsed. So far, however, the nation has failed to learn the lessons the tests have taught—and has failed to treat the patient. That failure has unquestionably caused some Americans to die and others to suffer, and a third failed test might prove even more damaging. Most cardiac patients do not recover from heart damage that builds up over time.

The core of the problem lies in three puzzles: wicked problems, messy boundaries, and depleted intellectual capital.

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First, the nation is increasingly facing problems that, by their very nature, are *wicked* (see Rittel 1973). From megastorms to terrorist attacks, from nasty flu viruses to earthquakes, we face the virtual certainty of big events that provide *little time to react*, and where the *cost of failure* is enormous. The failure to respond to such problems can pose enormous, sometimes unthinkable, consequences.

Second, although we design standard bureaucracies to deal with routine problems, more of the problems we face *fail to match these boundaries*. Our large bureaucracies deal with routine problems, from mailing social security checks to managing air-traffic control, and they are pretty good at it. The wicked problems we increasingly face, however, fall outside normal routines. By their very nature, they slop over any boundary—political or organizational—that we can draw. Hurricanes pay no attention to the jurisdictional lines between Louisiana parishes. They ignore the boundary separating Louisiana from Mississippi and, for that matter, between the federal, state, and local governments. In Katrina, the governmental response was crippled by the instinct of government officials to stay within their boundaries while they tried to cope with problems that paid no attention to those boundaries. Moreover, terrorists certainly were watching the government's chaotic response and have learned. They know about the fragmentation of our system and are surely planning to exploit it. More problems slop over the boundaries we have created to deal with them. For the really wicked problems, it is impossible to draw a box around them. Moreover, any box we draw for a current problem is certain to prove a poor match for future problems. The mismatch between our boundaries

and the problems we are trying to solve invites repeated failure and unacceptable consequences.

Third, the nation's intellectual capital for understanding, yet alone solving, these problems is seriously *depleted*. When they face big problems that demand quick responses, policy makers understandably retreat back to what they know or, at least, what they find comfortable. It is easy to blame terrorists in other countries, to suggest that other nations are either for us or against us, to rely on well-traveled governmental reorganization. For wicked problems that defy our organizational and policy boundaries, these past models provide a poor guide for future action. Attacking such problems with old, outdated tools is like trying to change a tire with a screwdriver and a hammer—while the car is moving down the highway at seventy miles per hour. If we cannot design new tools for society's toolbox, future failures are inevitable. Without a new toolbox for new problems, the nation will be constantly outmaneuvered by events—and by combatants who seek to exploit our weaknesses.

## Learning Pathologies

Why did the nation fail to learn from September 11—and why are we likely to fail to learn yet again from Katrina? In brief, policy instincts are hardwired for obsolete approaches. That makes the system hardwired for failure. Better learning requires rewiring.

What are these obsolete strategies? Consider the following five pathologies.

### *1. An instinct to look back instead of looking forward*

In observing the American response to the September 11 terrorist attacks, a European diplomat was puzzled. In its 2002 proposal for the new Department of Homeland Security (DHS), the Bush administration pointed backwards to the creation of the Department of Defense in 1947: a model of merging multiple organizations into one megadepartment. "I'm struck," the diplomat said, "that in charting a strategy for the future the nation focused on a model from the past" (interview with the author). In devising a new strategy for the most important problem of the twenty-first century, the nation relied on the best of 1940s technology. When Katrina put the new system to a stress test, it responded about as well as a 1947 Nash would respond on a twenty-first-century interstate highway.

Not only are many of the most important problems we face inherently wicked, many of them are *asymmetric*: broad and unpredictable events that, deliberately or not, take advantage of points of vulnerability in the system. On September 11, terrorists cleverly discovered and exploited weaknesses in the airline security system. Four years later, Hurricane Katrina inflicted enormous damage because of weaknesses in New Orleans's levee system.

It is one thing to deal with events that play to our strengths. That is why the battlefield engagements of both Gulf Wars lasted mere weeks. But when asymmetric

events occur, backward-looking strategies doom us to enormous damage and injury. The nation needs to get much smarter, very quickly, in learning how to deal with asymmetric threats. Without learning in advance about how to deal with such threats, we tend to pull old game plans off the shelf to deal with new problems. If all we have are backward-looking plans, we doom ourselves to repeated failure.

## *2. An instinct to reform instead of to govern*

The single most important fact about the creation of DHS in 2002 is that it emerged from political, not administrative, imperatives. Members of Congress worried about “connecting the dots”—bridging the gaps in the system to prevent such attacks from ever occurring again. In 2002, Sen. Chuck Grassley (R-Iowa) bluntly asked, “What will it take to ‘connect the dots’ necessary to piece together obscure clues and pursue leads to prevent another September 11 from devastating America all over again?” (Grassley 2002).

The conclusion: merge twenty-two agencies into a single new department. The Bush administration did not want to create a large new bureaucracy, and its top officials did everything they could to stop the plan. Not until it became clear that Congress was about to pass it did the administration embrace it. And in what proved one of the most brilliant tactical gambits of the George W. Bush years, the president then used the homeland security proposal to force congressional Democrats to accept a massive change in the new department’s personnel system. They had little choice but to accept a department they had pressed on the president; in return, the president undermined a key part of the Democratic constituency.

The debate over creating the department in the end turned much less on how best to secure the homeland than on how to balance executive and legislative power. Bush turned the congressional initiative for the department into a clever tactic to shift the balance of power to the executive branch. Most broadly, the creation of the new department became a symbol of the nation’s response to September 11, of the need to be seen to be responding, quite apart from the effectiveness of the response.

Despite the creation of the new department, key dots remained unconnected. Driving the debate was the need to coordinate intelligence, but the intelligence agencies successfully fought to remain outside the new department. How to make the new department work was largely an afterthought. It was huge, unwieldy, and beset by cross-pressures and bureaucratic turf wars. To make things worse, the Bush administration did not pay sufficient attention to staffing key positions, including FEMA, with officials skilled in emergency management. The department did not build skilled career administrators into key support positions, and too much of the department’s intellectual capital was contracted out. Devising communication strategies linking federal, state, and local officials was largely an afterthought. It was little surprise, then, that when Katrina hit and DHS needed key people with the right instincts, no one was home at Homeland.

Some of these problems were inevitable, for any reorganization effort that vast was certain to face growing pains. Given the enormous breadth of the homeland

security issue, the new department could only be viewed as a work in progress, and it was sure to take years for the department to settle into established routines. But Katrina revealed that a slow learning curve could impose enormous costs. The people of the Gulf Coast paid a price for FEMA's inability to respond effectively.

"When in doubt, reorganize!" is the usual catchphrase. Too often, elected officials declare victory as soon as the ink of the president's signature is dry and they win the symbol for which they were searching. Too often, elected officials neglect the job of making things work. Political candidates often put so much emphasis on the race that they forget to stop to ask themselves what they are going to do with the prize when they get it. Much of government's work is governing; Katrina demonstrates that periodically there are times when problems of capacity create serious problems. When we settle for bright political symbols instead of efficient public organizations, we inevitably pay the price.

### *3. An instinct to think vertically instead of horizontally*

Battles over the chain of command erupted in the days after Katrina hit. New Orleans Mayor Ray Nagin complained that federal officials "don't have a clue what's going on down here" (CNN.com 2005b). Louisiana Governor Kathleen Babineaux Blanco said she could not get federal officials to respond. Army officials said they were on the scene with thirty-six hundred troops from the 82nd Airborne Division within eight hours of getting the request to respond—but that it took three days for that request to arrive. "If the first Cav and 82nd Airborne had gotten there on time, I think we would have saved some lives," explained Army Gen. (Ret.) Julius Becton Jr., who had served as FEMA director under Ronald Reagan. "We recognized we had to get people out, and they had helicopters to do that" (Brown, Borenstein, and Young 2005).

All along the vertical line, from local officials through the states to federal officials at the highest level, battles erupted. Officials were clearly confused about who ought, could, and should do what. The long vertical chain of command provided political cover, for in a tall hierarchy, the problem (and blame) always lies somewhere else.

The debate since has confused the inescapable need for a "unified command"—ensuring that the key decision makers are all on the same page—with the "chain of command"—the vertical links among decision makers, from top to bottom of the system. Someone has to be in charge of the response to events like Katrina. But that does not require a civil war among levels of government and between government organizations over just who that ought to be. Indeed, as long as we have a system of federalism, even thinking about "top" and "bottom" makes no sense. A coordinated response requires the subtle weaving together of forces from a vast array of functional areas and from different levels of government, not hierarchical control. American federalism preserves autonomy for officials at each level. They need to coordinate with each other. They surely do not need to fight over who is in charge.

In the aftermath of September 11, New York Mayor Rudolph Giuliani eventually established himself as the frontline spokesman. He gathered around him the

resources he needed, from all levels of government. And New York's response began to emerge. It did not develop because Giuliani clawed to the top of a pyramid. It emerged because he became the conductor of a large and hugely complex symphony. He built a network of horizontal partnerships.

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That, indeed, is the lesson of the first responders who worked so effectively together at the Pentagon on September 11. The jurisdictions that surrounded the Pentagon, and the government agencies that worked within them, agreed far in advance of the attack who would be in charge at the scene of any major problem. What happened? It worked. By deciding—and practicing—the incident command system in advance, the area governments were ready when the terrorists struck (Arlington County n.d.). They did not magnify the disaster by creating a bureaucratic disaster of their own. They worked effectively in a tightly knit horizontal network instead of struggling over a vertical chain of command.

Former congressman Lee Hamilton, who served as vice-chairman of the 9/11 Commission, put it bluntly in the days after Katrina struck. On creating a unified command, he concluded, “we’re falling far short of where we would like to be four years after 9/11.” He added that what has to be done “as quickly as possible after a disaster has struck is to have a unified command so that the hundreds of decisions—and hundreds of them have to be made quickly about personnel and equipment and rescuing people and alleviating suffering and all of the rest—can be made quickly. There was not a unified command in New York in 9/11. There was not a unified command quickly enough after Katrina.” If the tough decisions are not made in advance, Hamilton concluded, “You have a disaster that will impact far more people than if you had the plan in place” (PBS *Newshour* 2005).

Effective response requires strong vertical lines in our organizations. Hierarchy provides the critical, unifying structure to the capacity of complex organizations. But effective response also requires strong horizontal relationships to put that capacity to work. We need to *organize vertically* and to *work horizontally*. If government officials fight over the baton instead of finding an effective orchestra conductor, Americans will needlessly suffer in any wicked problem.

#### *4. An instinct to regulate instead of to perform*

In case after case, rules, paperwork, and procedures stymied the government's response to Hurricane Katrina. President Bush said, "We will not allow bureaucracy to get in the way of saving lives" (Bush 2005a). But an infuriated Rep. Charlie Melancon (D-LA) told *Nightline*, "What I've seen the last several days is bureaucrats that were worried about procedure rather than saving lives. That's what I've seen" (ABC News, *Nightline*, September 2, 2005).

Hundreds of firefighters from around the country were stuck in Atlanta, receiving days of training on community relations and sexual harassment, before they reached the front lines. Truck drivers carrying thousands of water bottles were prevented from driving to New Orleans because they had not yet been assigned a "tasker number."<sup>1</sup> Sheriffs from other states simply ignored the paperwork. Wayne County, Michigan, Sheriff Warren C. Evans said he refused to stop his convoy of six trailer trucks, full of food and water, and thirty-three deputies. "I could look at CNN and see people dying, and I couldn't in good conscience wait for a coordinated response," he said (*New York Times* 2005).

Rules are invaluable. They help ensure that the same people in the same circumstances receive equitable treatment from government. For example, we would not want individual social security workers making their own individual judgment about the size of a senior citizen's check. But regulations can also create deep pathologies. They provide protection from blame and make it easy for officials to duck the responsibility for thinking about what they are trying to accomplish.

Rules matter. But they exist to foster superior performance. We cannot afford thousands of cowboys in the middle of a crisis, each setting policy on his own. When rules do not fit the situation, obedience to them can paralyze the capacity to act. The search for superior performance, not blind obedience to rules, must guide emergency response.

#### *5. A misplaced veneration for outdated traditions instead of a focus on effective governance*

In the midst of the post-Katrina problems, a senior state homeland security official (from far outside the region) said sadly that a major impediment to effective response is "our maniacally single-minded devotion to home rule" (interview with the author). We have governmental units that follow geographical lines, like river banks or lines on map. In many parts of the country, today's political boundaries reflect important seventeenth-century goals, such as ensuring that citizens live within a day's horseback ride of the county seat. These boundaries might have served the needs of centuries ago. They often prove a very poor match for twenty-first-century problems.

Self-government has always been the foundation of American democracy. That is as it should be, and the United States will survive any challenge it faces as long as self-government remains strong. But our government ought to empower effective

action. The boundaries of government should not constrain our ability to act. Too often, even years after the September 11 attacks, first responders in neighboring jurisdictions have radios that operate on different frequencies. Communication problems in crises sometimes occur because of technical problems. Too often, as a report from the Century Foundation discovered in 2003, they persist because officials in neighboring communities simply do not want to talk to each other (Kettl 2003).

Not long after watching a television newsmagazine report on the risks of sports-utility vehicle (SUV) rollover accidents, I just missed witnessing just such an accident. I came upon the scene moments later, and there was an SUV on its roof on the side of the road. As luck would also have it, the occupants were not hurt—but they were hanging upside down by their seatbelts. But as luck would also have it, the accident was precisely at the intersection of two local governments. It was anything but clear whose job it was to get those people out.

In a case like that, two bad things could happen: neither government might respond, with each assuming the other would handle the call; or both governments would respond, with the full first-response arsenal, and with a big waste of taxpayer dollars. Because both communities had worked out these problems in advance, a third alternative occurred: emergency vehicles with sirens wailing converged on the scene from both directions—with just the right level of support. They managed to extract the occupants from the vehicle, and in the process they taught a critical lesson: when you are hanging upside down from your seatbelts in a rolled-over SUV, the last thing you care about is the name on the decal on the side of the emergency vehicle.

But bad things happened in Katrina's wake. In Louisiana, the "maniacal devotion to home rule" literally produced gunfire at the boundary between two communities. New Orleans authorities advised some of the tourists trapped at the city's convention center that the only way out of the city was across the Crescent City Connection, a bridge that led to neighboring Gretna City. Buses were waiting for them there, they were told. But when hundreds of bedraggled tourists dragged their suitcases to the bridge, they found police from the community across the bridge, Gretna City, waiting for them. When the tourists tried to cross the bridge, the Gretna City police fired over their heads to warn them back to New Orleans. They told the crowd that Gretna City "was not going to become New Orleans and there would be no Superdomes in their city." Some members of the crowd asked what choice they had. They reported later that the armed security officials told them "that was [their] problem" and that they had no water to give them. As two paramedics, caught amid the crowd, later wrote, "These were code words for if you are poor and black, you are not crossing the Mississippi River and you are not getting out of New Orleans" (Waterman 2005; ABC News Online 2005).

Too often throughout the struggle to deal with Katrina's aftermath, the boundaries separating neighboring jurisdictions—as well as the federal, state, and local governments—became barriers handicapping the government's response. These tales proved even more chilling than what occurred on September 11. People want

their problems solved; they do not fuss over the patch on the arm of the person who solves them.

## Lessons from Katrina

What general lessons does Katrina teach? First, we face a new generation of wicked problems that demand innovative solutions. Second, lessons of the past are important, but old lessons can hamstring our ability to look forward. Third, we need to govern instead of reaching for symbols. We need to plan, practice, implement—and learn. Fourth, we need public officials to lead. Communicating confidence to citizens and delivering on promises are both critical in crises. Fifth, we need to devise new strategies for effective horizontal coordination so that we are not handicapped by the pathologies of vertical bureaucracies. Sixth, we need good rules, but we cannot afford to allow them to undermine commonsense solutions or high performance at times of crises. Seventh, while we can—and must—protect our traditions of self-government, we cannot let boundaries drawn centuries ago handcuff our ability to respond.

But we can go much further. After September 11—and long before Katrina hit—careful analysis identified big problems. They plagued us in Katrina's wake. Determining how to prevent them from recurring is the key to defining the enduring public lessons.

### *Lessons for the federal government*

As Katrina bore down on New Orleans, explains Leo Bosner, a twenty-six-year FEMA veteran, “We told these fellows [the agency's leaders] that there was a killer hurricane” taking aim on the city. “We had done our job, but they didn't do theirs” (CNN.com 2005a).

After September 11, Congress and President Bush joined in a fundamental restructuring of the nation's homeland security apparatus. FEMA, along with twenty-one other agencies, was moved into a new Department of Homeland Security. When Bush signed the bill creating the department on November 25, 2002, his promise was clear:

Today, we are taking historic action to defend the United States and protect our citizens against the dangers of a new era. With my signature, this act of Congress will create a new Department of Homeland Security, ensuring that our efforts to defend this country are comprehensive and united.

The new department will analyze threats, will guard our borders and airports, protect our critical infrastructure, and coordinate the response of our nation for future emergencies. The Department of Homeland Security will focus the full resources of the American government on the safety of the American people. (Bush 2002)

But when it faced its first important test, the department failed. Indeed, the government's response to Katrina ranks as perhaps the biggest failure of public admin-

istration in the nation's history. While the storm was so immense that it surely would have swamped anything the government could have created in advance, the department's sluggish response simply did not match the promise that Democrats and Republicans, the president and members of Congress, made when they created it.

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However, the problems were not surprising. In March 2004, the Century Foundation issued a report card on DHS's first year that eerily outlined many of the issues that plagued the department's response to the hurricane (Kettl 2004). The Century Foundation report card graded the DHS on five areas: aviation security, intelligence, immigration, coordination with state and local governments, and departmental management. The overall grade was a C+. The lowest-graded areas? Coordination with state and local governments—a grade of C—and internal management—a grade of C.

In fact, a close look at the criteria for these two areas reveals chilling warnings. In supporting state and local governments, DHS received low grades for devising a national strategy to help state and local governments deal with homeland security issues, a failure to allocate grant funds according to risk, poor support for state training, and poor support for first responders. In managing its own operations, DHS struggled to integrate its vast collection of agencies into a single, coordinated department. It was little wonder, therefore, that when DHS faced its first big challenge, it fell far short in coordinating its own response and in dealing effectively with state and local governments. In late 2005, the 9/11 Commission issued a final report—and report card—that found recurring problems of intergovernmental communication (9/11 Commission 2005).

Straightforward steps could help DHS deal with this problem. First, the department could *work from the top down so that the system works from the bottom up*. Most of DHS's efforts have been focused in corralling its vast federal empire. Coordination with state and local governments has largely been an afterthought. But yet again, Katrina taught a fundamental lesson of homeland security. Just as was the case on September 11, all homeland security events start as local events. The federal response will fail if it is not part of an integrated national—federal, state, and local—plan.

Second, *structure matters—but not as much as leadership*. Katrina made clear that it was a mistake to move FEMA into DHS. Prevention of terrorist attacks—

the core mission of DHS—is closely related to managing response to events that do occur—the core mission of FEMA. But not all events that demand FEMA's response come from terrorism. Emergency planners have long worked to develop what they call an “all-hazard” approach: it does not matter whether the reason people are trapped in a building is because of a terrorist bomb, a tornado, an earthquake, or a hurricane—they just need to be rescued. The nation needs a much more agile emergency response system, and there is disturbing evidence that FEMA's response was crippled by internal problems within DHS. Even more important, however, is the recognition that good leaders can bridge the boundaries of any bureaucracy. But to improve the odds of success, they need a better structure.

Third, *every disaster is different*. Even more than a new structure, DHS needs top homeland security officials who understand their critical role in coordinating an integrated response from the vast collection of tools in the government's toolbox. Crucial to building that integrated response is developing a leadership, especially in FEMA, that understands its role. Every disaster is different, with different challenges, just as every piece of music is different. Homeland security leaders need to work like symphony conductors to bring the right collection of instruments together to make the right music to fit every situation.

Fourth, *the federal budget, especially its homeland security grants, can create incentives for a minimal level of preparedness of everywhere*. Major homeland issues, including natural disasters, can occur anywhere. Moreover, given the ease of travel throughout the nation, citizens from anywhere can easily find themselves deeply affected by problems somewhere else. Four tourists from York, Pennsylvania, were not paying much attention to the forecast when they set off for a New Orleans vacation—and then they found themselves stranded without electricity and struggling with New Orleanians for the basic needs of life. Some communities face far bigger risks than others—New Orleans (from hurricanes), San Francisco (from earthquakes), New York and Washington (from terrorist attacks)—and federal money needs to focus most there. But for the funds distributed elsewhere in the country, the federal government has missed the chance to use those grants as incentives to make sure that citizens everywhere have at least a minimum level of protection.

### *Lessons for state and local officials*

State and local officials had their own struggles. The steady drumbeat of stories flowing out of the stricken area teaches, yet again, that state and local officials ought to follow these lessons.

First, *create a unified command*. Disaster management experts recommend that state and local officials establish unified command—bringing the full range of commanders together at a single location. Strong evidence shows that command, up and down the intergovernmental system, remained fragmented throughout much of the crisis.

Second, *create a single public face to encourage citizens' confidence*. Citizens need a voice of confidence from the scene. In the 1979 accident at the Three Mile Island nuclear power plant, near Harrisburg, Pennsylvania, Governor Dick Thornburgh and Harold Denton, from the Nuclear Regulatory Commission, brought unified command and constant communication with citizens. Their hard

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work helped steady nervous neighbors. Mayor Rudolph Giuliani underlined that lesson with his steady leadership following the September 11 terrorist attacks. One of the things that worsened Katrina's aftermath was the sense that no one was in charge because the public did not have steady communication from an official who could speak confidently about what was being done.

Third, *establish interoperable communication systems*. Just as in the aftermath of September 11, top officials found themselves cut off from other parts of the government because of failures in the communication system. New Orleans Mayor Nagin was stuck in the Hyatt Hotel for two days without a telephone. He resorted to sending pleas for help through CNN reporters. His staffers finally rigged a telephone line through an Internet long-distance account that a city technology team member had set up for his personal use (Rhoads 2005). Few things are more important than crisis communication, and job one for federal authorities ought to be to make sure that top officials can talk to each other in the inevitable future crises. Yet despite the recurring, inescapable message that effective emergency communication is the foundation of all emergency response, the nation still lacks an effective emergency communication system, especially one that is "interoperable"—one that allows officials in different jurisdictions to talk with each other.

These systems require technical elements: devices, like battery-powered satellite phones, that can continue to operate even if the power goes out and cell phone towers are blown down. People-based elements are an important part of this system, with a command system that links key decision makers so that they can make key decisions. But technology is not enough. In the crisis, many public officials could not communicate because they did not have established relationships on which they could draw. Coordination is not possible without preexisting trust.

Moreover, written plans are worthless unless everyone—including top officials—practices them regularly. Disturbing evidence indicates that many top officials at the federal, state, and local levels were unfamiliar with the disaster plans. As a

result, the situation played out like a football game when the coach picks up the game plan for the first time on the way down the tunnel to the field on a Sunday afternoon.

But better disaster management is only one of the lessons that Katrina teaches. Recovery from the blow that Katrina struck will take years, and government has promised substantial aid likely to total far more than \$100 billion. Without adequate management capacity, the federal, state, and local governments will struggle to spend the money well: to produce quick results without courting the evil trio of waste, fraud, and abuse. Evidence from the 2005 Government Performance Project (GPP), which measured the management capacity of American states, is not reassuring. The GPP produced grades for four management areas: money, people, information, and infrastructure (see <http://results.gpponline.org>).

The region facing the megareconstruction is the region graded lowest in the nation for its capacity in managing infrastructure. Louisiana and Mississippi received grades of C+. For Alabama, the grade was D. Moreover, the states are starting way behind. In all three states, officials say that they had postponed at least half of needed maintenance for at least the past four years. Deferred maintenance in Louisiana exceeds \$3.8 billion. In Mississippi, it is \$3.9 billion, and in Alabama, the total is \$2.9 billion. Why? Officials in each state claim “lack of resources,” although the three states rank among the lowest in tax burden. But even if the money began to flow, the infrastructure management systems in each of these states lags behind those of the nation’s highest-performing states. Alabama does not have a capital plan. In Louisiana, the plan is heavily influenced by political factors, and the Department of Transportation and Development has not implemented a comprehensive maintenance and management system.

Thus, post-Katrina resources will flow to states that already have a substantial infrastructure backlog. All three states rank below the national average in capacity to manage infrastructure (and Alabama was ranked fiftieth). What is their capacity to handle the enormous influx of funds? And down the road, how can taxpayers be assured that the new facilities that are built with scarce tax dollars from around the nation will be maintained properly?

### Is the Worst Yet to Come?

Two stress tests applied to the nation’s homeland security system—the September 11 terrorist attacks and Hurricane Katrina—showed serious coronary blockages. That surely was serious enough. But in a sense, we were lucky: the events could have been even more serious, and the cost to the nation of our inability to respond could easily have been far bigger. We might not be even this lucky—if the word can possibly be used—the next time. Another hurricane might be a direct Category 5 hit. An earthquake could shatter a major West Coast city. And any of a variety of terrorist events could pose even larger consequences.

The results of the first two stress tests are not encouraging, and it is not clear how well the patient would survive a third test. Americans deserve better because we

surely now know better. We need to learn from September 11 and Katrina—but we need to make sure we learn the right lessons.

But the consequences go far deeper than our response to terrorist events. Katrina also laid bare deep problems in the performance of American government that threaten to undermine the effort to rebuild the region, especially New Orleans. It was bad enough for the city to suffer catastrophic damage and loss of life. It would be worse for the city—and the nation—to suffer catastrophic failure amid the effort to rebuild it.

## Note

1. For some of the Army's rules on "tasker numbers," see <http://www.afsc.army.mil/im/rcdsmgt/admin/closetaskers.txt>.

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