

## **Chapter 31**

### **Prevention of Public Panic in the Wake of Terrorist Incidents**

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Public panic in the wake of a terrorist incident is counterproductive, providing benefits only to the perpetrators of the incident as well as those who seek to capitalize on fear and panic for their own purposes (often political or profit-oriented). And when people panic, they make bad decisions. Fortunately, scholarly research has shown that panic is the exception rather than the norm. Instead, studies of public behavior following natural disasters and terrorist incidents emphasize that most people are rational thinking and logically reacting beings who tend not to panic or to be frozen in fear. Thus, positive outcomes can be expected from devising and implementing research-based strategies that will diminish the likelihood of panic in the wake of terrorist attacks. For example, research on community resilience indicates that being well prepared, effectively communicating accurate, relevant information and empowering citizens to take recommended actions all help to significantly reduce fear and anxiety in times of crises. Following a review of this research, the chapter will conclude with a brief discussion on research policy implications.

**Keywords:** communication, community resilience, emergency preparedness, empowerment, fear, panic, social trust

There is an assumption - believed by many members of the public, and encouraged by Hollywood shows and politicians - that mass public panic is the most likely response to a major terrorist incident. And yet, scholarly research frequently concludes the opposite: beliefs that we should expect panic are not based on a significant amount of empirical evidence, but can instead be described as “disaster myths.” Further, as one study noted, “These myths matter, for they can serve as rationales for inappropriate, inefficient and even dangerous forms of emergency planning and response.”<sup>1</sup> Rather than expecting irrational panicking and civil disorder, researchers in social science, disaster management, and public health have found that mass behavior in times of emergency is often characterized by a type of resilience that can be facilitated by public policies and practices.<sup>2</sup>

This chapter will begin by examining the pervasive myth of public panic in the wake of a terrorist incident, and the ways in which terrorist networks try to provoke fear and panic as core elements of their strategy - the use of violence to achieve political goals. The chapter will also draw from research in psychology, sociology, security studies, and emergency preparedness to identify evidence-based strategies for preventing panic before, during, and after a terrorist incident - with a particular focus on practical ways to strengthen community resilience. Three areas of activity are particularly important: preparation, communication, and empowerment. Research also illustrates the vital importance of social trust - something that is jeopardized in societies where political polarization is more common than unity. A divided public consistently quarreling amongst themselves is unlikely to come together effectively in times of crisis. Thus, new research-based initiatives are needed to strengthen bonds of trust among community members, as well as between governments and citizens.

The chapter then concludes by examining a variety of research questions that remain unanswered, particularly regarding what data should be collected in order to assess levels of resilience in a society. Similarly, it is still unclear what kinds of efforts to build resilience actually have a positive impact. Without identifying exemplary best practices, it will be impossible to determine whether particularly effective initiatives and programs in one context can be successfully transported for implementation in other contexts. The policy implications of this research for governments and societies worldwide are fairly intuitive. The more a society commits itself to learning about and developing resilience, the more likely it will respond to any kind of terrorist incident in a positive manner, without any of the panic or disorientation that the terrorist might hope to create. This, in turn, means that community resilience can become a deterrent against terrorism: the more resilient a society proves to be in the face of a terrorist threat, the more likely a terrorist network will recognize the futility of its efforts. Thus, bolstering community resilience can be seen as a key component of any successful counterterrorism strategy.

### **Research on Fear, Panic and Terror**

Fear is a complicated and powerful emotion that can be stimulated by any number of things

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<sup>1</sup> Drury, John, David Novelli and Clifford Stott, ‘Psychological Disaster Myths in the Perception and Management of Mass Emergencies’, *Journal of Applied Social Psychology* vol. 43, no. 11, 2013, p. 2259.

<sup>2</sup> *Ibid.*, p. 2269.

in our lives. While many researchers have sought to determine the origins and science behind fear, there is only limited agreement amid a wealth of unanswered questions. We know in general that a complex array of sensors in the brain are primarily responsible for triggering the fear emotion, and that most often the reaction of fear is automatic - that is, we do not consciously choose whether to fear or not to fear. We also know that there is a wide variation from person to person in what causes fear. For some people, a spider or rodent could be the cause of fear, while for others it could be speaking in front of a large audience, and some people have a deep fear of aviation transportation or large bodies of water. Our reactions to fear also vary widely, in some cases evoking nervous laughter while in other cases initiating a “fight or flight” response. Further, researchers have found that the biochemical dimensions of fear - which can include increased heart rate and a rush of adrenaline - are fairly similar across all people, while the emotional responses to fear are highly personal and varied, with some people enjoying scary movies and extreme sports much more than others.

Psychological, scientific, and medical researchers who study fear routinely describe it as a normal human reaction to specific situations or conditions in which we perceive risks and dangers. Our survival instincts are necessarily intertwined with our ability to sense and fear danger, and to act accordingly. However, each of us has our own unique relationship with this emotion. Personal tragedies and other experiences may lead some individuals to be more fearful in general (e.g., of the unknown and the unknowable), while similar experiences may lead others to become more hardened and less fearful. A person’s fear can also be influenced by a range of formal and informal types of information - for example: government warnings about an impending terrorist attack or natural disaster, horror movies, personal superstitions, religious beliefs, or even just a friend or neighbor who shares with you some scary rumor.

From the research on fear, we can derive a generally accepted definition of the term panic as “an acute fear reaction marked by a loss of self-control which is followed by non-social and non-rational flight.”<sup>3</sup> Panic is different from a “fight or flight” impulse when facing perceived threats to one’s safety - in fact, that impulse is a natural product of human evolution, without which our ancestors may not have survived. It is not necessarily considered panic when someone flees the site of an incident where danger is clearly manifested, or (for example) in the aftermath of a terrorist attack where death and destruction are visibly prominent. Rather it is completely rational (from a self-preservation standpoint) to want to put distance between yourself and such danger or carnage. You are simply and quickly assessing a clear and present threat in your environment, and taking appropriate self-protection measures.

Meanwhile, terror is a state of mind that can undermine rational assessment and response to dangerous situations. It is closely related to panic in a conceptual way, in that the strongly felt emotions of terror may be induced by violent trauma, and the behaviors associated with both panic and terror appear similar. According to Alex Schmid, terror is “created by a level of fear that so agitates body and mind that those struck by it are not capable of making an objective assessment of risks anymore.”<sup>4</sup> Provoking terror among a target population is a central element of a terrorist

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<sup>3</sup> Quarantelli, Enrico L., ‘The Nature and Conditions of Panic’, *American Journal of Sociology*, Volume 60 (1954), p. 272. Ronald W. Perry and Michael K. Lindell, ‘Understanding Citizen Response to Disasters with Implications for Terrorism’, *Journal of Contingencies and Crisis Management*, Vol. 11, No. 2, June 2003.

<sup>4</sup> Schmid, Alex P., “Terrorism as Psychological Warfare,” *Democracy and Security*, 1, 2005, p. 137.

strategy. Here, the perpetrators of the terrorist acts seek to shock and intimidate the target, disorient and demoralize a society, and coerce them into behaving in ways that are meant to benefit the terrorists.<sup>5</sup> Thus, the links many draw between terrorism and panic in the wake of an attack are seemingly intuitive.

Frequently, three kinds of general assumptions are often made about how people will respond to a terrorist incident. According to research by Perry and Lindell, “conventional wisdom holds that typical patterns of citizen disaster response take the form of panic, shock, or passivity.”<sup>6</sup> Other researchers have also identified basically the same three assumptions about behavior following a terrorist attack: they will flee in panic; they will be frozen in a debilitating state of shock; or they will act in some type of irrational, fear-driven manner that will likely require the intervention of someone else.<sup>7</sup> Drawing from the disaster response literature, specific assumptions have included that communities will witness increased levels of antisocial behavior; victims will become dependent on outside response organizations; evacuation orders will result in a mass exodus; public shelters will quickly fill up with dazed and confused survivors; price gouging, looting and other forms of criminality will be widespread; and it will become necessary to declare martial law to impose order on the chaos.<sup>8</sup> As Webb observes, “perhaps the strongest and most enduring myth of human response to disaster is that the social structure breaks down under stress - victims engage in panic flight with no regard for social relationships, and emergency workers abandon their occupational roles to be with family members.”<sup>9</sup> Recognizing and actively addressing and evaluating these myths should be a cornerstone of any public education effort to ensure a more positive and productive response to the threat of terrorism.

Of course, certain kinds of terrorist attacks will undoubtedly inspire more fear among the target population than others. For example, the detonation of a nuclear bomb is often considered one of the worst-case scenarios because of the destructive capacity of such weapons. While to date no such attack by non-state actors has occurred, it has been featured in many popular fiction books, Hollywood movies and television shows. Similarly, an attack using a contagious virus to intentionally infect a large portion of a population has been portrayed as inciting panic, where the fear of being infected will drive some to behave in irrational (and likely counterproductive) ways. But here as well, no terrorist group has ever come close to the threshold of capability for carrying out such an attack. More realistic, instead, are the suicide bombs and improvised explosive devices that have become a staple in the modern era of terrorist attacks. And even more likely still are assaults with knives and guns, driving cars and trucks into crowds, or hijacking and kidnapping for ransom (or demands to release imprisoned comrades).

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<sup>5</sup> For a much more comprehensive definition of terrorism, see Alex P. Schmid (Ed.), *Routledge Handbook of Terrorism Research* (London, Routledge, 2011), pp. 86–87.

<sup>6</sup> Ibid.

<sup>7</sup> Perry, Ronald W., and Michael K. Lindell, ‘Understanding Citizen Response to Disasters with Implications for Terrorism’, *Journal of Contingencies and Crisis Management*, Vol. 11, No. 2, June 2003, citing Russell Dynes and Enrico L. Quarantelli, ‘The Family and Community Context of Individual Reactions to Disaster’, in: Howard J. Parad, H.L.P. Resnik and Libbie G. Parad (Eds.), *Emergency and Disaster Management* (Bowie, MD: The Charles Press, 1976); and Perry, Ronald W., ‘Environmental Hazards and Psychopathology: Linking Natural Disasters with Mental Health,’ *Environmental Management*, Volume 7, 1983.

<sup>8</sup> Gary R. Webb, ‘Sociology, Disasters, and Terrorism: Understanding Threats of the New Millennium’, *Sociological Focus*, 35:1,2002,p. 88.

<sup>9</sup> Ibid., p. 90.

The nature of the target attacked by the terrorists also impacts the level of fear among a target population. For example, when the terrorist group attacks a specific type of religious institution (like a Sikh temple) or medical facility (like an abortion clinic), it may have a limited impact on the wider population who are not associated with such targets. In contrast, attacks against public spaces (hotels, cafes, shopping centers, office buildings, sports arenas, etc.) and public transportation (e.g., subways, airplanes, or commuter railways) raise the level of perceived threat among the broader population because virtually anyone could be a victim of such an attack.

Overall, there is a broad spectrum of terrorist attacks, and thus an equally broad spectrum in how individual members of the public may be expected to respond to any particular incident. And unfortunately, there have been so many terrorist incidents over the past half-century we now have a fairly significant amount of data and evidence to analyze how people react in the wake of these attacks. For example, we know that the potential effects on victims of terrorism may be experienced at many interrelated levels - individually, collectively, and societally. According to Erez, there are three circles of 'personal victimization' which are determined in accordance with their proximity to the direct victim: "primary or first order victimization, experienced by those who suffer harm directly, whether it is injury, loss or death; secondary or second order victimization, experienced by family members, relatives or friends of primary victims; and tertiary or third order victimization, experienced by those who observe the victimization, are exposed to it through TV or radio coverage of the victimization, or help and attend to victims."<sup>10</sup>

Studies have found that perceptions about the risks of terrorism may be influenced by the degree to which individuals feel they have knowledge of and control over an outside event, and how familiar and catastrophic the event will be. People are more likely to feel that an activity or event is not dangerous if they can control it.<sup>11</sup> However, researchers have also noted that survivors of terrorist acts may experience fear, shock, anxiety, shame, guilt and self-blame, anger, hostility, rage and resentment, together with a sense of disempowerment and helplessness.<sup>12</sup> Meanwhile, societies may suffer collective trauma, particularly when attacks are targeted against a particular group or community.<sup>13</sup> According to Butler et al., terrorism can uniquely disrupt societal

<sup>10</sup> Erez, Edna, "Protracted War, Terrorism and Mass Victimization: Exploring Victimological/Criminological Concepts and Theories to Address Victimization in Israel." In: Uwe Ewald and Ksenija Turkovic, (Eds.) *Large-Scale Victimization as a Potential Source of Terrorist Activities*. (Amsterdam: IOS Press, 2006), p. 90; cited United Nations Office of Drugs and Crime, Counterterrorism Module (14). Available at: <https://www.unodc.org/e4j/en/terrorism/module-14/key-issues/effects-of-terrorism.html>.

<sup>11</sup> Stith Butler, Adrienne, Allison M. Panzer, and Lewis R. Goldfrank (Eds.), *Preparing for the Psychological Consequences of Terrorism: A Public Health Strategy*. Washington, DC: National Academies Press, 2003, p. 45. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK221638/>; citing Paul Slovic, "Perception of Risk." *Science* 236(4799) (1987).

<sup>12</sup> Schmid, Alex P., 'Magnitudes and Focus of Terrorist Victimization'. In: Uwe Ewald, and Ksenija Turkovic, (Eds.). *Large-Scale Victimization as a Potential Source of Terrorist Activities* (Amsterdam: IOS Press, 2006), p. 7. Cited in United Nations Office of Drugs and Crime, Counterterrorism Module (14). Available at: <https://www.unodc.org/e4j/en/terrorism/module-14/key-issues/effects-of-terrorism.html>

<sup>13</sup> Alexander, Jeffrey. *Trauma: A Social Theory* (Cambridge, MA: Polity Press, 2012); and Stevan M. Weine, Alma Dzubur Kulenovic, Ivan Pavkovic, and Robert Gibbons (1998). 'Testimony Psychotherapy in Bosnian Refugees: A Pilot Study'. *American Journal of Psychiatry* 155(12) (1998), pp. 1720–1726. Available at: <https://ajp.psychiatryonline.org/doi/10.1176/ajp.155.12.1720>. Cited in United Nations Office of Drugs and Crime, Counterterrorism Module (14), online at: <https://www.unodc.org/e4j/en/terrorism/module-14/key-issues/effects-of-terrorism.html>.

functioning, as it “has the capacity to erode the sense of community or national security; damage morale and cohesion; and open the racial or ethnic, economic, and religious cracks that exist in our society, as evidenced by an increase in hate crimes following the September 11, 2001, attacks.”<sup>14</sup>

Overall, terrorism impacts people and societies in many ways. And fear is embedded in the fabric of terrorism; there can be no terror without the underlying element of fear. However, there are important factors to be considered when assessing the likelihood of sheer panic in the wake of a terrorist attack. To begin with, scholarly research on human behavior under emergency conditions does not support the popular perception that most people respond to disasters in a socially disorganized or personally disoriented manner. Instead of shock reactions, or panic flight, research has repeatedly demonstrated that individual reactions to natural disasters or terrorist attacks in public spaces are mainly rational,<sup>15</sup> and that most people tend to act in what they believe is their best interest, given their limited understanding of the situation.<sup>16</sup> One study found that public behavior in the immediate aftermath of a major disaster “is generally pro-social as well as rational. Following the impact, uninjured victims are often the first to search for survivors, care for those who are injured, and assist others in protecting property from further damage.”<sup>17</sup> Further, people who are far away from the disaster scene often donate significant amounts of money and supplies, and are generally willing to offer whatever kinds of assistance they can.

Case studies and ‘after action’ reports of recent incidents illustrate these kinds of behavior. One study found that the evacuation of the World Trade Center in 1993 was tense but orderly.<sup>18</sup> Published reports about the immediate aftermath of the 9/11 attacks also noted the evacuation process of the two WTC towers was orderly and calm, with survivors recounting numerous acts of heroism.<sup>19</sup> The immediate response to the 9/11 attacks also included an influx of volunteers from many parts of the country to assist in clearing the rubble of the World Trade Center and to search for survivors. While there was considerable uncertainty and apprehension during this period, reports of panicked behavior were quite rare.<sup>20</sup> In Tokyo, when the religious cult Aum Shinrikyo attacked subway trains with Sarin nerve agent in March 1995, personal accounts provided by commuters on these trains revealed no real sense of panic during the attacks, with individuals responding in an orderly fashion as they were evacuated from the affected areas. The

<sup>14</sup> Butler, Panzer, and Goldfrank, 2003, p. 47; citing Human Rights Watch. ‘We Are Not the Enemy: Hate Crimes Against Arabs, Muslims, and Those Perceived to be Arab or Muslim after September 11’. *Human Rights Watch*, 14(6) 2002; and FBI (Federal Bureau of Investigation, 2002). *Crime in the United States—2001*.

<sup>15</sup> Mailer, Gideon, ‘Individual Perceptions and Appropriate Reactions to the Terrorist Threat in America’s Public Spaces’. In: James J.F. Forest (Ed.), *Homeland Security*, Vol. 2 (Westport, CT: Praeger Security International, 2006), pp. 333–349.

<sup>16</sup> Perry and Lindell, 2003.

<sup>17</sup> Tierny, Kathleen J., Michael K. Lindell, and Ronald W. Perry. *Facing the Unexpected: Disaster Preparedness and Response in the United States*. Washington, DC: Joseph Henry Press, 2001.

<sup>18</sup> Aguirre, Benigno E., Dennis Wenger, and Gabriela Vigo. ‘A Test of the Emergent Norm Theory of Collective Behavior’, *Sociological Forum*, 13(2) (1998). Available at: <https://doi.org/10.1023/A:1022145900928>.

<sup>19</sup> Murphy, Dean A., and Clifford J. Levy. ‘The Evacuation That Kept a Terrible Toll From Climbing Higher’. *The New York Times* (September 21, 2001); and Rory Connell, ‘Collective Behavior in the September 11, 2001 Evacuation of the World Trade Center’. Disaster Research Center, University of Delaware, Preliminary Paper #13 (2001). Available at: <http://udspace.udel.edu/handle/19716/683>.

<sup>20</sup> Schoch-Spana, Monica, ‘Educating, Informing, and Mobilizing the Public’. In: Barry S. Levy and Victor W. Sidel (Eds.) *Terrorism and Public Health: A Balanced Approach to Strengthening Systems and Protecting People* (New York: Oxford University Press, 2003), pp. 118–135.

same behavior was reported in hospitals where victims waited patiently to be treated.<sup>21</sup> Following the July 2005 bombing attacks in London, according to Sheppard et al, “First-hand accounts given in media interviews suggest that the public responses could be better characterized by themes of cohesion, unity, and mutual cooperation, than by any sense of panic.”<sup>22</sup>

These and other examples reflect what research on collective behavior has generally concluded: in the immediate wake of a terrorist attack, members of the public are fairly resilient, calm, and rational in their reactions. According to these studies, “the typical response is marked by the maintenance of normative expectations and role relations. Social order does not break down, and in the case of evacuation, there is no unregulated competition for exits.”<sup>23</sup> Evidence-based research on this topic has demonstrated that “in the face of disaster, most people do not engage in the barbaric, selfish, unthinking, emotional and often self-destructive behavior depicted in the media.”<sup>24</sup> In fact, contrary to expectations of panicked behavior, researchers have noted a tendency for people to redefine norms for social behavior in the wake of a terrorist attack in ways that make helping others an expectation rather than an exception to the norm. As Webb notes, “new norms emerge to govern behavior, and people make every effort to maintain social bonds even under extreme stress.”<sup>25</sup> Further, studies have found that the immediate response period of natural and technological disasters is socially organized, and communities experience an increase in prosocial behavior.<sup>26</sup>

Although it is rare for people to panic, researchers have identified several conditions that must occur - in many cases simultaneously - in order to provoke this kind of behavior: the perception of immediate and severe danger; the existence of a limited number of escape routes; the perception that the escape routes are closing, necessitating immediate escape; and a lack of communication about the situation.<sup>27</sup> Essentially, the literature in this field emphasizes that people confronting a disaster usually react in intelligent, rational ways based on the information they have available to them at any given moment. People often fear what they do not know or do not understand, and panic most often results from fear when there is a paucity of clear and actionable information

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<sup>21</sup> Murakami, Haruki, *Underground: The Tokyo Gas Attack and the Japanese Psyche* (London: The Harvill Press, 2000); Nozomu Asukai and Kazuhiko Maekawa, ‘Psychological and physical health effects of the 1995 Sarin attack in the Tokyo subway system’. In: Johan M. Havenaar, Julie G. Cwikel, and Evelyn, J. Bromet (Eds.), *Toxic Turmoil: Psychological and Societal Consequences of Ecological Disasters* (New York: Kluwer Academic/ Plenum Publishers, 2002); and Ben Sheppard, G. James Rubin, Jamie K. Wardman and Simon Wessely. ‘Terrorism and Dispelling the Myth of a Panic Prone Public’, *Journal of Public Health Policy*, Vol. 27, No. 3 (2006), pp. 219–245.

<sup>22</sup> Sheppard et al. 2006, p. 236.

<sup>23</sup> Quarantelli, Enrico L., ‘The Behavior of Panic Participants’. *Sociology and Social Research* Vol. 41, No. 3 1957; Sheppard et al. 2006, p. 238; and Durodie, William, and Simon Wessely. ‘Resilience or Panic? The Public and Terrorist Attack’, *The Lancet*, Vol. 360, 14 December 2002, p. 1901.

<sup>24</sup> Benjamin Cornwell, Wendy Harmon, Melissa Mason, and Brian Merz. ‘Panic of Situational Constraints? The Case of the M/V Estonia’, *International Journal of Mass Emergencies and Disasters*, Vol. 19, No. ,1 March 2001, p. 7. Citing Erich Goode and Nachman Ben-Yehuda, *Moral Panics: The Social Construction of Deviance* (Oxford: Blackwell, 1994).

<sup>25</sup> Gary R. Webb, ‘Sociology, Disasters, and Terrorism: Understanding Threats of the New Millennium’, *Sociological Focus*, 35:1, 2002, p. 90.

<sup>26</sup> *Ibid.*, p. 88.

<sup>27</sup> Fritz, Charles E., ‘Disasters Compared in Six American Communities’, *Human Organisation*, Volume 16, 1957, pp. 6-9; Quarantelli 1957; Quarantelli 1977; and Dennis S. Mileti, Thomas E. Drabek and J. Eugene Haas, *Human Systems in Extreme Environments* (Boulder, CO: University of Colorado Institute of Behavioral Science, 1975). Cited in Perry, & Lindell 2003.

available. Further, fear and anxiety often diminish a person's ability to figure out the most optimum response to complex, unfamiliar problems, and the less we understand something, the greater our perceptions of risk tend to be.<sup>28</sup>

Further, a person's response to a terrorist incident is largely based on what they *believe to be true* at the time, which may or may not be rooted in factual evidence. This has significant implications in today's modern social media-infused era, where the tools of influence warfare and disinformation are used to manipulate beliefs, perceptions and behavior in ways that may benefit a political agenda but prove disastrous for the broader society.<sup>29</sup> When our perceptions of risk are misinformed and manipulated, we are unlikely to make the kinds of decisions that will be the most beneficial. Thus, to minimize counterproductive behavior among individuals in a society, it is vital to devise and implement strategies that will prevent or diminish the likelihood of panic in the wake of terrorist attacks. Further, based on the research findings that panic is a considerably less likely response to terrorist attacks than is frequently assumed, it should be intuitive that strategies can be pursued to minimize this even further.

### Strategies to Prevent or Diminish Panic in Emergencies

Research-based strategies and policies on preventing public panic in emergencies emphasize the essential importance of community resilience, although different definitions of this term are used. For the purposes of this discussion, we can define resilience as the ability to make adaptive processes to alleviate stress by modifying various capacities to restore a level of normalcy in the face of trauma, tragedy, and threat.<sup>30</sup> To put more simply, resilience is "the ability to adapt to changing conditions and prepare for, withstand, and rapidly recover from disruption."<sup>31</sup> Several countries - including Australia, New Zealand, the UK, and the US - have formally identified the need to nurture resilience as part of an overall strategy for national security.<sup>32</sup> For example, the 2010 US National Security Strategy describes several essential elements for building resilience: reduction of vulnerability at home, effective management of all-hazards, empowering communities and engaging citizens, building partnerships, and encouraging resistance to fear and

<sup>28</sup> Slovic, Paul, Baruch Fischhoff and Sarah Lichtenstein. 'Facts and Fears: Understanding Perceived Risk', in: Richard C. Schwing and Walter A. Albers (Eds.), *Societal Risk Assessment* (New York: Plenum Press, 1980).

<sup>29</sup> For more on this, see Forest, James J.F., *Digital Influence Warfare in the Age of Social Media* (Santa Barbara, CA: ABC-CLIO/Praeger, 2021).

<sup>30</sup> For example: Adger, W. Neil, 'Social and Ecological Resilience: Are They Related?', *Progress in Human Geography*, 24, 2000; George A. Bonanno, 'Loss, Trauma, and Human Resilience: Have we underestimated the human capacity to thrive after extremely aversive events?' *American Psychologist*, 59,2004; Brown, David D., and Judith C. Kulig, 'The Concept of Resiliency: Theoretical Lessons from Community Research'. *Health and Canadian Society*, 4,1996-97; Norris, Fran H., and Susan P. Stevens. 'Community Resilience and the Principles of Mass Trauma Intervention'. *Psychiatry: Interpersonal and Biological Processes*, 70 (4), 2007; and Pfefferbaum, Betty, Dori B. Reissman, Rose L. Pfefferbaum, Richard W. Klomp and Robin H. Gurwitsch, 'Building Resilience to Mass Trauma Events'. In: Lynda S. Doll, Sandra E. Bonzo, David A. Sleet and James A. Mercy (Eds.), *Handbook on Injury and Violence Prevention Interventions* (New York: Kluwer, 2007), pp. 347-358.

<sup>31</sup>The White House. *The National Security Strategy of the United States of America*,2010, p. 18.

<sup>32</sup> National Counter-Terrorism Plan2017, Australia New Zealand Counter-terrorism Committee. Commonwealth of Australia. 4th Edition 2017. Available at: <https://www.nationalsecurity.gov.au/Media-and-publications/Publications/Documents/ANZCTC-National-Counter-Terrorism-Plan.PDF>.

overreaction.<sup>33</sup> Similarly, the 2017 US National Security Strategy identifies a series of goals and initiatives meant to strengthen the country's "ability to withstand and recover rapidly from deliberate attacks, accidents, natural disasters, as well as unconventional stresses, shocks, and threats to our economy and democratic system."<sup>34</sup> In the UK, many regions have established "Community Resilience Teams" - with representatives from local emergency response authorities and private sector - and several major cities (including London, Bristol, Manchester, and Glasgow) have created the new position of a "Chief Resilience Officer."<sup>35</sup> These kinds of national strategies inform efforts at the local level to build community resilience as a central means of preventing public panic in the wake of a terrorist incident.

In general, community resilience is seen as a means of mitigating the discomfort of uncertainty. Inherent uncertainty surrounds us all, as a part of life. Individuals, organizations, and governments respond by seeking to manage uncertainty, and reduce it whenever they can. The central goals of any strategy to prevent panic must address the need to reduce uncertainty and instill confidence that no matter what the future holds, the community will make it through. Trust in government - as well as trusting each other - is essential for instilling such confidence, and by extension, community resilience. Further, research shows that higher levels of generalized social trust before exposure to terrorism are linked to lower levels of fear after the event.<sup>36</sup> So, strategies to prevent or diminish panic should include a central goal of increasing trust between the government and society's various communities, citizens and residents. To this end, three themes of particular relevance appear most prominent in the research on decreasing uncertainty and increasing community resilience: preparation, communication, and empowerment.

### *Preparation*

To be (or at least to feel) completely prepared for any type of unforeseeable event is surely rare. However, a combination of historical analysis and contemporary risk assessment has led to a fairly solid understanding of effective incident preparedness. When considering ways to prepare a society for coping with a terrorist attack, much of our understanding draws from the large literature on preparation for natural disasters. Here, scholars have emphasized the importance of stockpiling emergency supplies and materials; establishing a robust, multi-channel communications infrastructure; and having some form of an integrated system for responding to emergencies, with a clearly defined chain of command and well-defined jurisdictions, legal authorities and responsibilities. In addition, as organizational readiness is broadly seen as a critical component of

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<sup>33</sup> The White House. *The National Security Strategy of the United States of America*, 2010, pp. 10–18.

<sup>34</sup> The White House. *The National Security Strategy of the United States of America*, 2017, p. 14.

<sup>35</sup> For example, see 'Appointment of Chief Resilience Officer for London', *Resilience First*, 27 November 2018. Available at: <https://www.resiliencefirst.org/news/appointment-chief-resilience-officer-london/>; 'Bristol Appoints Resilience Officer', *100 Resilient Cities* (13 January 2015). Available at: <https://www.100resilientcities.org/bristol-appoints-resilience-officer/>; 'Glasgow gets UK's first chief in Disaster Role', *100 Resilient Cities*, 30 October 2015. Available at: <http://100resilientcities.org/glasgow-gets-uks-first-chief-in-disaster-role/>; and 'London Resilience Partnership'. Available at: <https://www.london.gov.uk/what-we-do/fire-and-resilience/london-resilience-partnership>.

<sup>36</sup> Enjolras, Bernard, Kari Steen-Johnsen, Francisco Herreros, Øyvind Bugge Solheim, Marte Slagsvold Winsvold, Shana Kushner Gadarian, and Atte Oksanen. 'Does Trust Prevent Fear in the Aftermath of Terrorist Attacks?' *Perspectives on Terrorism* vol. 13, no. 4, August 2019.

an effective response to a terrorist attack, a variety of drills and exercises should be conducted to test the response capabilities of emergency services, and remedy any identified concerns or areas of weakness.

Research on best practices for emergency preparedness has informed the development of numerous national-level disaster preparedness plans, several of which focus prominently on fostering resilience for community members and critical infrastructure. For example, Australia's Strategy for Disaster Resilience describes how individuals and communities "should be self-reliant and prepared to take responsibility for the risks they live with. For a resilient nation, all members of the community need to understand their role in minimizing the impacts of disasters, and have the relevant knowledge, skills and abilities to take appropriate action."<sup>37</sup> Similarly, the 2017 US National Security Strategy emphasizes the need to "build a culture of preparedness and resilience across our governmental functions, critical infrastructure, and economic and political systems."<sup>38</sup> The US Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA) are the government organizations primarily responsible for ensuring preparedness at all levels. In addition to gathering and storing emergency supplies at locations around the country (the Strategic National Stockpile), and conducting regular training exercises for first responders, the federal government also provides financial support for local communities to purchase equipment and signage for evacuation routes, among other necessities.

Often, these kinds of preparedness efforts are meant to influence the population's trust that federal and local government agencies are ready to respond effectively to whatever might happen in the future. A government's preparedness measures must be matched by public confidence in those measures. There is thus an important perception factor in all of this, which underscores the need for transparency and accountability on the part of government agencies, and for involving ordinary citizens in preparations for natural disasters and terrorist incidents. To that end, national preparedness strategies also emphasize the need to get the public involved, and for every citizen to take some responsibility for personal and family preparations. For example, the American DHS/FEMA sponsors the "Ready.gov" public education initiative which encourages US businesses, communities, families, and individuals to prepare themselves for disasters of all kinds.<sup>39</sup> Guidance is provided for effective emergency planning, with a particular emphasis on assembling a personal or family emergency supplies kit (with food, water, first aid, medicines, and other necessities) to ensure their survival for at least a few days. To the degree that the population of a country takes heed of this sort of guidance and prepares accordingly, the research literature indicates we should anticipate lower levels of panic in the wake of a disaster (or terrorist attack).

### *Communication*

A second theme in the research literature on preventing public panic addresses the need for effective communication. In their analysis of research on public responses to terrorist attacks, Durodie and Wessely made a compelling argument for the need "to identify and prepare

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<sup>37</sup> Council of Australian Governments. *Australia's National Strategy for Disaster Resilience*, February, 2011, p. 10. Available at: <https://knowledge.aidr.org.au/resources/national-strategy-for-disaster-resilience/>.

<sup>38</sup> The White House. *The National Security Strategy of the United States of America*, December 2017, p. 7.

<sup>39</sup> DHS/FEMA Ready.gov website. Available at: <https://www.ready.gov>.

mechanisms for accurate and effective dissemination of necessary information through the full range of available media.”<sup>40</sup> It is widely understood that communicating accurate information in a timely manner is a key part of any strategy to reduce fear and panic in the wake of a terrorist incident (or any other crisis or emergency). People look to authorities to help them make correct decisions, and when there is a lack of communication (or authorities are simply not forthcoming with enough information), it can lead to bad decision-making and other negative behaviors.<sup>41</sup> In fact, as Perry and Lindell argued, a lack of information has been found to increase fear in the immediate aftermath of a traumatic incident.<sup>42</sup>

But even before an incident occurs, there must be continual and effective communication between authorities and citizens. In February 2019, the US National Governors Association published a *Guide to Homeland Security*, in which state leaders are encouraged to identify essential messages to communicate to the public; learn best practices and innovations from other states; and use campaigns and incentives to raise public awareness. Communities need to know about evacuation routes, emergency, shelters, and the basic parameters of their local community’s emergency response plans. Reinforcing earlier discussions about preparations, this document also calls on governors to ensure that the citizens in their state are prepared to be self-sufficient for at least 72 hours in the aftermath of a disaster, including maintaining an ample supply of food, water, and other necessities.<sup>43</sup>

Overall, the research literature highlights three areas of recommendations for government leaders that are fairly applicable in any community setting worldwide:

1. Communicate effectively, provide accurate, truthful information before, during and after an incident.
2. Focus on influencing perceptions of competence, trust and good faith - before, during and after an incident - which can do a lot to reduce fear and panic; and
3. Set an example in what you communicate and how you communicate, because if you remain calm, others will follow your lead accordingly.

How individuals perceive their government’s prevention and emergency preparedness impacts on how they assess the threat of terrorism as well as their expectations as to how the government is most likely to respond in the event of a terrorist attack. Effective risk communication involves providing people with the facts they need to make best choices among the often-limited options available, being candid about what is known and the quality of the information being provided to the public.<sup>44</sup> According to Durodie and Wessely, “One primary role is to fill the information vacuum before rumors, myths, misinformation, and ultimately hoaxes can take their course. Rapid, timely, clear, and repeated facts and data need to be at hand and presented by trusted sources,

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<sup>40</sup> Durodie and Wessely 2002, p. 1901.

<sup>41</sup> Wilson, Sean A., Bethany J. Temple, Mark E. Milliron, Calixto Vazquez, Michael D. Packard, and Bruce S. Rudy. ‘The Lack of Disaster Preparedness by the Public and its Effect on Communities’. *The Internet Journal of Rescue and Disaster Medicine* vol. 7, no. 2, 2007.

<sup>42</sup> Perry and Lindell, 2003.

<sup>43</sup> National Governors Association. *A Governor’s Guide to Homeland Security*. NGA Center for Best Practices, Homeland Security & Public Safety Division, February 2019, pp. 22–24. Available at: [https://www.nga.org/wp-content/uploads/2010/11/NGA\\_HomelandSecurityGuide\\_2.19\\_update.pdf](https://www.nga.org/wp-content/uploads/2010/11/NGA_HomelandSecurityGuide_2.19_update.pdf).

<sup>44</sup> Sheppard et al. ,2006.

appropriate to relevant communities. Much of this can be prepared in advance but needs to be specific and robust rather than general or vague.”<sup>45</sup> Further, “The release of inaccurate, confusing, or contradictory information has the potential to increase levels of demoralization as well as discrediting the authorities concerned. Such failures of communication can create misunderstanding, suspicion, and resistance to future warnings that ultimately inhibit relief efforts.”<sup>46</sup>

Unfortunately, as noted earlier, mass and social media can play a significantly negative role throughout manmade (and natural) disasters. Research from the fields of psychology, sociology, security studies and elsewhere have highlighted the unhelpful and irresponsible ways in which media often overemphasize portrayals of panicked behavior during disasters.<sup>47</sup> Of course, because drama and fear attracts viewers and readers, a country’s profit-motivated media services have a business incentive to focus more heavily on the emotionally provocative aspects of an incident and downplay or ignore examples of calm, rational behavior among the victims. But there should also be a recognition among the media that they have a responsibility in their reporting to help prevent - rather than exacerbate - the chances of panic in the wake of a terrorist attack. Similarly, governments must pay close attention to social media, which has been increasingly used by some ill-meaning individuals to spread rumors and disinformation, incite paranoia and hysteria, and reinforce prejudices and biases. Regrettably, certain prominent politicians have been known to engage in such negative behavior in order to gain some sort of political advantage.

Literature from the field of psychology describes how calm reassurances by government authorities in the wake of a terrorist incident can have a beneficial impact on anxiety levels among members of the public. The central goal of communication efforts during ongoing incidents and immediately thereafter should be to reduce fear while addressing misunderstandings and misinformation. In the wake of an incident, as Durodie and Wessely note, “The public can become victims of their fears - terrorizing themselves far better than terrorists can.”<sup>48</sup> Government spokespersons should avoid emphasizing the vulnerabilities of the community, and instead focus on people’s resilience and provide specific, relevant information and recommended actions in a timely, authoritative manner. For example, after a series of four terrorist attacks in Germany within one week in July 2016, the spokesman for the Munich police made a public appeal: “Give us the chance to report facts. Don’t speculate, don’t copy from each other.”<sup>49</sup> Most politicians and media services throughout the country heeded his advice. Only a small handful of fringe politicians - like the leader of the anti-immigrant Alternative for Germany (AFD) party - tried to capitalize on the attacks, and were immediately condemned on social and broadcast media.<sup>50</sup> Similarly, after the 7 July 2005 terrorist attacks in London on the transport system, the Queen of England visited hospitals to meet victims and express sympathy. During a visit to the Royal London Hospital, she

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<sup>45</sup> Durodie and Wessely 2002, p. 1902.

<sup>46</sup> Ibid.

<sup>47</sup> Cornwell et al. 2001; Quarentelli Enrico L., and Russell R. Dynes. ‘When Disaster Strikes’, *Psychology Today* 5 (1972), pp. 66–71; John P. Keating. ‘The Myth of Panic’, *Fire Journal*, 77, 1982; Johnson Norris R., ‘Panic at ‘The Who Concert Stampede’ - An Empirical Assessment’. *Social Problems* 34, 1987.

<sup>48</sup> Durodie and Wessely, 2002, p. 1902. Citing John Gearson, ‘The Nature of Modern Terrorism’, in Lawrence Freedman (Ed.), *Superterrorism: Policy Responses*. (Oxford: Blackwell, 2002) pp. 7 – 24.

<sup>49</sup> ‘Pure Reason: How Germans Handle Terror’, *Economist*, 30 July 2016. Available at: <http://econ.st/2EwwXQN>.

<sup>50</sup> Ibid.

stated, “Those who perpetrate these brutal acts against innocent people should know that they will not change our way of life.”<sup>51</sup> Finally, transparency and honesty are vital in such instances, in order to engender widespread trust in the government’s response efforts, and convey the message that by working together the society will make it through this. As the 2017 US National Security Strategy notes, “An informed and engaged citizenry is the fundamental requirement for a free and resilient nation.”<sup>52</sup>

### *Empowerment*

Finally, a third theme that is reflected in research - and in many emergency planning documents - highlights the central importance of partnerships, shared responsibility and empowerment. To be sure, citizens must be able to trust their government agencies and authorities responsible for safety and security. But it is commonly accepted that private citizens must also take some ownership for their own preparedness. This, in turn, requires a government to empower individuals to be proactive, give them a sense of purpose and direction in times of crisis, and provide ways for them to take responsibility for responding effectively when an incident does occur. Similar to preparedness, the central message in this area of strategic planning is to establish mechanisms through which individual members of society are provided opportunities to partner with government agencies in answering calls for help. Much of this empowerment has traditionally been organized at the volunteer level by non-profit and community organizations (e.g., the American Red Cross/Red Crescent). The public health sector will often organize blood donor drives, another way of empowering the members of a community to contribute towards an effective response to whatever crisis has emerged.

Meanwhile, governments have also sponsored various initiatives to empower their citizens. In the US, FEMA sponsors a Citizens Corps initiative that brings together government and community leaders to involve individuals in emergency preparedness and response. Participants in this program are asked to get training in first aid and emergency skills, become familiar with local emergency plans and resources, and to volunteer their assistance when called upon by emergency responders. Similarly, the Community Emergency Response Team (CERT) program educates volunteers about disaster preparedness for those hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, search and rescue, team organization, and disaster medical operations.<sup>53</sup> Specific actions an individual could be empowered to do include providing food and clothing to survivors at relief shelters, assisting with search and rescue operations, directing traffic during evacuations, and many other kinds of tasks. By empowering local citizens to participate effectively in times of crisis, these programs also allow professional emergency responders to focus on more complex tasks. And to avoid redundancy or wasted efforts, tasks and responsibilities are to be coordinated by a comprehensive incident management plan and a command structure for emergency response.

Having a structure in place for community volunteers to get involved in response efforts is an essential form of empowerment. Few things have a greater impact on an individual’s perceptions

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<sup>51</sup> ‘Queen condemns bombing outrage’, *BBC News*, 8 July 2005. Available at: <http://news.bbc.co.uk/2/hi/4665537.stm>.

<sup>52</sup> *US National Security Strategy* 2017, p. 14.

<sup>53</sup> FEMA Community Emergency Response Teams: <https://www.ready.gov/cert>.

and resilience than personal experience. Further, beyond empowering individual members of the public to be proactive in the face of terrorist threats, these types of efforts help create social bonding among community members, which also reduces panic in the wake of terrorist attacks. In fact, research has found evidence that the existence of such bonds among social groups may play a greater role in determining whether panic ensues than the response of the authorities themselves during an emergency. As Sheppard et al. note, “Military leaders’ perception that established units are less likely to panic under fire than newly formed units where members have yet to bond with each other also appears to hold weight in civilian life. The presence of familiar people can have a remarkably calming effect during an emergency, so much so that people will sometimes delay evacuating dangerous situations, or even enter dangerous situations, in order to maintain a personal bond with someone.”<sup>54</sup>

In sum, there is extensive research on ways to prevent panic in the wake of terrorist incidents. Three prominent themes within this literature - preparation, communication and empowerment - offer useful guidance that governments should incorporate into their emergency response strategies. These strategies are known to bolster social trust, which is central to ensuring community resilience in times of crisis. And higher levels of community resilience lead to diminished likelihood of panic in the wake of terrorist incidents.

### **Research and Policy Implications**

The culmination of these three areas of effort - preparation, communication and empowerment - is a more resilient community, one that can manage uncertainty more effectively. The policy implications of this research for governments and societies worldwide are fairly intuitive. The more a society commits itself to learning about and building community resilience, the more likely it will respond to any kind of emergency in a positive and constructive manner. Further, resilience can be a deterrent against terrorism: the more resilient a society proves to be in the face of a terrorist threat, the more likely the terrorists will recognize the futility of their efforts. Quite often, terrorist groups are opportunistic, using violence to take advantage of possible vulnerabilities in a society, in order to advance their political and ideological objectives. However, they will find no advantage and no success when the society they wish to weaken or disorient has invested in best practices of emergency preparation, communicates effectively, maintains trusted relationships between the government and the governed, and empowers community members with knowledge and tools to cope with any kind of terrorist attack.

However, as noted earlier, researchers have employed multiple definitions of “community resilience”, and definitional clarity is further complicated by variations in what we mean by “community” - a term that can include geographic, national, social, and economic boundaries, as well as cultural, ethnic, and racial dimensions. In general, a community is viewed as a collective group, one that often finds itself reliant upon others with whom they share something in common. In the face of adversity - which may include terrorism (or other forms of political violence and criminality), environmental hazards, and epidemics, as well as industrial accidents - communities must find ways to adapt as a collective group in order to remain viable and prosperous. For

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<sup>54</sup> Sheppard et al. ,2006.

communities threatened or attacked by campaigns of political violence, the ability to retain positive cohesiveness is vital for a successful recovery.

While community resilience may be difficult to define, it is even more challenging to measure or to identify and implement effective strategies for improving it. Some scholars have suggested that resilience should be viewed as a multilevel construct derived from the capabilities of individuals and groups to sustain positive relationships, as well as endure and recover from stressors. Norris et al. equates resilience with the process of linking resources, referred to as adaptive capabilities, to outcomes, or adaptation.<sup>55</sup> Expanding on Dohrenwend's model of psychological stress (published in the late 1970s),<sup>56</sup> Norris' model examines various decision points and accounts for various resource factors whereby the community's ability to adapt is a vital element for achieving resilience. Communities who are internally polarized, lack resources or are unable to adapt to challenges are vulnerable to persistent dysfunction.<sup>57</sup> Accordingly, building resilience can be a positive process when it is linked to a network of adaptive capabilities after a disturbance: "to build collective resilience, communities must reduce risk and resource inequities, engage local people in mitigation, create organizational linkages . . . [and incorporate] flexibility, decision-making skills, and trusted sources of information that function in the face of unknowns."<sup>58</sup>

Ideas of self-efficacy are based upon the transfer of accountability to communities by building stronger societal pillars that can withstand shocks from man-made events such as terrorist incidents as well as natural disasters. Further, as described earlier, it is important to recognize that shoring up community resilience involves significant investments of effort before an incident occurs. It should be an ongoing process that is constantly addressing vulnerabilities and improving shortcomings, with a particular commitment to effective communication and public education. Various kinds of emergency preparedness efforts reduce doubt and uncertainty. These in turn increase the ability of a community to return to normalcy and diminish the potential for a terrorist incident to provoke panic. Further, resilience is built on foundations of trust, the strength of which can be increased by effectively communicating prompt and accurate information before, during, and after an event occurs. On the other hand, mistrust reduces the overall willingness of the community to become self-efficient and resilient.<sup>59</sup> Government leaders must be committed to effectively communicating the risks of terrorism in a way that is comprehensible and inclusive to all sectors of the population, and to remain calm in the immediate aftermath of an incident.

There must also be a humble but honest acknowledgement that even though every measure is being taken to prevent a terrorist incident, it is unrealistic and irresponsible to encourage the expectation of 100% failsafe security. As noted earlier, risk perception is influenced by the amount of information individuals have about a potential incident, and people are more likely to feel that an activity or event is not dangerous if they are empowered to manage it (or control their response to

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<sup>55</sup>Norris, Fran H., Susan P. Stevens, Betty Pfefferbaum, Karen Fraser Wyche, and Rose L. Pfefferbaum. 'Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness'. *American Journal of Community Psychology* 41 (1-2), 2008.

<sup>56</sup> Snell Dohrenwend, Barbara, 'Social Stress and Community Psychology', *American Journal of Community Psychology*, 6 (1), 1978.

<sup>57</sup> Norris et al., 2008.

<sup>58</sup> Ibid., p. 145.

<sup>59</sup> Bach, Robert and David Kaufman. 'A Social Infrastructure for Hometown Security: Advancing the Homeland Security Paradigm'. *Homeland Security Affairs* 5, 2009.

it) effectively.<sup>60</sup> Proactive measures before a terrorism event can thus set the tone for subsequent response behaviors. The goal is to provide the community with the ability to develop a calculated risk perception culture through a collaborative cycle of information sharing between subject matter experts and the public. Perceptions of credibility, objectivity, transparency and trust are essential here between the people producing information and those consuming it.<sup>61</sup> Trusting the validity of information sources and the decision processes involved in mitigating hazards enables people to become less afraid.<sup>62</sup> In order to achieve a higher level of trust and develop a robust risk perception culture, officials need to improve information sharing, engage in efficient outreach programs, and increase public empowerment through involvement.<sup>63</sup>

Perceptions of risk and community resilience also depend on trust in the local critical infrastructure. At a very basic level, this means having confidence that electric power and water supplies will remain available (or will be repaired very quickly), that the rule of law will be upheld throughout the community, and that the public health system is adequately prepared to function effectively in order to save as many lives as possible. Research has also found that community resilience is dependent on the development of healthy connections among individuals within that community.<sup>64</sup> Positive, trusted relationships among a community's members help ensure its collective efficacy and enhance their ability to adapt and recover from traumatic events.<sup>65</sup> Thus, strengthening communal interconnectedness - what Daniel Aldrich describes as "communities' social capital" - becomes central to increasing the ability to bounce back from major terrorist attacks or other unforeseen catastrophic events.<sup>66</sup>

In politically polarized societies (as many Western democracies are today), this raises an important topic for further research: how to strengthen bonds of trust between government and civilians, and among civilians regardless of political affiliation, socio-demographic background, and so forth. A divided public fighting amongst themselves so bitterly is unlikely to come together effectively in times of crisis. The level of distrust and acrimony between and among members of "the public", combined with diminishing confidence in government agencies and leaders, create a recipe in

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<sup>60</sup> Butler, Panzer, and Goldfrank 2003, p. 45; citing Paul Slovic, 'Perception of Risk'. *Science* 236(4799), 1987, pp. 280–285.

<sup>61</sup> Siegrist, Michael, George Cvetkovich and Claudia Roth. 'Salient Value Similarity, Social Trust, and Risk/Benefit Perception'. *Risk Analysis*, 20 (3), 2000; Siegrist, Michael, Heinz Gutscher and Timothy C. Earle. 'Perception of Risk: The Influence of General Trust, and General Confidence'. *Journal of Risk Research*, 8 (2), 2005, pp. 145–156; Horst, Mark, Margot Kuttschreuter and Jan M. Gutteling (2007). 'Perceived Usefulness, Personal Experiences, Risk Perception and Trust as Determinants of Adoption of e-Government Services in The Netherlands'. *Computers in Human Behavior*, 23 (4), 2007; and Igor Khripunov, 'Educating the Public About Nuclear Terrorist Risks Can Help Raise Levels of Security'. *IAEA Bulletin*, 48, 2006, pp. 39–41.

<sup>62</sup> Ropeik, David *Risk: A Practical Guide for Deciding What's Really Safe and What's Really Dangerous in the World Around You* (New York: Houghton Mifflin, 2002).

<sup>63</sup> Khripunov, 2006; also, for a comparative study on the difficulties of educating the public before a terrorism event involving chemical weapons, see Sarah Hildebrand and Anthony Bleetman, 'Comparative Study Illustrating Difficulties Educating the Public to Respond to Chemical Terrorism'. *Prehospital and Disaster Medicine*, 22(1), 2007, pp. 35–41.

<sup>64</sup> Cacioppo, John. T., Harry T. Reis and Alex J. Zautra. "Social Resilience: The value of social fitness with an application to the military." *American Psychologist*, 66, no. 1, 2011, p. 43.

<sup>65</sup> Rapaport, Carmit, Tzipi Hornik-Lurie, Odeya Cohen, Mooli Lahad, Dmitry Leykin and Limor Aharonson-Daniel, 'The Relationship Between Community Type and Community Resilience'. *International Journal of Disaster Risk Reduction*, 31, 2018, pp. 470 – 477.

<sup>66</sup> Aldrich, Daniel P., *Social Capital in Post-Disaster Recovery* (University of Chicago Press, 2012).

which the fear that terrorists seek to provoke can be amplified, thereby exacerbating the already daunting challenges of fostering community resilience. Government-led strategies and initiatives to build (or rebuild) social capital in polarized communities will necessitate the active engagement of the private sector, and religious and educational leaders.

Unfortunately, we do not yet have a clear understanding about what sorts of initiatives and programs exemplify best practices in building resilience. There is a fair amount of quality research (including case studies that identify best practices) on how to prepare for emergencies, communicate effectively, and empower citizens. But assessing these things before a terrorist incident occurs is another matter. How well-prepared is our community for an unforeseen crisis? How effectively do our leaders communicate in times of crisis? How empowered are our community's members? Without accurate assessments of these things, there is no way to determine shortfalls or areas that need additional investment. Gaps in the research literature that need to be addressed also include finding methodologies how to accurately assess community resilience at specific points in time, in order to determine changes (positive or negative) and whether existing efforts to build resilience actually have a positive impact. What data should be collected and analyzed for this purpose? And further, how can those data help us evaluate whether any improvement over time can be properly attributed to certain programs or initiatives? If we are able to accurately provide evidence about which communities seem to be the most resilient, and why, the next area of research to be addressed involves determining whether strategies developed and applied in one context could be successfully transported for implementation in other contexts.

Similarly, more research is needed on how to assess (and then improve) the effectiveness of communication efforts, particularly in the modern era of social media-fueled disinformation. As noted earlier, when our perceptions of risk are misinformed and manipulated, this has a negative impact on our decision-making. Disinformation -regardless of its source - can reduce social trust and undermine efforts to build community resilience. Rumors, myths and hoaxes can spread all too easily via social media, so government authorities need to be equipped to rapidly respond by providing members of society with accurate facts and data.<sup>67</sup> Failing to do so could increase levels of disorientation and demoralization among a community's members, and decrease their confidence in the government's (and their own) ability to manage a crisis effectively. In a similar vein, the media have a tremendous responsibility to confront the spread of disinformation and help prevent - rather than exacerbate - the chances of panic outbreaks in the wake of a terrorist attack. Thus, policies and strategies are needed to ensure the media take this responsibility seriously, for the sake of community resilience.

Research-based public education programs are also needed for both emergency preparation and empowerment. As noted above, fear rarely produces panic or frozen shock, an inability to react at all. So, instead of implementing plans and policies based on inaccurate perceptions and expectations (fueled by the myth of panicked flight), government agencies should seek partnerships with community members, and ensure they are well-informed and equipped with the tools necessary to contribute productively to the management of a terrorist incident. Similarly, research in this area has identified issues that can reduce community resilience, and must be avoided. For example, new societal efforts are needed to curb the dramatization of terrorist incidents by the media, and to deter fear-mongering by politicians. Provoking fear on behalf of a

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<sup>67</sup> Durodie and Wessely2002, p. 1902.

political agenda has often involved directing people's anxieties toward a specific "other" (immigrants, Muslims, Jews, homosexuals, etc.) in ways that are unjust, irresponsible and counterproductive. This, in turn, contributes to the kind of fear and polarization that undermines any effort to build social capital and strengthen community resilience. What is needed instead is a commitment to community preparedness, transparency, effective and transparent communication, citizen empowerment, and trust in each other. Together, these things strengthen community resilience in ways that can prevent public panic in the wake of a terrorist incident.

## Conclusion

To sum up, evidence-based research has illuminated critical intersections between government preparedness, trust, transparency, effective communication, citizen empowerment and other efforts to strengthen community resilience. Policies and strategies based on solid research can benefit governments and communities worldwide. Unfortunately, there are widespread beliefs and assumptions about panic in the wake of a terrorist attack that are largely based on myth rather than fact. And when the media (and some politicians) encourage myth-making by envisioning a mass of panicked and passive victims in the wake of a terrorist attack, this leads to policies that are at best unhelpful, and potentially even counterproductive. But rather than encouraging fear (and even trying to capitalize on that fear for the sake of political agendas and profits), we must acknowledge the many things that individuals, families and communities can do - with and without their government's involvement - to strengthen community resilience. Commitments and investments in these areas are bound to yield more sophisticated and successful measures to prevent public panic in the wake of a terrorist incident.

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## Bibliography

- Adger, W. Neil. 'Social and Ecological Resilience: Are They Related?' *Progress in Human Geography*, 24, 2000, pp. 347–364.
- Aguirre, Benigno E., Dennis Wenger, and Gabriela Vigo. 'A Test of the Emergent Norm Theory of Collective Behavior', *Sociological Forum*, 13(2), 1998, pp. 301–320.
- Aldrich, Daniel P. *Social Capital in Post-Disaster Recovery* (University of Chicago Press, 2012).
- Alexander, Jeffrey. *Trauma: A Social Theory* (Cambridge, MA: Polity Press, 2012).
- Asukai, Nozomu and Kazuhiko Maekawa, 'Psychological and physical health effects of the 1995 Sarin attack in the Tokyo subway system'. In: Johan M. Havenaar, Julie G. Cwikel, and Evelyn, J. Bromet (Eds.), *Toxic Turmoil: Psychological and Societal Consequences of Ecological Disasters* (New York: Kluwer Academic/ Plenum Publishers, 2002).
- Bach, Robert, and David Kaufman. 'A Social Infrastructure for Hometown Security: Advancing the Homeland Security Paradigm'. *Homeland Security Affairs* 5, 2009.
- Bevc, Christine. A. 'Introduction to Conceptual Insights and Applications of Resilience'. In Naim Kapucu, Christopher V. Hawkins, and Fernando I. Rivera (Eds.), *Disaster Resiliency: Interdisciplinary Perspectives* (New York: Routledge, 2012), pp. 15–20.
- Bonanno, George A. 'Loss, Trauma, and Human Resilience: Have we underestimated the human capacity to thrive after extremely aversive events?' *American Psychologist*, 59, 2004, pp. 20–28.
- Bonanno, George A. 'Resilience in the Face of Potential Trauma'. *Current Directions in Psychological Science*, 14, no. 3, 2005, pp. 135–138.
- Brown, David D. and Judith C. Kulig, 'The Concept of Resiliency: Theoretical Lessons from Community Research'. *Health and Canadian Society*, 4, 1996–97, pp. 29–52.
- Butler, Adrienne Stith, Allison M. Panzer, and Lewis R. Goldfrank (Eds.), *Preparing for the Psychological Consequences of Terrorism: A Public Health Strategy*. Washington, DC: National Academies Press, 2003), p. 45. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK221638/>.
- Cacioppo, John. T., Harry T. Reis and Alex J. Zautra. 'Social Resilience: The value of social fitness with an application to the military'. *American Psychologist*, 66, no. 1, 2011, pp. 43–51.
- Chandler, David and Jon Coaffee. 'Introduction: Contested Paradigms of International Resilience'. *The Routledge Handbook of International Resilience*, (London: Routledge, 2017), pp. 3–9.
- Cornwell, Benjamin, Wendy Harmon, Melissa Mason, and Brian Merz. 'Panic of Situational Constraints? The Case of the M/V Estonia', *International Journal of Mass Emergencies and Disasters*, Vol. 19, No. 1, March 2001, pp. 5–25.
- Denollet, Johan. 'DS14: Standard Assessment of Negative Affectivity, Social Inhibition, and Type D Personality'. *Psychosomatic Medicine*, 67(1), 2005, pp. 89–97.
- Dohrenwend, Barbara Snell. 'Social Stress and Community Psychology', *American Journal of Community Psychology*, 6(1), 1978, pp. 1–14.
- Drury, John, David Novelli and Clifford Stott, 'Psychological Disaster Myths in the Perception and Management of Mass Emergencies', *Journal of Applied Social Psychology* Vol. 43, No. 11, 2013, pp. 2259–2270.
- Durodie, William and Simon Wessely. 'Resilience or Panic? The Public and Terrorist Attack', *The Lancet* Vol. 360, 14 December 2002, pp. 1901–1902.

- Dynes, Russell and Enrico L. Quarantelli, 'The Family and Community Context of Individual Reactions to Disaster', in Howard J. Parad, H.L.P. Resnik and Libbie G. Parad (Eds.), *Emergency and Disaster Management* (Bowie, MD: The Charles Press, 1976), pp. 231–244.
- Enjolras, Bernard, Kari Steen-Johnsen, Francisco Herreros, Øyvind Bugge Solheim, Marte Slagsvold Winsvold, Shana Kushner Gadarian, and Atte Oksanen. 'Does Trust Prevent Fear in the Aftermath of Terrorist Attacks?', *Perspectives on Terrorism* Vol. 13, No. 4, August 2019, pp. 39–55.
- Erez, Edna. 'Protracted War, Terrorism and Mass Victimization: Exploring Victimological/Criminological Concepts and Theories to Address Victimization in Israel'. In: Uwe Ewald and Ksenija Turkovic (Eds.), *Large-Scale Victimisation as a Potential Source of Terrorist Activities*. (Amsterdam: IOS Press, 2006), pp. 89–103.
- Fischhoff, Baruch. 'Communicating About the Risks of Terrorism (or Anything Else)'. *American Psychologist*, 66(6), 2011, pp. 520–531.
- Fritz, Charles E. 'Disasters Compared in Six American Communities', *Human Organisation*, Volume 16, 1957, pp. 6–9.
- Goode, Erich and Nachman Ben-Yehuda, *Moral Panics: The Social Construction of Deviance*. (Oxford: Blackwell, 1994).
- Hildebrand, Sarah and Anthony Bleetman, 'Comparative Study Illustrating Difficulties Educating the Public to Respond to Chemical Terrorism'. *Prehospital and Disaster Medicine*, 22(1), 2007, pp. 35–41.
- Horst, Mark, Margot Kuttschreuter and Jan M. Gutteling (2007). 'Perceived Usefulness, Personal Experiences, Risk Perception and Trust as Determinants of Adoption of e-Government Services in The Netherlands'. *Computers in Human Behavior*, 23(4), (2007), pp. 1838–1852.
- Johnson, Norris R. 'Panic at 'The Who Concert Stampede' - An Empirical Assessment'. *Social Problems* 34 (1987), pp. 362–373.
- Keating. John P. 'The Myth of Panic', *Fire Journal*, 77 (1982), pp. 57-61.
- Khripunov, Igor. 'Educating the Public About Nuclear Terrorist Risks Can Help Raise Levels of Security'. *IAEA Bulletin*, 48 (2006), pp. 39–41.
- Kimhi, Shaul and Yohann Eshel. 'Individual and Public Resilience and Coping With Long-Term Outcomes of War 1'. *Journal of Applied Biobehavioral Research*, 14(2), 2009, pp. 70–89.
- Mailer, Gideon. 'Individual Perceptions and Appropriate Reactions to the Terrorist Threat in America's Public Spaces'. In: James J.F. Forest (Ed.), *Homeland Security*, Vol. 2 (Westport, CT: Praeger Security International, 2006), pp. 333–349.
- Mileti, Dennis S., Thomas E. Drabek and J. Eugene Haas, *Human Systems in Extreme Environments* (Boulder, CO: University of Colorado Institute of Behavioral Science, 1975).
- Murakami, Haruki. *Underground: The Tokyo Gas Attack and the Japanese Psyche* (London: The Harvill Press, 2000).
- National Counter-Terrorism Plan. *Australia New Zealand Counter-terrorism Committee. Commonwealth of Australia*. 4<sup>th</sup> Edition, 2017. Available at: <https://www.nationalsecurity.gov.au/Media-and-publications/Publications/Documents/ANZCTC-National-Counter-Terrorism-Plan.PDF>
- Norris, Fran H. and Susan P. Stevens. 'Community Resilience and the Principles of Mass Trauma Intervention'. *Psychiatry: Interpersonal and Biological Processes*, 70 (4), 2007, pp. 320–328.
- Norris, Fran H., Susan P. Stevens, Betty Pfefferbaum, Karen Fraser Wyche, and Rose L. Pfefferbaum. 'Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy

- for Disaster Readiness'. *American Journal of Community Psychology* 41 (1–2), 2008, pp. 127–150.
- Perry, Ronald W. 'Environmental Hazards and Psychopathology: Linking Natural Disasters with Mental Health', *Environmental Management*, Vol. 7, 1983, pp. 543–552.
- Perry, Ronald W. and Michael K. Lindell, 'Understanding Citizen Response to Disasters with Implications for Terrorism', *Journal of Contingencies and Crisis Management*, Vol. 11, No. 2, June 2003, pp. 49–60.
- Pfefferbaum, Betty, Dori B. Reissman, Rose L. Pfefferbaum, Richard W. Klomp and Robin H. Gurwitch, 'Building Resilience to Mass Trauma Events'. In: Lynda S. Doll, Sandra E. Bonzo, David A. Sleet and James A. Mercy (Eds.), *Handbook on Injury and Violence Prevention Interventions* (New York: Kluwer, 2007), pp. 347–358.
- Quarantelli, Enrico L. 'The Behavior of Panic Participants'. *Sociology and Social Research*, Vol. 41, No. 3, 1957, pp. 187–194.
- Quarantelli, Enrico L. 'The Nature and Conditions of Panic', *American Journal of Sociology*, Volume 60, 1954, pp. 267–275.
- Quarantelli, Enrico L., 'Social Aspects of Disasters and their Relevance to Pre-Disaster Planning', *Disasters*, 1, 1977, pp. 98–107.
- Quarantelli, Enrico L. and Russell R. Dynes. 'When Disaster Strikes', *Psychology Today* 5, 1972, pp. 66–71.
- Rapaport, Carmit, Tzipi Hornik-Lurie, Odeya Cohen, Mooli Lahad, Dmitry Leykin and Limor Aharonson-Daniel (2018). 'The Relationship Between Community Type and Community Resilience'. *International Journal of Disaster Risk Reduction*, 31, 2018, pp. 470–477.
- Ropeik, David. *Risk: A Practical Guide for Deciding What's Really Safe and What's Really Dangerous in the World Around You* (New York: Houghton Mifflin, 2002).
- Schmid, Alex P. "Terrorism as Psychological Warfare," *Democracy and Security*, 1, 2005, pp. 137–146.
- Schmid, Alex P. (Ed.), *The Routledge Handbook of Terrorism Research* (London, Routledge, 2011).
- Schoch-Spana, Monica. 'Educating, Informing, and Mobilizing the Public'. In Barry S. Levy and Victor W. Sidel (Eds.). *Terrorism and Public Health: A Balanced Approach to Strengthening Systems and Protecting People* (New York: Oxford University Press, 2003), pp. 118–135.
- Sheppard, Ben, G. James Rubin, Jamie K. Wardman and Simon Wessely. 'Terrorism and Dispelling the Myth of a Panic Prone Public', *Journal of Public Health Policy*, Vol. 27, No. 3, 2006, pp. 219–245.
- Siegrist, Michael, George Cvetkovich and Claudia Roth. 'Salient Value Similarity, Social Trust, and Risk/Benefit Perception'. *Risk Analysis*, 20(3), 2000, pp. 353–362.
- Siegrist, Michael, Heinz Gutscher and Timothy C. Earle. 'Perception of Risk: The Influence of General Trust, and General Confidence'. *Journal of Risk Research*, 8(2), 2005, pp. 145–156.
- Slovic, Paul, Baruch Fischhoff and Sarah Lichtenstein. 'Facts and Fears: Understanding Perceived Risk'. In: Richard C. Schwing and Walter A. Albers (Eds.), *Societal Risk Assessment* (New York: Plenum Press, 1980).
- Slovic, Paul. 'Perception of Risk'. *Science* 236(4799), 1987, pp. 280–285.
- Tierney, Kathleen J., Michael K. Lindell, and Ronald W. Perry. *Facing the Unexpected: Disaster Preparedness and Response in the United States*. Washington, DC: Joseph Henry Press, 2001.
- Tierney, Kathleen. *The Social Roots of Risk: Producing Disasters, Promoting Resilience*. Stanford University Press, 2014.

Webb, Gary R. 'Sociology, Disasters, and Terrorism: Understanding Threats of the New Millennium', *Sociological Focus*, 35:1, 2002, pp. 87–95.

## Web Resources

- Aly, Anne (2013): 'The Policy Response to Home-Grown Terrorism: Reconceptualising Prevent and Resilience as Collective Resistance'. *Journal of Policing, Intelligence and Counter Terrorism*, 8 (1), pp. 2-18. Available at: <http://dx.doi.org/10.1080/18335330.2013.789594>
- Australia National Strategy for Disaster Resilience. Available at: <https://bit.ly/2Q7LDYt>
- FEMA Community Emergency Response Teams. Available at: <https://www.ready.gov/cert>
- Fischhoff, Baruch (September 2011): 'Communicating about the Risks of Terrorism (or anything else)'. *American Psychologist*, 66(6), pp. 520-531. Available at: <https://www.cmu.edu/dietrich/sds/docs/fischhoff/AP%20Fischhoff.pdf>
- Jenkins, Brian M., 'Taking the 'Terror out of Terrorism Requires Outsmarting Fear', RAND Blog, 16 March 2017. Available at: <http://bit.ly/2zpvrmg>.
- Jenkins, Brian M. and Bruce R. Butterworth, 'Does 'See Something, Say Something' Work?' Mineta Transportation Institute (December 2018). Available at: <https://bit.ly/2Di6x49>
- National Governors Association. *A Governor's Guide to Homeland Security*. NGA Center for Best Practices, Homeland Security & Public Safety Division (February 2019). Available at: [https://www.nga.org/wp-content/uploads/2010/11/NGA\\_HomelandSecurityGuide\\_2.19\\_update.pdf](https://www.nga.org/wp-content/uploads/2010/11/NGA_HomelandSecurityGuide_2.19_update.pdf)
- Stith, Butler Adrienne, Allison M. Panzer, and Lewis R. Goldfrank (Eds.), *Preparing for the Psychological Consequences of Terrorism: A Public Health Strategy*. Washington, DC: National Academies Press, 2003). Available at: <https://www.ncbi.nlm.nih.gov/books/NBK221638/>.
- UK Cabinet Office of Resilience, "Preparation and Planning for Emergencies: The National Resilience Capabilities Programme," (January 2014). Available at: <https://www.gov.uk/preparation-and-planning-for-emergencies-the-capabilities-programme>
- U.S. Department of Homeland Security. *Incorporating Resilience Into Critical Infrastructure Projects*. (4 pages): <http://bit.ly/2ZIBYqQ>
- US Department of Homeland Security, Resilience Initiative. Available at: <https://www.dhs.gov/topic/resilience#>
- US Department of Homeland Security. "Resolve to be Ready" Toolkit. Available at: <https://www.ready.gov/NewYears>
- US Department of Homeland Security, 2011, *If You See Something, Say Something*. <http://www.dhs.gov/files/reportincidents/see-something-say-something.shtm>