

# Are human made disasters different?

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The author distinguishes natural from human made disasters, and identifies their traumatic effects. He stresses the impact on both individuals and communities. Lessons learned from the NYC World Trade Center bombings are offered. He concludes with a universal prescription for responding to disasters.

## Introduction

Every day, on average, disaster strikes a community somewhere around the world. In disaster's wake comes the emotional trauma whose wounds may not be as visible, but are perhaps even more ubiquitous: two-third of the world's population will suffer trauma in a lifetime; one in five Americans will be impacted annually (Galea *et al.* 2005).

Disasters can be grouped as those caused by *nature* (e.g., floods, hurricanes, tornadoes, tsunamis, earthquakes, fires, landslides, nuclear accidents, and motor vehicle and other transportation accidents) and those rendered by *human hands* – or their indifference or incompetence (e.g., war and other violent conflicts, terrorism, prisoner, concentration and refugee camps, involuntary relocations, riots, family and stranger violence, oil spills, and arson).

Is there a difference between the human impact that results from a human made disaster instead of a natural disaster? And if so, what are the implications for promoting resilience in those affected?

## The emotional consequences of disaster

While post-traumatic stress disorder (PTSD) may be the most well-known emotional disorder to occur after the trauma of a disaster, it is hardly the only one. Acute stress reactions, lasting up to a month, are highly prevalent, and generally considered 'a normal reaction to an abnormal situation'. Depression; anxiety disorders different from PTSD (e.g., generalized anxiety and agoraphobia); alcohol, tobacco and drug overuse, and abuse; and worsening of pre-existing mental and addictive disorders are common disorders that emerge. The more life threatening and ghastly the disaster, as well as the degree of what is called

'exposure' (direct and continuous visual, olfactory, and auditory sensations) the more likely that a traumatic state will ensue. Direct victims are at greatest risk of developing post-traumatic emotional problems, of all varieties, followed by rescue workers, and finally the general population affected. Once PTSD sets in there is evidence that it can and does persist, especially for those with early onset of the symptoms.

Women are at greater risk for PTSD than men, and low levels of social support correlate with increased risk. No definitive psychological profile characterizes those who are apt to do poorly after a disaster except for those with poor coping skills to begin with, which is no surprise. People with active or past mental disorders or who have been previously traumatized are also at greater risk. There is not enough reliable information to identify risk differences among racial and ethnic groups. Television and other visual media can either help or irresponsibly play endless looping tapes of a disaster that mesmerize audiences and produce distress.

Remarkably, most people are resilient. Stable and caring families, cohesive communities, trustworthy governments and institutions, reliable and safe housing, a return to everyday routines, good self-care, hope, and faith are important factors in recovery from disaster and trauma for individuals and communities.

## Disaster, trauma, the person, and community

There is an organic chemistry between the blow that a traumatic event delivers and the human host upon whom it has visited. We are all resilient, though some more than others – and some experiences are more catastrophic to the psyche than others. It has been said that nothing good comes out of the concentration camps.

The blow that disaster delivers is thus in part determined by the response of a person (and community): it is the interaction of the two that produces the final

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reaction. Witness New Orleans, Louisiana, where Hurricane Katrina was combined with the failure of governments to respond and the inhumane conditions and insufferable delays that followed. Witness the effect of sexual abuse in a family where instead of its members coming to protect the victim they blame her/him and/or allow the abuse to continue.

### **Is there a difference between the impact of human made and natural disasters?**

The answer is that there is no consensus of opinion – at least among the academic community. In part, that is because the methodology required, the numbers needed to make significant distinctions, and the great differences among the disasters themselves make scientific certainty not yet possible.

One seminal study (Norris *et al.* 2002) did conclude that there is evidence that more severe clinical impairments are associated with mass violence. The same report indicated that ‘technological disasters’ (e.g., bombings, plane and bus crashes, ships sinking, and company nuclear accidents) showed a trend towards having worse outcomes than natural disasters – with the results becoming more significant when the analysis is restricted to the USA and other developed countries.

Beyond the visible attack on the lives of people and the integrity of our buildings, terrorism is an effort to destroy the social, emotional, and economic fiber of our communities. The terrorist bombings of New York’s World Trade Center sought to destroy the fabric of American communities (Sederer *et al.* 2003).

Terror, itself, also can be understood as a *behavioral toxin* in that it can increase the risk of mental and addictive disorders, as noted above. Dread is its modus operandi and becomes most intense when attacks are uncontrollable, inequitable, and unmanageable.

Bioterrorism spawns its own chilling anxieties because the fear and panic caused is likely to be greater than the actual injury or death that will result, making it perhaps the ultimate psychological warfare. For every one physiological case of disease there can be 50- or 100-fold effect due to psychological contagion. More eerily, as so-well depicted in the film ‘Contagion’ – which thought it was not about bioterrorism it is about the mass destruction a virus can claim (Sederer, 2011a) – the victims may serve as contaminating agents. Everyone is a danger, every touch possibly fatal.

Kai Erikson’s ‘A New Species of Trouble’ (Erikson, 1994) I believe, remains the best depiction of the

differences between human made and natural disasters. He portrays our human experience of natural disasters that ‘happen’, whereas human made disasters may be preventable, which, in turn, evokes a sentiment that someone is responsible, culpable, and thus deserving of blame. Moreover, wrongs, however perpetrated, are never settled unless there is genuine apology and reparation (to the extent possible) for what has been lost.

Erikson stresses that the impact of trauma after a catastrophe is twofold: on individuals and on communities. Moreover, human made disasters tend to have no limit: they do not come and then go, like a hurricane or fire or flood. Their menace persists, since the perpetrators are all around us. Our world becomes one of unpredictability and peril. For communities, trust and cohesion are among the first of a human made disaster’s victims. Loss of confidence in authorities and institutions, threadbare often to begin with, follows unless there is clear leadership, reliable and timely information, trustworthy actions, and hope that is sustainable.

Communities after natural disasters repeatedly show what was termed ‘post-disaster euphoria’ (Wallace, 1957). Communities after human made disasters seem different. The euphoria related to the end of a natural calamity cannot set in and instead those affected tend to isolate themselves and form a troubled ‘kinship’ (Erikson, p. 237). When those responsible then deny, avoid, cower in the shadows, and hide behind legions of lawyers the worst of scenarios sets in. I am reminded of what a friend and colleague has repeatedly said about those medical malpractice cases that result in big damages against doctors and hospitals: ‘Successful suits are the product of two things: bad outcomes and bad feelings’ (Gutheil, 1990). When those in authority, like local, state and national governments, and social welfare institutions, procrastinate, seek to shift or deny responsibility, and lack a strong commitment to the future of those impacted then the fabric of society is further torn asunder.

### **The world trade center bombings of 9.11.2001**

I refer the reader to previous reports (Sederer *et al.* 2003, 2011b; Donahue *et al.* 2006; Sederer, 2011c) for more detailed information on the mental health consequences and the responses mobilized to assist New Yorkers in managing the emotional impact of 9.11.

We learned that one great lesson in the wake of disaster, human or natural, is that no one should go it alone. After 9.11 there was an impressive level of

governmental and community collaboration with a compelling sense of shared purpose. Communication between levels of government and communities was sustained in the immediate aftermath and then for years to follow. Communication by those impacted was essential: one (of many) public message we issued was to those most impacted – *Even Heroes Need to Talk*.

We saw how few mental health professionals, back then, had experience with delivering clinical care to traumatized people – a shortcoming substantially corrected since that time. We learned how media can be helpful or worsen the impact of a disaster by endlessly looping images of buildings with fireballs exploding from them. We learned that ‘psychological first aid’ is far more beneficial than a band-aid and can serve most people in need.

But overriding all these observations was how remarkably resilient individuals and communities can be – when provided support, leadership, and hope.

## Conclusions

While quantitative analyses between natural and human made disasters are not sufficient to declare their emotional impact very different qualitative studies and clinical experience speak volumes.

A core difference in outcome from either form of disaster appears to be the way we humans process how we treat one another. Nature may – and regularly does – ravage: but when the human, community, and governmental responses are trustworthy, supportive and foster hope then resilience is given a critical boost. When disaster and trauma are human made then the bedrock of trust in others and community is challenged and readily damaged.

Ours is a world where disaster will strike – be it natural or human made. It is *how we respond* to each and everyone of these catastrophic events, regardless of their cause, that will shape the course of recovery

for individuals, the capacity for communities to rebuild and for civilization to sustain belief in its inherent humanity.

## Declaration of Interest

None

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