

CHAPTER 13

A Nation's Resilience as a Deterrence Factor

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For most Berliners, New Year's Eve 1988 was the holiday finale similar to the many eves since the wall, separating East from West, was built. Unfortunately, the ushering in of the fresh year held no real clues the world was about to change and by the end of that year the wall would collapse. Like a door hinge that sets a new direction for the door, a new course was set in the geopolitical world, a harbinger of the massive changes to come. The phantom of the old epoch passed away and a new era was on the horizon. Historians call periods like this a hinge of history.

Hence, when historians write about this period the narrative may very well begin with the fall of the wall and end with the collapse of the World Trade Center buildings. Between those two events the world was transformed from a Cold War paradigm to a more connected globalized paradigm. Consequently, with these changes came new actors who would create new challenges for the United States. Traditional forms of deterrence were set on notice as being less effective against newer non-state actors trying to procure weapons of mass destruction (WMD). This hinge of change would recast our understanding of our adversaries and the deterrence efforts against them.

In the Director of National Intelligence's February 2010 Annual Threat Assessment of the US Intelligence Community, Director Dennis Blair, states, "Traditionally WMD use by most nation states has been constrained by deterrence and diplomacy, but these constraints may be of less utility in preventing the use of mass-effect weapons by terrorist groups."¹

He further states "the time when only a few states had access to the most dangerous technologies is over. Technologies, often dual-use, circulate easily in our globalized economy, as do the personnel with scientific expertise who design and use them. It is difficult for the United States and its partners to track efforts to acquire WMD components and production technologies that are widely available."² This new threat

forces us to reexamine deterrence theories and to develop new means to influence adversaries. This essay is put forth to help stimulate a dialogue on how national resilience might be an affective support to deterrence efforts.

Deterrence

Deterrence has been defined as “the actions of a state or group of states to dissuade a potential adversary from initiating an attack or conflict by the threat of retaliation. Deterrence should credibly demonstrate to an adversary the costs of an attack would be too great and would outweigh any potential gains.”³ The destructive power of nuclear weapons makes retaliatory power absolute.

Fortunately, no nuclear weapons have been used since World War II. This can be mainly attributed to rational leaders who steered away from armed conflict rather than see their nations disappear in a nuclear exchange. However, we have entered into a new era of non-state actors, rational or not, who seem willing to use nuclear weapons as an act of coercion or terror if they were to acquire them. The key task is still the same, “persuading a potential enemy that he should, in his own interest, avoid certain courses of activity...”⁴ But terrorists present a new dilemma. How do you deter an enemy with no known return address?

Recent events continue to highlight the terror threat to the United States. On Dec. 25, 2009, Northwest Airlines Flight 253 left Amsterdam Airport, in the Netherlands, on its way to Detroit. On its final descent, 20 minutes before landing, a young Muslim Nigerian passenger tried to set off a plastic bag of explosives sown into his underwear. He was subdued by other passengers who brought this al-Qaeda motivated operation to an end. Then most recently, on May 1, 2010, Faisal Shahzad, born in Pakistan, but naturalized as an American citizen, attempted to detonate a car bomb in Times Square. Reported to have been trained in bomb-making in Pakistan he was caught trying to take a flight to Dubai, United Arab Emirates.

Fortunately these attempts failed; but they do show terrorists will continue to try to attack us, and their weapons will evolve. We must also not lose sight that the crown jewel of terror weapons will continue to be

weapons of mass destructions, in particular nuclear and biological. So how do we deter these new terror threats and their possible use of WMDs?

To maximize deterrent effects on an adversary, it is likely that we should follow a dual strategy of deterrence by denial and by retaliations combined with positive outcome for good behavior. First, let the adversary know we can deny them the benefits they seek to obtain from an attack. Second, let them know the cost resulting from an attack will be too high for them. Third, encourage restraint by letting them know that not to attack would be better for them.⁵ To be effective these three tasks must be unified as one effort at all level of our government's diplomatic, intelligence, military and economic (DIME) actions.

Affecting the Decision-Making Calculus

If deterrence is in the eye of the beholder and all deterrence activities are calculated to persuade opponents not to attack us by influencing their decision matrix,⁶ how do we go about influencing that calculus? What must we focus on? As previously mentioned, we should center our attention on the three "essentials" that affect their perception and decision-making process: "(1) The benefits of a course of action; (2) The costs of a course of action; and (3) The consequences of restraint (i.e., costs and benefits of not taking the course of action we seek to deter)."⁷

Taking these same essentials, Brad Roberts distills them further and says, "Deterrence, like other tools of influence, is a strategy for creating disincentives in an adversary's mind to courses of action he might otherwise adopt." Creating these disincentives takes great effort, and grafted into the body of those disincentives must be a message that asserts our ability to withstand any attack. He continues, "Sometimes those disincentives already exist...Sometimes the primary goal of an influence strategy might be simply to reinforce those existing restraints."⁸

We must also understand that anything we do could affect the targeting dynamics of adversary planners. Roberts, referring to a quote by Robert Anthony, says, "Even suicide terrorists are willing to delay their attack until they are convinced that they have a 'good' chance of success."⁹ Witnessing these types of operational changes points to how

decision-makers might modify their targets, as they become harder, and look for easier ones that offer more success.

This idea is further pressed by two RAND analysts, Andrew R. Morral and Brian A. Jackson, in their study *Understanding the Role of Deterrence in Counterterrorism Security*. They believe “determined terrorists—both as *individuals* and *organizations*—may be willing to risk everything to achieve their objectives, [however] they do not wish to waste their own lives or other resources on missions that are doomed to fail or unlikely to achieve their intended results.”¹⁰

“Many terrorist groups,” according to Morral and Jackson, “may be averse to engaging in operations when the likely outcomes are shrouded by significant sources of uncertainty.”¹¹ Thus, we can increase our deterrent capability if we communicated the message to our adversaries that to attack would mean a high chance for failure. One method for discouraging attacks is to build public resiliency so terrorist acts do not unduly bother or change the everyday life of the country. Resilience can take the “terror” out of terrorist actions by not rewarding such behavior.

As early as the 1960s governmental thinkers pointed toward the necessity of fostering public resiliency, the ability to spring back after an attack, in our national fabric. This resiliency was to be manifested as a result of civil defense (CD) efforts. Thus, in the late 1960s research was begun by the Hudson Institute on behalf of the Department of the Army’s Office of Civil Defense.

When completed in 1967, the report titled *Crisis Civil Defense and Deterrence*, authored by Frederick Rockett, made the following comments about the Soviet Unions and People’s Republic of China’s capability to withstand a nuclear exchange with the United States. The issue was survival based on Civil Defense capabilities. Rockett said, “Nuclear deterrence is a central element in the military policy of the United States. The credibility of this deterrence has depended primarily upon our ability to wreak immense destruction. If an opponent believes that he can reduce his vulnerability, this may affect his assessment of the credibility of our nuclear deterrent. Perhaps a future crisis will demonstrate the potential effectiveness of emergency CD measures. This could profoundly affect military policies and planning in many countries.”¹² In particular Russia and China come to mind.

Rockett continues by saying, “Although there is no reliable way of determining what crisis CD actions could be taken and completed successfully, it may not be unreasonable to assume that under crisis conditions a significant reduction in vulnerability is possible. It may even be that during a crisis emergency, civil defense activities would be deemed more effective than either bomber or missile defenses for reducing vulnerability.”¹³

In the author’s view a robust civil defense could sway an aggressor’s use of nuclear weapons because he would not have the desired effects. “If a crisis demonstrated that the vulnerability of an opponent had been reduced due to effective CD measures, our ability to deter his hostile actions might suffer.”¹⁴

During the Cold War the Soviets spent large amounts of their capital building a robust CD system. The issue was not if it was effective or not, but how it made us perceive the strategic situation.

Rockett’s analyses goes a step further and points out what could happen if CD is mutually robust among all affected parties. He says, “If most countries can protect themselves better than had previously been believed, then a mutual deterrence suffers, for war is less costly for both sides.”¹⁵

Thus far, our discussion has alluded to the notion that in conjunction with a capability to inflict great overt damage, to modify an aggressor’s will, a perceived ability to withstand an attack could likewise have a persuading effect on a potential attacker’s decision-making calculus. This later idea falls into the category known as deterrence by denial.

Deterrence by Denial

Deterrence by denial is a posture in which enemy “operations are discouraged because... [their expected] payoffs or success rates appear too low”¹⁶ for the effort and risks undertaken. A nation “perceived as well prepared to prevent, defeat, and mitigate the consequences of aggression, may deter an adversary from attempting a WMD attack.”¹⁷

No doubt, if attackers abort an attack because they perceive their efforts will incur no benefit, or even fail, they have been deterred and

denied the profit from a successful attack. So a central aspect of deterrence by denial is getting into the mind of an adversary and influencing them to discount the benefits of an attack.

Morral and Jackson, who focus primarily on security countermeasures, as a means for deterrence by denial, believe the way to do this is by exploiting the large degree of uncertainty associated with terror operations. They think “understanding the sources of these uncertainties for terrorist planners can aid in the design of effective security countermeasures. If attackers are sensitive to uncertainty, security interventions might be valuable even if their only effect is to increase the width of the error bar around the outcome and cost of an operation without necessarily changing the average expected payoffs or costs of the operation.”¹⁸

One tool available to influence adversary uncertainty is strategic communication that Brad Roberts says “has a role to play in enhancing the performance of deterrence by denial. Its function is not to lend credibility, but to lend doubt. Those targets potentially amenable to deterrence by denial include foot soldiers, professionals, and leaders.” For example, Roberts writes, “If their WMD assets are few, they are unlikely to risk them in unviable operations.”¹⁹

Resilience efforts can enhance a nation’s deterrence by denial efforts by affecting the terrorist decision calculus, dissuading the terrorist use of weapons of mass destruction. Countries that appear to be able to withstand and recover quickly from terror attacks stand a greater chance of not being attacked.

Resilience

In 1998, Osama bin Laden’s “World Islamic Front” fatwa laid out his intent for America: “We -- with Allah's help -- call on every Muslim who believes in Allah and wishes to be rewarded to comply with Allah's order to kill the Americans and plunder their money wherever and whenever they find it.”²⁰ Initially viewed as just empty threats, this became all too real as numerous attacks by al-Qaeda against Americans outside the United States began occurring, culminating in the devastating attacks of Sept. 11.

A country that pursues resiliency in all forms makes itself more durable and less vulnerable to shocks from natural disasters or terrorism. Resilient publics are less prone to panic and over-reaction. Resilient publics are not so easily terrorized. Resilient publics can regroup rapidly and do not require ultra-costly counter-measures to reassure them. Resilient public do not abandon public transport just because a bus or train or plane is attacked.

But, what is resilience? And how do you make a nation more resilient? *Merriam-Webster's online dictionary* defines resilience as “the capability of a strained body to recover its size and shape after deformation caused especially by compressive stress.”²¹ *Webster's Revised Unabridged Dictionary* (1913) defines resilience as “the act of recovering, springing back, or rebounding.”²² *The Collaborative International Dictionary of English* defines resilience as the “power or inherent property of returning to the form from which a substance is bent, stretched, compressed, or twisted...The power or ability to recover quickly from a setback, depression, illness, overwork or other adversity.”²³

Specifically, resilience has a more definite definition given by the Department of Homeland Security that defines resilience, in its National Infrastructure Protection Plan, as “the ability to resist, absorb, recover from, or successfully adapt to adversity or a change in conditions.”²⁴ In his article “Critical Infrastructure, Interdependencies, and Resilience,” T.D. O'Rourke points out that “definitions vary slight, but they all link the concept of resilience to recovery after physical stress.”²⁵

A definition more relevant to our discussion is from Karl Weick and Kathleen Sutcliffe in their book *Managing the Unexpected: Resilient Performance in an Age of Uncertainty*. They say “resilience is the ‘capability of a system to maintain its function and structure in the face of internal and external changes and to degrade gracefully when it must.’ Resilience occurs when the system continues to operate despite failures in some of its parts.”²⁶

This idea of resiliency applied to the material world looks something like this. Metals made more resilient to withstand the pressures and strains of physics are less likely to fail at the most critical moment. So aircraft designed to withstand the forces of gravity and wind dynamics at high speeds are more resilient and will less likely fail in midflight.

Likewise, a nation that is more resilient could have the ability to rebound, after a terror attack, in ways unexpected to a terrorist's anticipate desire. Brian Jackson, in his RAND paper *Marrying Prevention and Resiliency Balancing Approaches to an Uncertain Terrorist Threat*, says "the definition of *resilience* differs somewhat in the literature but generally includes measures that make it possible for key infrastructures, economic activities, and other parts of society to rapidly 'bounce back' after a disruption."²⁷

This ability to "bounce back" is what many resiliency promoters want to see fostered by national education and training programs. Stephen Flynn in his book *The Edge of Disaster: Rebuilding a Resilient Nation* thinks "America needs to make building national resiliency from within as important a public policy imperative as confronting dangers from without." Flynn also believes a "society that can match its strength to deliver a punch with the means to take one makes an unattractive target."²⁸ Stewart Baker, the assistant secretary for Policy, Department of Homeland Security, echoing Flynn's thoughts, told the United States House of Representatives Committee on Homeland Security that "we must make every effort to prevent an attack, but we must do more. As a nation, we must be able to withstand a blow and then bounce back. That's resilience."²⁹

Ever since Sept. 11, homeland security practitioners have been working hard to shore up old infrastructures while trying to protect vulnerable systems from attack. But the United States is a target rich environment and protecting everything is virtually impossible. As Dr. James Jay Carafano of the Heritage Foundation points out, it "is impossible to protect every target, and a strategy predicated on protection is bound to fall short. The enemy will find something else to attack."³⁰ He further adds as the lists of critical infrastructures grow, they become harder to protect. "If everything is critical, nothing is critical..."

In contrast, resiliency promises something much more achievable and important: sustaining society amid known threats and unexpected disasters. Indeed, the more complex the society and the more robust the nature of its civil society, the more it should adopt a strategy of resilience."³¹ We cannot protect everything, and other means must be pursued to help offset our vulnerabilities. Building resilience into our way of life is one way of doing this.

Inevitably, we will be tested. Natural and technological disasters will continue to test our ability to function as a people and country. According to Weick and Sutcliffe, “unexpected events often audit our resilience. They affect how much we stretch without breaking and then how well we recover. Some of those audits are mild. But others are brutal.”³²

So how do we rebuild resilience into our national fabric to make us more able to “bounce back” from terror attacks and other crises? There are at least three ways a nation can be made more resilient. The old adage says, “A cord of three strands is not easily broken.” No doubt the sailors of old, when “ships were made of wood and men of iron,” knew a multi-strand rope, woven together, was much stronger and more reliable in the middle of a wicked storm than a single strand of rope. Likewise, there are three strands that, when woven together, would make us more resilient to terror attacks, giving us more robust deterrence by denial capability. These three strands are tested and resilient leadership, defended physical infrastructure and prepared populations.

Times of great danger and uncertainty often reveal the kind of leadership we have, whether strong or weak. For a nation to survive it must have strong leadership to recover from a devastating event. Consequently, the first strand is “resilient leadership.” Leaders at all levels of government and society must be resilient themselves to be able to help encourage the population to hang in there, remain calm and tough, and to be brave. Leaders must be an example of hope, telling others that we will come through this as long as we hold on and have courage. Resilient leaders can inspire a people and a nation to “bounce back” and demonstrate by example how to do it well.

The second strand is ensuring that critical infrastructures are made more resistant to failure and attacks. Much work has been done in this area since the Sept. 11 attacks to shore up vulnerabilities of our physical infrastructure by improving protection of things like power grids, communication networks, and financial systems, but much more needs to be done.

The third and final strand is to understand how to make the general population more tough-minded and resilient. A population’s resilience is especially crucial for a nation’s ability to withstand the effects of terror attacks as well as natural and technological disasters.

When these three strands are woven together in meaningful ways, they optimize a nation's ability to rebound. This, if appreciated, should have a deterring affect on would-be attackers. Resiliency, articulates Dr. Carafano, "is about building strong, cohesive societies that can prevail against many challenges, from the heartless whims of Mother Nature to the malicious acts of terrorists."³³ A more robust resilient leadership, infrastructure and population provide an unseen shield of strength and recovery capability.

Resilient Leadership

First of all, resilient leaders are not so easy to find, but are important to have and to develop. Good leadership strengthens communities, and, as T.D. O'Rourke says, "is a critical factor in promoting resilient communities.... and also the least predictable."³⁴ So what does resilient leadership look like? What are the qualities of a resilient leader and how are they made? And what happens when leaders fail at being resilient?

In their book *The Secrets of Resilient Leadership: When Failure is Not an Option*, George Everly, Douglas Strouse and George Everly III state the "mystery of resilient leadership is revealed, not in the best of times, but in the worst of times – in times of crisis, even during times of initial defeat."³⁵ They point out getting back on your feet requires resilience, and "adversity, especially on a large scale, requires leadership."³⁶ When bad things happen we naturally look for strong leaders to guide us to safety.

Normally, a resilient leader is one who has had to become resilient through many trials. Adversity is the tool that tries and reveals leaders, and, I might add, builds leaders. Hardship was their teacher. Resilient leaders do not become so overnight. Well-known leadership expert Warren Bennis says, "The leaders I met, whatever walk of life they were from, whatever institutions they were presiding over, always referred back to the same failure - something that happened to them that was personally difficult, even traumatic, something that made them feel that desperate sense of hitting bottom - as something they thought was almost a

necessity. It's as if at that moment the iron entered their soul; that moment created the resilience that leaders need.”³⁷

Resilient leaders offer their communities hope and encouragement during turbulent times. They offer a form of stability that helps the community to hold together. Some call it adaptive capacity or hardiness. The “one competence,” notes Warren Bennis, “that I now realize is absolutely essential for leaders – the key competence – is adaptive capacity. Adaptive capacity is what allows leaders to respond quickly and intelligently to relentless change....Adaptive capacity is made up of many things, including resilience or what psychologist calls ‘hardiness.’”³⁸

In their article “To Build Resilience: Leader Influence on Mental Hardiness,” National Defense University authors Bartone, Barry and Armstrong point out leaders who are resilient, or have what they term “hardiness,” can become a source of great encouragement during challenging times. They believe leaders “by their example, as well as by the explanations they give to the group, they encourage others to interpret stressful events as interesting challenges that can be met.”³⁹ Authors Everly, Strouse and Everly III, affirm this idea and say resilient leadership “is that set of leadership qualities that motivates and inspires others during crisis. It includes those actions that help others adapt to, or rebound from, adversity.”⁴⁰

We can deduce from these comments resilient leaders can lead thru hard times because they themselves have overcome adversity in their own experiences. They may also be better positioned to radiate hope and encouragement that enables others to bear the burden of adversity. But as there is great praise to bestow on such leaders who lead well in dangerous and difficult times there is also criticism for those who fail to do so.

Hurricane Katrina was “a story of human failure, more specifically *a failure of leadership to act in a strong, decisive manner* at a time when such strength was desperately needed.”⁴¹ This comment speaks to the results of missing leadership. When a leader is perceived as weak, and unable or unwilling to lead, the blow back can often result in the loss of their moral authority and even their political office. Such leaders, perceived as non-resilient or negligible in protecting their people, lose credibility. We have all witnessed past crises where leaders who failed to take measures within their means, to safeguard their communities, invited severe criticism.

Arjen Boin and Paul't Hart in their article "Public Leadership in Times of Crisis: Mission Impossible?" speaks about a modern situation that has created a more volatile hypersensitive environment for leaders during crises. They point out that 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."⁴²

Boin and Hart further posit that this modern occurrence creates a predicament even for those leaders who do it right. They cite German sociologist Ulrich Beck who points out we live in a "risk society" which makes health and safety issues the focal point for all political matters. This "risk society" then creates a difficult situation for leaders. The public expects leaders to be able to take care of and prevent all kinds of emergency situations.⁴³ When they fail, they are greatly chastised. This creates, in their thinking, a "social-psychological and political climate [that] makes it very hard—perhaps even impossible—for leaders to emerge from crises unscathed."⁴⁴

Therefore, negative blow back for real or perceived negligence on the part of leaders and their administrations can have serious consequences. These consequences can be at the national level, in the eyes of our allies, and or in our inability to deter our enemies. This will happen for sure at the public level. For if the public thinks their government is responding inappropriately, "that government may lose legitimacy. This in turn, may lead to increased anxiety, panic, and other forms of destructive behavior that can undermine the stability of civil society."⁴⁵ But what happens to leaders who lead well, make difficult decisions and still bring on criticism? What must they do?

Because of the potential for blow back from decisions and actions taken, leaders must always be aware of their actions and potential results. For leaders to avoid blow back and become more resilient they need to be mindful of what could happen, how they would respond before an event, and what they will say and do during an event. According to Weick and Sutcliffe, to "be resilient is to be mindful about errors that have already occurred and to correct them before they worsen and cause more serious harm."⁴⁶ One way to develop this kind of mindfulness is to learn from

others who have had to lead in difficult environments.

Resilient leaders must often take unpopular actions or make difficult decisions. This often requires the ability to act courageously in ways that may be politically difficult, but are the right thing to do. For Everly, Strouse and Everly III, “resilient leadership is the courage to act, the willingness to take responsibility for decisions regardless of outcome, and the ability to engender trust and fidelity through a consistent pattern of acting with integrity.”⁴⁷

Resilient leaders must also help to build systems that connect people together. Leaders who desire to build resiliency into their communities and nation must consider how to develop social networks that can be called upon during crisis and disasters. Everly, Strouse and Everly III have noted in their research that “the single most powerful predictor of the ability to withstand and rebound from adversity is the perceived support of others.”⁴⁸ This means leaders must continually strive to create a resilient culture. A culture that creates social networks of “shared identity, group cohesion and mutual support.”⁴⁹

Leaders play a key role in communicating resiliency by both word and deed. Their actions must focus on building infrastructures and associated organizations that help their people become more resilient. Leaders must help make their communities believe they are resilient. Resiliency’s “decisive advantage is its psychological influence on civil society...The most resilient societies are the ones that *believe* they are resilient.”⁵⁰ Good leadership helps others believe.

To better understand this kind of leadership we need to look at real examples. Let’s look at two historical leaders and one contemporary: Abraham Lincoln, Winston Churchill and Rudy Giuliani.

Abraham Lincoln

Abraham Lincoln is one of America’s most celebrated U.S. presidents, with an overwhelming appeal not only to Americans, but also to people around the globe. However, during the early years of the American Civil War he was under constant pressure from the unfolding national trauma and also from personal family loss. His lack of popularity in the southern secessionist states led to their breaking away from the

Union and eventually war. And throughout both terms of his administration he had the great burden of leading the nation through four bloody years of rebellion. Yet, in spite of all these unbearable pressures he was a resilient leader.

In September 1859, a year before being elected president when Lincoln was only known to most Americans as an up-and-coming Republican politician, he gave a speech to the Wisconsin State Agricultural Society in Milwaukee that ended with a sentiment that revealed his attitude toward adversity and his strength to get through difficult situations. Always the master communicator he said, "An Eastern monarch once charged his wise men to invent him a sentence, to be ever in view, and which should be true and appropriate in all times and situations. They presented him the words: 'And this, too, shall pass away.' How much it expresses! How chastening in the hour of pride! -- How consoling in the depths of affliction! 'And this, too, shall pass away.'"⁵¹ Lincoln used this kind of understanding to help guide a young nation through four terrible years of warfare and division on the hope and vision that "this, too, shall pass," and the nation would once again be whole.

Lincoln also was able to grieve with the families who had lost sons in the war. His own son William "Willie" Lincoln died from sickness during his first term in the White House. It was a devastating event in his life. But through this event he was able to console a nation. Elizabeth Keckley, a dressmaker for Mrs. Lincoln, witnessed his grief. "Mr. Lincoln came in. I never saw a man so bowed down with grief...he buried his head in his hands, and his tall frame convulsed with emotion. His grief unnerved him, and made him a weak, passive child. I did not dream that his rugged nature could be so moved."⁵² However, he was not a passive weak child, as U.S. Army Lieutenant General William B. Caldwell IV, in his article "Leadership in a Time of Crisis," says, "Lincoln's anguish only made him a stronger leader. His tragic loss gave him a perspective on empathy....a strength born through adversity."⁵³

His own loss paved the way for him to grieve for many others. Several years later he would write a letter to a grieving mother who had lost five of her sons in combat. In a letter to Mrs. Bixby of Boston, Mass., in November 1864, Lincoln wrote, "I feel how weak and fruitless must be any word of mine which should attempt to beguile you from the grief of a loss so overwhelming. But I cannot refrain from tendering you the

consolation that may be found in the thanks of the republic they died to save.”⁵⁴ It was his ability to empathize and encourage people with hope of better days and knowledge their sacrifices were not in vain, that helped to inculcate resilience into the population’s will to fight on.

Lincoln’s resilience as a leader can be best summed up by Donald Phillips in his book *Lincoln on Leadership: Executive Strategies for Tough Times*. “It was Abraham Lincoln who, during the most difficult period in the nation’s history, almost single-handedly preserved the American concept of government. Had he not been the leader that he was, secession in 1860 could have led to further partitioning of the country into an infinite number of smaller, separate pieces, some retaining slavery, some not.... Abraham Lincoln was the essence of leadership.”⁵⁵

Winston Churchill

Winston Churchill is another example of resilient leadership. In 1940, as the German *Wehrmacht* pummeled allied forces in France, Winston Churchill gave his famous “We Shall Fight on the Beaches” speech to the House of Commons which set forth and stirred the national will to fight back against all odds and not cave in.

This voice of resilient leadership helped create a resilient nation. Churchill told his people that,

I have, myself, full confidence that if all do their duty, if nothing is neglected, and if the best arrangements are made, as they are being made, we shall prove ourselves once again able to defend our Island home, to ride out the storm of war, and to outlive the menace of tyranny, if necessary for years, if necessary alone.... whatever the cost may be, we shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender.⁵⁶

It was such speeches that helped to inspire a nation to fight and withstand the viciousness of war.

The early days of World War II severely tested the British people. Nightly bombings, threats of invasion and German U-boats sinking allied ships put a great strain on the British nation. In spite of this, the British people's mottoes were "business as usual" and "London can take it," who according to radio newsman Edward R. Murrow was their act of defiance towards the Germans.⁵⁷

Toward the end of 1940, while the Blitz raged, the British government produced a film called "London Can Take It." Narrated by an American journalist, it spoke of the strength and resiliency of the British people and their resolve to fight and survive. As the film rolls the narrator says,

There is nothing but determination, confidence and high courage among the people of Churchill's island....It is true the Nazis will be over again tomorrow night and the night after that and every night. They will drop thousands of bombs and they'll destroy hundreds of buildings and they'll kill thousands of people. But a bomb has its limitations. It can only destroy buildings and kill people. It cannot kill the unconquerable spirit and courage of the people of London. London can take it!⁵⁸

Yes, most cynics today would scoff at the terms of unconquerable spirit and courage, but in November 1940 when their world was literally being bombed back to nothing, those words rang true, and men and women like Winston Churchill were able to give an example of resiliency to their people.

Rudy Giuliani

Rudy Giuliani also knows what resilient leadership looks like. He ought to, for on Sept. 11 and the days following he was the face of New York, and his ability to bounce back while confronted with many difficulties encouraged others to hang on. What did Giuliani do that demonstrated resiliency?

For starters, Giuliani and his N.Y.C. team saw the need to build

resiliency into their response systems as demonstrated by their extensive preparations before Sept. 11. They had foresight about possible future threats and took actions to meet those threats. Giuliani said, "One reason New York City was able to withstand the Sept. 11 attack was that we were prepared to meet 21st century security threats... We drilled and planned for various threats... And while we didn't anticipate the specific scenario of Sept. 11, the constant practice, and the relentless follow-up from actual emergencies, certainly helped in its aftermath."⁵⁹ All the work done to help the city respond to catastrophic emergencies gave it the necessary capacity to spring back.

Another demonstration of resiliency was when in the midst of all the chaos and death he "was able to galvanize emergency operations" despite severe loss of emergency response personnel and command and control capabilities.⁶⁰ Not only were the buildings and people down, but valuable first responders and their leaders, charged for the protection of citizens and maintaining order in chaos, were now themselves victims all in a matter of hours. Any community that suffered a similar catastrophe proportional to its size would be devastated for decades.

Not only did New York City spring back after being tested, but so did its mayor. "Giuliani's *Zivilkourage*," According to Arjen Boin and Paul't Hart, "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."⁶¹ Business author Tom Peters writes of Giuliani's courage to be visible: Rudy "showed up" when it really mattered on Sept. 11. As one individual put it, he went from being a lame duck, philandering husband to being *Time* magazine's "Man of the Year" in 111 days. How? Not through any "strategy, well-thought-out or otherwise. But by showing his face. By standing as the embodiment of Manhattan's indomitable spirit."⁶²

Whether you like him or not, you cannot call him a coward because when it counted most he showed up. And Giuliani's pro-active nature did not start on Sept. 11, but years earlier. He himself says, "While mayor, I made it my policy to see with my own eyes the scene of every crisis so I could evaluate it firsthand."⁶³

When he was there at ground zero, he demonstrated something else those New Yorkers and people everywhere needed to see - a leader

leading with composure and control. He points out leaders “have to control their emotions under pressure. Much of your ability to get people to do what they have to do is going to depend on what they perceive when they look at you and listen to you. They need to see someone who is stronger than they are, but human, too.”⁶⁴ Giuliani says he would “ask the people of New York City to do everything that they can to cooperate, not to be frightened.”⁶⁵

Giuliani was also seen everywhere, like a Churchill, visiting dangerous areas. He says “there was a method to my day on Sept. 11. I couldn’t tell people, ‘be brave,’ unless I was willing to walk the streets, or not to panic over anthrax unless I was willing to go to the places where it was suspected. That is what the optimism of leadership is about. Once the leader gives up, then everybody else gives up, and there’s no hope.”⁶⁶

Compare that with Louisiana Gov. Kathleen Blanco’s response, during Hurricane Katrina, who had a problem inspiring and leading. *Time* magazine’s article “4 Places Where the System Broke Down,” had this to say about Gov. Blanco, “No one would mistake Blanco, 62, for Rudy Giuliani. In the first week after the storm hit, she came across as dazed and unsteady.”⁶⁷ According to John Magginnis, a newspaper publisher in Louisiana, “Blanco is not an inspiring speaker and appeared ‘rattled’ on TV after seeing her devastated state....She’s an empathetic, nurturing kind of person,” he says. “Maybe she is not the towering tower of strength that some people would hope or expect to see.”⁶⁸ She was counseled by General Honore who met with her regularly to “present a tougher face to the public.”⁶⁹

On Sept. 10, 2005, CNN Security Watch’s “Lessons of Hurricane Katrina,”⁷⁰ aired. This program focused on the failure of resilient leadership, or none at all, during the disaster. Of those doing interviews for the program, Candy Crowley, CNN correspondent, points out that what was missing during this disaster was “a strong guiding hand in times of tragedy.” Crowley goes on and says, “In the uncertainty of Sept. 11 the surest thing was his honor, the mayor, Rudy Giuliani, tough, uncompromising, fully competent.”⁷¹ She points to this common picture of a lack of a central guiding leader in response to a great tragedy, for “many reasons foreseeable and not, Katrina is a different story. It lacks a leading man or lady.”⁷²

David Gergen, former presidential adviser, said, “We want

somebody to fill the screen and tell us what to do, and go for it - someone who's decisive. And Rudy Giuliani had all of those qualities. They were almost Churchillian.”⁷³ Adding to this notion, Mike Deaver, former Reagan adviser, explains the need people have for a leader to help them deal with great disasters. He said one “of the things that's needed in a situation like this is for somebody to sit down with, us and tell us and reassure us, and help us sort of fathom it and tell us that it's going to be all right eventually. That hasn't happened. That's sort of the leadership quotient that we haven't seen yet.”⁷⁴

Candy Crowley’s comparison of Giuliani with former Louisiana Gov. Blanco boils down to this: Giuliani had better command of details of what was going on and that steadied a hurting city. By contrast Blanco seemed faltering about fundamental things, such as water in the city being just lake or canal water instead of possible toxic soup from hazardous materials.⁷⁵ Crowley says, “Giuliani brought calm to chaos and poetry to the unspeakable.... The truth is the story of Katrina has many heroes. What it's lacked is a leader.”⁷⁶

Resilient Infrastructures

For thousands of years most people lived on farms or in communities where they were required to be self-reliant. People produced most of their own goods and services to survive and by necessity were more resilient to life’s difficulties. However, this all changed as we became more interconnected and interdependent on others for our daily livelihoods.

With the merger of new technologies to facilitate modernization we became coupled into an intricate network of complex associations. “Our society and modern way of life depend on a complex system of critical infrastructures”⁷⁷ was how the 2003 *National Strategy for the Physical Protection of Critical Infrastructures and Key Assets* framed our current state. Six years later *the National Infrastructure Protection Plan* expressed, “Protecting and ensuring the continuity of the critical infrastructure and key resources (CIKR) of the United States is essential to the Nation’s security, public health and safety, economic vitality, and way of life.”⁷⁸

Our way of life has become wholly dependent on technologies and the reliability of the infrastructures they spawned. As a consequence we have become less self sufficient, hence, less resilient.

Most modern developed nations have infrastructures that basically revolve around three functions: (1) Production and delivery of essential goods and services (agriculture, food and water, public health, energy, transportation, banking and finance, chemical manufacturing, and postal and shipping); (2) Interconnectivity and operability (financial, information and telecommunication systems); and (3) Public safety and security (government institutions that provide security, defense, and emergency services such as fire and police).⁷⁹ Another way to understand these three functions is to look at them as lifeline systems.

The “concept of a “lifeline system,” according to T.D. O’Rourke, “was developed to evaluate the performance of large, geographically distributed networks during earthquakes, hurricanes and other hazardous natural events. Lifelines are grouped into six principal systems: electric power, gas and liquid fuels, telecommunications, transportation, waste disposal, and water supply.”⁸⁰ O’Rourke concludes “because lifelines are intimately linked to the economic well-being, security and social fabric of a community, the initial strength and rapid recovery of lifelines are closely related to community resilience.”⁸¹

Ownership of these lifelines or infrastructures varies from country to country. Some countries provide for the entire major infrastructures. Others are a mixture of private and public ownership. In the United States, private industry owns and operates about 85 percent of the critical infrastructures.⁸² These are further broken down into specific kinds of infrastructure systems. These systems of interconnected and often seamless networks have also become the most vulnerable to perturbations and must be made more resilient.

For most of America’s history, we have been fortunate not to have large invading forces threatening us as has happened in other parts of the world. Two large oceans have protected our homeland, but now that has changed. Advanced technologies and communications have not only changed our boundaries, but have also created what Boin and Hart call the “modern crisis,” requiring new methods of protection. According to them this “modern crisis” is the result “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 shocks from a single crisis. Comparatively slight mishaps within these massive and intricate infrastructures can sometimes create problems in unforeseen ways.”⁸³

As separate infrastructures develop, they often connect to other infrastructures for support or to provide support. New technologies create new infrastructures, which interconnect to the older ones. This growth creates a density of systems, which has never been seen before. As infrastructures go from the local to global connectedness, so does the density and creates a dense global medium. This makes our systems less resilient and more vulnerable to disturbances. The 2009 *National Infrastructure Protection Plan* alludes to this by saying critical infrastructures are “systems and assets, whether physical or virtual, so vital to the United States that the incapacitation or destruction of such systems and assets would have a debilitating impact on national security, national economic security, public health or safety, or any combination of those matters.”⁸⁴

As we rely more on technology and associated networks we have become more aware of their vulnerability. Often the weaknesses in these networks are unveiled when they fail during major accidents or disasters. This was the case with Hurricane Katrina. According to Lt. Gen. H. Steven Blum, then chief of the National Guard Bureau, when referencing the Mississippi region which took the brunt of the hurricane’s force, the affected region was “plunged back 200 years, to a time when there were no cell phones, no television or radio, and no electricity. I saw antebellum homes that had withstood 150 years of storms on the Gulf Coast, and all that was left was their foundations and a few steps. The rest was gone. Gone.”⁸⁵

The destruction of key support systems in the region resulted in the loss of homes, jobs, commercial enterprises and life-support kinds of functions. The disruption to regional networks also hampered military responses. “Perhaps the single greatest impediment to a faster military response to Katrina was the nearly total destruction of the communication network in the entire Gulf Coast region. Land lines, cell phone towers and electric power lines were all down.”⁸⁶ Events such as Hurricane Katrina

revealed the vulnerabilities of current infrastructures and the cascading affects that result. This destruction sent a ripple through the United States.

Think about physics where it takes less force to agitate a solid medium. In effect it's like throwing a rock in a pool of water and watching the ripples move away from the disturbed area. The denser the pond the smaller the rock needed to affect it. A very dense infrastructure with all of its connections and levels of interconnectivity would act in a similar way and not be unaffected.

Indeed the two most recent events in the last decade which demonstrate what happens when the technological system is disturbed are Sept. 11 and Hurricane Katrina. The former caused the nations entire air-traffic system to shut down sending shock waves throughout the world web of air-route connections. The latter shut down an entire city and petroleum and other industrial systems feeding a nation and world.

But if you think that is old news a more recent event has demonstrated the vulnerability of our globally interconnected system. In April 2010 one of Iceland's volcanoes erupted and spewed ash all across the European skies. The effects were drastic. According to *USA Today*,

The eruption...is causing massive dislocation across Europe. By late Sunday [April 18], more than 63,000 flights had been canceled in 23 European countries, stifling the lifeblood of the continent's economy. Because few planes are flying, travelers can't travel, machinery parts can't get to factories, food sellers can't transport their goods, and businesses are finding business increasingly difficult to conduct. The economic ripples are being felt worldwide. In the USA, air carriers canceled 310 flights to and from Europe on Sunday, according to the Air Transport Association, which represents most major U.S. airlines. Because of the volcano, Kenya's hothouse flowers — responsible for 20 percent of that African nation's exports — are rotting in warehouses rather than winging their way to Europe.⁸⁷

These kinds of events should be eye-openers, shedding light on the fragileness of our globalized interconnected systems. Failures in any of

the infrastructures due to natural disasters or technological failures could be replicated deliberately by terrorists to create similar consequences, possibly by using the effects of WMDs. An attack on any one of these webs could have a ripple or cascading effect felt around the world.

Terrorists understand these new infrastructures currently define not only how people live, but also how they will operate in the world. Consequently, this infrastructure damage or takeover could become lucrative lightning rods for gaining public and national attention. So any infrastructure vulnerability could be exploited asymmetrically against us. The 2009 Homeland Security's *National Infrastructure Protection Plan* highlights this and maintains that terror attacks, using parts of the CIKR, could cause direct or indirect impacts, resulting "in large-scale human casualties, property destruction, economic disruption and mission failure, and also significantly damage national morale and public confidence."⁸⁸

Because of the aforementioned natural disaster and terrorist threats a lot of effort and thought has gone into learning more about infrastructure fragility and survivability. After the Sept. 11 attacks new strategies and policies emerged to improve security of the American homeland.

The National Infrastructure Advisory Council (NIAC) interprets infrastructure resilience as "the ability to reduce the magnitude and/or duration of disruptive events." To be effective we have to be able to "anticipate, absorb, adapt to and/or rapidly recover"⁸⁹ from these kinds of events. The U.S. National Strategy for the Protection of Critical Infrastructure and Key Assets identified over 18 systems, networks and assets⁹⁰ deemed extremely valuable for "life as we know it." The 2006 version says "among our most important defensive efforts is the protection of critical infrastructures and key resources....These are systems and assets so vital that their destruction or incapacitation would have a debilitating effect on the security of our Nation."⁹¹ Later, the Homeland Security's 2009 *National Infrastructure Protection Plan* emphasized the overarching goal is to "build a safer, more secure, and more resilient America by preventing, deterring, neutralizing or mitigating the effects of deliberate efforts by terrorists to destroy, incapacitate, or exploit elements of our nation's critical infrastructure and key resources."⁹²

In April 2010, the Obama administration put forth its Homeland Security guiding principle, "Promote the Resiliency of our Physical and Social Infrastructure." It focuses more on specific infrastructure concerns

and states, “Ensuring the resilience of our critical infrastructure is vital to homeland security. Working with the private sector and government partners at all levels will develop an effective, holistic, critical infrastructure protection and resiliency plan that centers on investments in business, technology, civil society, government and education. We will invest in our nation's most pressing short and long-term infrastructure needs.”⁹³

Then in May 2010, the Obama administration released its *National Security Strategy* (NSS). In general, this document lays out the major strategic concerns of the United States and the plan to address them. Resilience was brought front stage in the section called “Strengthen Security and Resilience at Home.” The administration recognizes not every threat can be stopped and resilience must be a key measure. “We...recognize that we will not be able to deter or prevent every single threat. That is why we must also enhance our resilience — the ability to adapt to changing conditions and prepare for, withstand and rapidly recover from disruption.”⁹⁴

The NSS proposes five overarching objectives to create a more resilient homeland. One objective called “Enhance Security at Home” specifically deals with infrastructures. It put forward new initiative for protecting and reducing infrastructure vulnerabilities “at our borders, ports and airports, and to enhance overall air, maritime, transportation, and space and cyber security.”⁹⁵ Of key interest is the “global systems that carry people, goods, and data around the globe [which] also facilitate the movement of dangerous people, goods, and data.” “Within these systems of transportation and transaction, there are key nodes—for example, points of origin and transfer, or border crossings—that represent opportunities for exploitation and interdiction.”⁹⁶

Thus, the overall strategy is to work with partners at all levels domestically and abroad to make these systems more resilient. This is a tall order in a world of diverse interest, capabilities, resources and the complexity of systems which are not fully understood. Challenges and problems notwithstanding, building resilience into our systems, and correcting resilience deficiencies are paramount.

When it comes to terrorism, we recognized our own brittleness after Sept. 11. And most would agree with Dr. James Carafano that “strengthening most critical components of infrastructure or essential

systems prevents terrorists from exploiting a society's vulnerabilities and dealing blows that could cripple it. Decentralizing and reducing the brittleness of necessary global and national systems demonstrates to terrorists the futility of attacking those systems — and thus deters."⁹⁷

The bottom line is when infrastructures are resilient to attacks terrorists may not want to waste their limited advantage and resources on a potentially failed mission.

Resilient Populations

On March 4, 1933, the newly elected president of the United States, Franklin D. Roosevelt, facing the chief justice took his oath of office. In his first inaugural address, broadcasted across the nation by radio, he set a nation at ease with words of encouragement. In the midst of a great depression he spoke to the people,

This is preeminently the time to speak the truth, the whole truth, frankly and boldly. Nor need we shrink from honestly facing conditions in our country today. This great Nation will endure as it has endured, will revive and will prosper. So, first of all, let me assert my firm belief that the only thing we have to fear is fear itself — nameless, unreasoning, unjustified terror which paralyzes needed efforts to convert retreat into advance. In every dark hour of our national life a leadership of frankness and vigor has met with that understanding and support of the people themselves which is essential to victory.⁹⁸

In his address he spoke to the people's sense of resiliency and their ability to bounce back in spite of hardships. Likewise, today we are confronted by new threats, and old kinds of disasters, that require Americans to once again dig deep inside for the resilience to withstand the current and future challenges to our way of life.

The United States by the very nature of its size and constitutional freedoms creates a more permissive environment for terrorist operations than in more dictatorial countries. Those responsible for protection cannot

possibly provide an effective defense of all the potential targets. Therefore, many cannot be protected and are left vulnerable to attack. Consequently, a “focus on resilience has value in part because it forces us to acknowledge the limits of government capability.... No government can respond as quickly and as creatively as individuals concerned with the well-being of their families, their businesses and their communities. That is the source of our resilience as a country.”⁹⁹ If this analysis is correct, the American public must become more resilient to better handle unforeseen events.

An enemy’s willingness to attack is often influenced by his sense of the possibilities of operational success. If he senses a greater chance for failure, he may be dissuaded from conducting the operation in the first place. And if a population fails to react in a way satisfying to terrorist purposes he may well cease from such operations. How a population reacts to terrorist attacks could directly influence terrorist operations. If the people are able to continue on in their daily lives and recover well from the events of an attack, they are “resilient.” If they fail to recover well and if they respond in ways that negatively affects a nation’s ability to govern and or changes our value systems they could be characterized as malleable, breakable and exploitable.

A report on Israel’s ability to bounce back and weather attacks, states, “Victory on the home front depends on national resilience. National resilience is the capacity to recover from a crisis without breaking the social fabric or compromising core human and national values. Israel’s national resilience may turn into a strategic asset and even enhance Israel’s deterrence.”¹⁰⁰

This renewed focus on population resilience was drastically brought forward by the effects of Katrina and its aftermath. Before Katrina there was a strong focus on protecting critical infrastructures. After Katrina the focus moved toward making communities resilient.¹⁰¹ To help make diverse communities more resilient requires the national government to give them kinds of support only it is capable of providing. “At the end of the day,” says Steward Baker, “building a resilient homeland requires us to trust our citizens. We must inform them – and trust them to inform others. We must equip them with the right tools and technologies – and trust them to use those tools to help themselves and others.”¹⁰²

The kinds of support governments need to give are vast. The Center for the Study of Weapons of Mass Destruction gives examples of the kinds of support needed. They focused on the “before and after” of a terrorist nuclear attack. Needs included “educating the general public in advance about nuclear effects and about how individuals should respond would facilitate response efforts and save many more lives. Important technical, legal, and regulatory issues of long-term recovery and restoration initiatives... need to be addressed.”¹⁰³ However, government support cannot guarantee greater population resilience. It can help, but population resilience also means individual resilience.

So what does a resilient population look like? How do people react to threats that affect every aspect of their lives? And when we are attacked how do we bounce back? Hopefully, the answer to these questions can in a very real way present a clear message to future terrorists. You can attack us, hurt us, but you can’t destroy us, and we will bounce back and come after you. This ability to bounce back sends a clear message when communicated by word and deed and could be a deterring factor vis-à-vis future attackers. “Don’t thread on me” because I will survive and continue on. Moreover, such attacks will galvanize our counter-terror operations against you.

One concept of resilience, previously mentioned, is the notion of “hardiness.” One NDU study on the subject states, “Conceptually, hardiness was originally seen as a personality trait or style that distinguishes people who remain healthy under stress from those who develop symptoms and health problems. Hardy persons have a high sense of life and work commitment and a greater expectation of control and are more open to change and challenges in life. They tend to interpret stressful and painful experiences as a normal aspect of existence.”¹⁰⁴

This need for hardiness, to survive difficult situations, has been part of human history especially in times of war when civilizations often break down. During World War II, “the British, the Germans and the Russians proved resilient because they summoned the will to prevail and persevere through hardship; the acumen to organize delivery of needed goods and services; and the wherewithal to maintain an organized civil structure....Keeping the heartbeat of the nation going amid adversity is the very definition of resiliency, and national will is the key element in accomplishing this goal.”¹⁰⁵

How do you develop hardiness in populations? According to Bartone, Barry and Armstrong, “Hardiness levels can be increased as a result of experiences and training. So it is better to think about hardiness not as an immutable trait, but rather as a generalized style of functioning that continues to be shaped by experience and social context.”¹⁰⁶ They continue by explaining how a person’s attitude and the way he sees life or frame experiences help determine the level of his hardiness or resilience to unforeseen events. “The power of hardiness to mitigate stressful experiences is related to the positive interpretations or framings of such experiences the hardy person typically makes.”¹⁰⁷

Dr. (Lt Col) Michael Kindt, a U.S. Air Force psychologist, in his monograph *Building Population Resilience to Terror Attacks: Unlearned Lessons from Military and Civilian Experience*, illustrates two different experiences after two separate attacks. He observed the American response to the Sept. 11 attacks and juxtaposed it to the British public’s response to its July 8, 2005, London terror attacks. He says after the attacks America went into a “circle the wagons” mentality and grounded all air traffic and increased security in all areas. The result slowed travel to a crawl, from which took months to recover, at a great economic price. However, across the Atlantic after the London bombing attacks, mass traffic moved that very afternoon of the attacks even though people were still in shock. People would continue the following days to take the same modes of transportation that had been attacked. According to Dr. Kindt the difference between the two responses was resilience.¹⁰⁸

He points out England’s ability to bounce back after the London attacks was in part due to its history of having to cope with previous attacks. “Resilience to trauma is increased by a number of factors, which include preparation for the trauma, perceived ability to cope with trauma, and, perhaps most important, experience of successful recovery to past trauma. Clearly, London has had more experience dealing with the effects of bombing than the United States.”¹⁰⁹ Kindt referred to German bombing campaign of World War II, and later with the Irish Republican Army bombing campaigns.

Dr. Kindt’s research concluded with ways populations can increase their resilience. First, he says, “One key to the development of resilience is having had the experience of being faced with responsibility in a threat or crisis and successfully managing that crisis.”¹¹⁰ As people embrace very

difficult situations and pass through them successfully, they build up capacity to deal with future trials.

Further, high “resilience to stress is the combination of a positive individual perspective, strong social connectedness and effective problem solving skills, all of which allow an individual to cope positively with traumatic events such as a terror attack.”¹¹¹

In addition, taking decisive action can increase resilience which “is a way of reducing the anxiety of indecision. By taking action, individuals can focus on the action at hand, rather than feeling stuck in uncertainty.”¹¹²

Moreover, we need to keep “things in perspective....As individuals improve their ability to look at the big picture of events they can better direct their actions and moderate emotional reactions.”¹¹³ A part of this is developing the ability to “avoid seeing crises as too large to be managed, and by beginning to break down a crisis into more manageable pieces.”¹¹⁴

Finally, and most important, is the “ability to reach out to provide support to and receive support from others in times of stress. This ability to affiliate with others during crisis or stress then appears to not only help individuals cope with a crisis, but on a large scale enables groups to avoid panic behavior.”¹¹⁵

Conclusions

A resilient nation possesses deterrence by denial effects if it can introduce doubt about operational success into the calculations of a terrorist leader and thus deter an attack. Therefore, the previous analysis leads to six conclusions on resilience and deterrence.

First, as a nation we should continue to announce our efforts at making the country more resilient. The more our adversaries are made to see us as a harder target, the more their decisions will be affected. “Our future deterrence success will be a function of how well we bring all our capabilities and resources to bear to achieve decisive influence over adversary decision-making.”¹¹⁶

Second, for us to ensure our resilience efforts are understood by the attended audience, terrorist decision-makers, we need to have a robust strategic communication effort. This effort must constitute all facets of the U.S. government “through the use of coordinated programs, plans,

themes, messages, and products synchronized with the actions of all elements of national power.”¹¹⁷

Third, our message cannot be just propaganda, but must be fundamentally true or appear as such. Resiliency must be a national effort to shore up our systems with the ability to withstand attacks from terrorist or nature. Our systems must have the following three abilities to be resilient: “(1) the ability to absorb strain and preserve functioning despite the presence of adversity... (2) An ability to recover or bounce back from untoward events...and (3) An ability to learn and grow from previous episodes of resilient action.”¹¹⁸ In other words we require robustness, redundancy, resourcefulness and rapidity to bounce back after being challenged.¹¹⁹

Fourth, and more specifically, one of the most devastating attacks against the United States would be from a nuclear detonation. Therefore, we need a capability to recover from a nuclear terror attack. Bartone, Barry and Armstrong believe the “United States currently lacks a robust nuclear consequence management capability, although important efforts are under way to enhance preparedness. A robust consequence management capability could save lives, facilitate restoration of critical functions, better contain social and political impacts, and more effectively manage the larger international security repercussions.

Nuclear consequence management is feasible.”¹²⁰

Fifth, there should be national- and local-level discussions on what a resilient nation is and how it can have a deterring affect. Resiliency should be a national priority, and the United States should establish “a positive, consistent, national message which says ‘we as American people are all vital parts of a team, each with our own critical roles, working together to prepare to ultimately defeat terrorism.’”¹²¹

Finally, we should make resilience a part of our educational efforts. “Resilience requires public concern about disasters and the operation of critical infrastructure, which, in turn, requires public education.... Public education also involves media coverage via newspapers and television.... Risk communication is also important to public awareness.”¹²²

Following that terrible day in September, Mayor Giuliani spoke words that indicated we as a nation were going to get through this dark time and gave hope to those who needed it. He said, "I am an optimist by

nature. I think things will get better, that the good people of America and New York City will overcome any challenge thrown our way. So in the face of this overwhelming disaster, standing amid 16 acres of smoldering ruins, I felt a mixture of disbelief and confidence... that Americans would rise to this challenge."¹²³

Notes

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²⁰ Osama bin Laden, "World Islamic Front Statement," Jihad against Jews and Crusaders (Feb. 23, 1998), <http://www.fas.org/irp/world/para/docs/980223-fatwa.htm>; also can be found in Bruce Lawrence's (editor) book *Messages to the World: The Statements of Osama Bin Laden*, 61. The following statement from Osama bin Laden and his associates purports to be a religious ruling (fatwa) requiring the killing of Americans, both civilian and military.

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³⁸ Warren Bennis, *On Becoming a Leader*, Basic Books: New York, First Edition (1989, 2009), xxvi–xxvii.

³⁹ Paul T. Bartone, Charles L. Barry, and Robert E. Armstrong, “To Build Resilience: Leader Influence on Mental Hardiness,” *Defense Horizons*, Center for Technology and National Security Policy, National Defense University (Nov. 2009), 5.

⁴⁰ George S. Everly Jr., Douglas A. Strouse, and George S. Everly III. *The Secrets of Resilient Leadership: When Failure is Not an Option*, DiaMedica Publishing: New York, N.Y. (2010), 3.

⁴¹ *Ibid.*, 8.

⁴² Arjen Boin and Paul’t Hart, “Public Leadership in Times of Crisis: Mission Impossible?,” *Public Administration Review*, (Sept./Oct. 2003), Volume. 63, No. 5, 544–553.

⁴³ *Ibid.*, 546.

⁴⁴ *Ibid.*

⁴⁵ Carafano, “Resiliency and Public–Private Partnerships to Enhance Homeland Security,” 3.

⁴⁶ Weick and Sutcliffe, *Managing the Unexpected*, 68.

⁴⁷ Everly, Strouse, Everly III, *The Secrets of Resilient Leadership*, 18.

⁴⁸ *Ibid.*, 95.

⁴⁹ *Ibid.*

⁵⁰ Carafano, “Resiliency and Public–Private Partnerships to Enhance Homeland Security,” 2

⁵¹ Abraham Lincoln, “Address before the Wisconsin State Agricultural Society,” Milwaukee, Wis., (Sept. 30, 1859), *Abraham Lincoln Online*, Speeches and Writings (accessed May 14, 2010),

<http://showcase.netins.net/web/creative/lincoln/speeches/fair.htm>; Abraham Lincoln, “Address before the Wisconsin State Agricultural Society,” Milwaukee, Wisc., (Sept. 30, 1859), *Collected Works of Abraham Lincoln. Volume 3. Lincoln, Abraham, 1809-1865*, Ann Arbor, Mich.: University of Michigan Digital Library Production Services (2001), 481–482, <http://name.umdl.umich.edu/lincoln3>; *Collected works, The Abraham Lincoln Association*, Springfield, Ill., Roy P. Basler, editor; Marion Dolores Pratt and Lloyd A. Dunlap, assistant editors. Lincoln, Abraham, 1809-1865. New Brunswick, N.J., Rutgers University Press (1953).

⁵² LTG William B. Caldwell, IV, “Leadership in a Time of Crisis,” Lincoln Lecture Series at the University of Saint Mary, Leavenworth, Kan. (Feb. 12, 2009), 4–5, (accessed from the following website on April 8, 2010), <http://usacac.army.mil/cac2/Repository/SelectedSpeeches/SaintMary.pdf>.

⁵³ *Ibid.*

⁵⁴ Abraham Lincoln, “To Mrs. Lydia Bixby,” Milwaukee, Wis., (Sept. 30, 1859). *Collected Works of Abraham Lincoln. Volume 8. Lincoln, Abraham, 1809-1865*, Ann Arbor, Mich., University of Michigan Digital Library Production Services (2001), 117, <http://name.umdl.umich.edu/lincoln8>.

NOTE: The Complete Letter. “Executive Mansion, Washington, Nov 21, 1864, To Mrs. Bixby, Boston, Mass. Dear Madam, I have been shown in the files of the War Department a statement of the Adjutant-General of Massachusetts, that you are the mother of five (5) sons who have died gloriously on the field of battle. I feel how

weak and fruitless must be any word of mine which should attempt to beguile you from the grief of a loss so overwhelming. But I cannot refrain from tendering you the consolation that may be found in the thanks of the republic they died to save. I pray that our Heavenly Father may assuage the anguish of your bereavement, and leave you only the cherished memory of the loved and lost, and the solemn pride that must be yours to have laid so costly a sacrifice upon the altar of freedom. Yours, very sincerely and respectfully, A Lincoln.”

⁵⁵ Donald T. Phillips, *Lincoln on Leadership: Executive Strategies for Tough Times* (N.Y., Business Plus), 172-173.

⁵⁶ Winston Churchill, “We Shall Fight on the Beaches” (June 4, 1940), House of Commons, <http://www.winstonchurchill.org/learn/speeches/speeches-of-winston-churchill/1940-finest-hour/128-we-shall-fight-on-the-beaches>.

⁵⁷ “Part 8: England in the 20th Century, World War II,” Britannia, America’s Gateway to the British Isles, (accessed on April 2, 2010),

<http://www.britannia.com/history/nar20hist4.html>. Edward Murrow’s famous opening line preceding each broadcast from England into American households was “This is London Calling.”

⁵⁸ Produced by the British Government in October 1940, ‘London Can Take It’ is narrated by American journalist Quentin Reynolds and pays tribute to London, Ministry of Information Film – The London Blitz, <http://www.south-wales.police.uk/museum/worksheets/london2.pdf>.

⁵⁹ Giuliani, Rudolph W., “The Resilient Society: A blueprint for homeland security,” *City Journal* (Winter 2008), Vol. 18, No.1, http://www.city-journal.com/2008/18_1_homeland_security.html.

⁶⁰ O’Rourke, “Critical Infrastructure, Interdependencies, and Resilience,” 27.

⁶¹ Boin and Hart, “Public Leadership in Times of Crisis,” 544.

⁶² Jeff Janssen, “9/11 Leadership Lessons,” *PR Intelligence Report*

Volume 3, Issue 16, (Wednesday, Jan. 2, 2008), (accessed May 14, 2010), http://www.enebuilder.net/techimage/e_article000930036.cfm?x=b11,0,w. The article can also be found at “Team Captains Network” at

<http://www.teamcaptainsnetwork.com/public/230.cfm>.

⁶³ Rudolph Giuliani, *Leadership*. New York: Hyperion, Miramax Books (2002), 4.

⁶⁴ Janssen, “9/11 Leadership Lessons.”

⁶⁵ CNN Security Watch, “Lessons of Hurricane Katrina,” transcript from Broadcast, CNN.Com (aired Sept. 10, 2005 - 20:00 EST, (accessed on April 7, 2010), <http://transcripts.cnn.com/TRANSCRIPTS/0509/10/cp.01.html>.

⁶⁶ Giuliani, *Leadership*, pp. 297-298.

⁶⁷ “4 Places Where the System Broke Down,” *Time Magazine*, Time.COM (Sunday, Sept. 11, 2005), (accessed on April 7, 2010),

<http://www.time.com/time/magazine/article/0,9171,1103560-1,00.html>.

⁶⁸ Jill Lawrence, “Governors handle crisis in own ways,” *USA TODAY* (Sept. 12, 2005), (accessed April 7, 2010), http://www.usatoday.com/news/nation/2005-09-12-two-governors_x.htm.

⁶⁹ CNN Security Watch, “Lessons of Hurricane Katrina.”

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Department of Homeland Security (DHS), *The National Strategy for The Physical Protection of Critical Infrastructures and Key Assets* (February 2003), 35, http://www.dhs.gov/xlibrary/assets/Physical_Strategy.pdf.

⁷⁸ Department of Homeland Security (DHS), *National Infrastructure Protection Plan: Partnering to enhance protection and resiliency*, 2009, Glossary of Key Terms, 7.

⁷⁹ DHS, *The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets*, 6. Note: The ideas for the three functions come from this national strategy which discusses American systems; however, these systems are found in any developed and developing nation.

⁸⁰ O’Rourke, “Critical Infrastructure, Interdependencies, and Resilience,” 23.

⁸¹ Ibid., 25.

⁸² DHS, *The National Strategy for The Physical Protection of Critical Infrastructures and Key Assets*, 8.

- ⁸³ Boin and Hart, “Public Leadership in Times of Crisis,” 545.
- ⁸⁴ DHS, *National Infrastructure Protection Plan*, 7.
- ⁸⁵ James Kitfield, “Poor communication slowed military’s hurricane response,” *National Journal*, GOVEXEC.com (Sept. 19, 2005), (copied on Sept. 21, 2005), www.govexec.com/story_page.cfm?articleid=32263.
- ⁸⁶ *Ibid.*
- ⁸⁷ Elizabeth Weise, Dan Vergano, and Doyle Rice, “Icelandic volcano: The impact is broad, but could be worse,” *USA Today* (April 20, 2010), (accessed on June 4, 2010), http://www.usatoday.com/tech/science/2010-04-19-1Avolcano19_CV_N.htm.
- ⁸⁸ Department of Homeland Security (DHS), *National Infrastructure Protection Plan*, 7.
- ⁸⁹ NIAC, *Critical Infrastructure Resilience Final Report and Recommendations*, National Infrastructure Advisory Council, Secretary of the Department of Homeland Security (Sept. 8, 2009), 8.
- ⁹⁰ The 18 CIKR sectors are: Agriculture and Food; Commercial Facilities; Dams; Energy; Information Technology; Postal and Shipping; Banking and Finance; Communications; Defense Industrial Base; Government Facilities; National Monuments and Icons; Transportation Systems; Chemical; Critical Manufacturing; Emergency Services; Healthcare and Public Health; Nuclear Reactors, Materials and Waste; and Water. Table S-1: Sector-Specific Agencies and Assigned CIKR Sectors, the Department of Homeland Security, *National Infrastructure Protection Plan: Partnering to enhance protection and resiliency* (2009), 3.
- ⁹¹ The White House, *National Strategy for Combating Terrorism*, (September 2006), 13.
- ⁹² Department of Homeland Security (DHS), *National Infrastructure Protection Plan*, 9.
- ⁹³ The White House, Homeland Security, “Guiding Principles” (April 5, 2010), <http://www.whitehouse.gov/issues/homeland-security>, NOTE: This infrastructure needs include: “modernizing our electrical grid; upgrading our highway, rail, maritime, and aviation infrastructure; enhancing security within our chemical and nuclear sectors; and safeguarding the public transportation systems that Americans use every day.”
- ⁹⁴ The White House, *National Security Strategy* (May 2010), 18.
- ⁹⁵ *Ibid.*
- ⁹⁶ *Ibid.*
- ⁹⁷ Carafano, “Resiliency and Public–Private Partnerships to Enhance Homeland Security,” 1.
- ⁹⁸ Franklin D. Roosevelt, “First Inaugural Address” (Saturday, March 4, 1933), <http://www.bartleby.com/124/pres49.html>.
- ⁹⁹ Stewart Baker, “The Resilient Homeland: Broadening the Homeland Security Strategy,” Statement for the Record, Assistant Secretary for Policy, Department of Homeland Security, Before the United States House of Representatives Committee on Homeland Security (May 6, 2008), <http://homeland.house.gov/SiteDocuments/20080506102214-20293.pdf>.
- ¹⁰⁰ “National Resilience’ Victory on the Home Front: A Conceptual Framework,” Executive Summary, *The Reut Institute*, Version A, Cheshvan 5769 (November 2008), 5.
- ¹⁰¹ O’Rourke, “Critical Infrastructure, Interdependencies, and Resilience,” 25.
- ¹⁰² Baker, “The Resilient Homeland: Broadening the Homeland Security Strategy.”
- ¹⁰³ Center for the Study of Weapons of Mass Destruction, *Are We Prepared?*, 101.
- ¹⁰⁴ Bartone, Barry, and Armstrong, “To Build Resilience: Leader Influence on Mental Hardiness,” 4.
- ¹⁰⁵ Carafano, “Resiliency and Public–Private Partnerships to Enhance Homeland Security,” 3.
- ¹⁰⁶ Bartone, Barry, and Armstrong, “To Build Resilience: Leader Influence on Mental Hardiness,” 4.
- ¹⁰⁷ *Ibid.*, 5.
- ¹⁰⁸ Michael T Kindt, *Building Population Resilience to Terror Attacks: Unlearned Lessons from Military and Civilian Experience*. USAF Counterproliferation Center, Future Warfare Series, No.36, Maxwell Air Force Base, Alabama (Nov. 2006), 2.
- ¹⁰⁹ *Ibid.*
- ¹¹⁰ *Ibid.*, 5.
- ¹¹¹ *Ibid.*, 7.
- ¹¹² *Ibid.*, 8.
- ¹¹³ *Ibid.*
- ¹¹⁴ *Ibid.*
- ¹¹⁵ *Ibid.*, 9.
- ¹¹⁶ USSTRATCOM, *Deterrence Operations Joint Operating Concept*, 56.

¹¹⁷ Ibid., p. 37.

¹¹⁸ Weick and Sutcliffe, *Managing the Unexpected*, 71.

¹¹⁹ O'Rourke, "Critical Infrastructure, Interdependencies, and Resilience," 25.

NOTE – O'Rourke explains the four "R" as "Robustness: the inherent strength or resistance in a system to withstand external demands without degradation or loss of functionality. Redundancy: system properties that allow for alternate options, choices, and substitutions under stress. Resourcefulness: the capacity to mobilize needed resources and services in emergencies." And "rapidity: the speed with which disruption can be overcome and safety, services, and financial stability restored."

¹²⁰ Center for the Study of Weapons of Mass Destruction, *Are We Prepared?*, 99.

¹²¹ Kindt, *Building Population Resilience to Terror Attacks*, 27.

¹²² O'Rourke, "Critical Infrastructure, Interdependencies, and Resilience," 26-27. c

¹²³ Janssen, "9/11 Leadership Lessons."