Chapter Three:
The Trauma Response: External Factors

I. Sensory Inputs from Event

The nature of sensory information and its strength when people encounter a traumatic event may relate both to the developmental stage of the individuals as well as previous life experience. For instance, a small child may react more to a sense of smell than an adult because the olfactory senses develop first in the growth of brain structures. For most adults, the visual or auditory senses are the strongest initial perceptions, but visual perceptions are often critical to the eventual formation of a narrative.

> *Seeing apparently dominates all other senses following trauma because it is the sense by which most horrible episodes are recorded and reviewed in the mind. Traumatic "tapes" are almost always replayed by victims in silent video – not in audio or even in "smellovision." Even in cases where a traumatic episode begins in an entirely blinded way ... the event may eventually transform itself into "sight."*
> – Terr, *Too Scared to Cry.*

The immediate impact of sensory information is affected by the proximity of an individual to the trauma. It is also affected by prior experience. If a particular taste, smell, touch, sight or sound has previously been associated with threat and danger, the neuronal connection is already established and it is reactivated by the current experience. It is likely that repeated exposure to such threat will both increase sensitization to the sensory information as well as mute response.

Since the senses are the primary source of information, they become the foundation for memory of what happened.

II. Chronology of the Event and the Individual's Participation in the Chronology

Understanding the perception of time and its relation to trauma reactions is crucial since the sense of time helps the brain organize and transcribe feelings and thoughts.

> *Fitting a frightening event into "time," either personal time or world time, helps a person to cope with that event. Seeing, furthermore, how sequences of events work together and how long events will last also helps prevent any flooding of the psyche. Feeling rhythms, in addition, helps maintain a person's sense of balance. If all of these time awarenesses fail, however, to prevent a person from becoming traumatized, the person's time sense will undergo some damage. ... As a "stimulus barrier," in other words, time functions both as a protection against damage and as a marker of the damage.*
> – Terr, *Too Scared to Cry.*

The use of chronology to form a cognitive narrative for a story of events is helpful to victims. It is also helpful if they can comprehend the circumstances of the event and their involvement in it as they seek order and meaning in their world. It is useful for crisis responders to try to sort out the stages of the event and the roles that victims played in the event as they listen to victims' stories. Some of the issues associated with the chronological recounting of the story will involve the following stages of disaster as interpreted by individuals and the community:

A. Pre-disaster equilibrium

The community equilibrium before a disaster is defined by cultural transitions or tensions, previous disaster history, or political, economic, or historical tensions. That equilibrium and the effect of stressors on it is similar to that of an individual. The pre-disas-

ter equilibrium has been established as a balance be-tween existing stressors and the adaptive capacity of a community to such stressors.

B. Warning and threat

These stages for all intents and purposes often are merged in our understanding. Certainly they may be experienced differently by different people. How-ever, objectively, there is a distinct difference. The warning period is characterized by anxiety, wariness, and wonder. There may be excitement tempered by high vigilance. Post-disaster reactions to what hap-pened during this period may involve concerns of evacuation and shelter.

Most communities experience warnings of poten-tial disasters on a regular basis. Tornado warnings, flood warnings, and hurricane warnings are all a part of continuing community life in many parts of the country. If individuals or communities experience such warnings, they develop plans of action for evacuation, shelter, or care in the event of a disaster. They also experience a growing acceptance of the warnings and a gradual denial of the imminence of the disaster. That denial is exacerbated when the community or individual has more immediate needs – financial, emotional, or political.

Repeated warnings along with sporadic impacts of a certain kind of event often are the foundation of a "disaster subculture." Disaster subcultures emerge when there have been repetitive disaster impacts, pe-riodic warnings of disaster, and the community's knowledge and recognition of consequential damage from the disaster event.

Many individuals who live in disaster subcultures cope in the aftermath of the impact of a "predictable" disaster by relying upon their cognitive understanding that they had a choice in whether to live in the area or not. Recognition of pre-disaster choices made on an assessment of the risks can ameliorate stress and help to define future action.

In disaster subcultures, organizational elements of

a community may provide a degree of effective prediction, control, and response. However, individual alarm systems may have been weakened by denial, lack of interest, or competing anxieties or concerns. This was illustrated in the disaster in Aberfan, Wales, on October 21, 1966, when 140,000 cubic yards of colliery rubbish swept down Methyr Mountain and killed 116 children, 5 teachers, 23 other adults, injured 35 people, and destroyed two schools and many houses. The village had noted changes in the slag pile days before the disaster and there had been warnings over the course of 40 years prior to the catastrophe.

Since the village was dependent economically on the Aberfan mine, there was an element of willful blindness in refraining from taking extra safety measures. There appeared to be a greater anxiety about the thought of losing jobs than from some contingent fear of disaster.

– Howe, "The Aberfan Disaster," Medico-Legal Journal, 1968.

Examples of disaster subcultures include the following.

- Israel: This description depicts the reaction of a family returning to the United States for a visit after moving to Israel. Israel is often besieged by violent acts, but it is significant that in many cases, its citizens have chosen to reside there and have accommodated the threats of such violence through a disaster subculture of attitudes, behaviors, and norms.

The Rosenfelds have reached the Mall intact. They are eating popcorn as they amble towards the National Museum of History. One of the children goes over to a trash can and looks inside before depositing the empty

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popcorn cup. An identical carton litters the path. The child eyes it and leaves it there, earning a disdainful glare from a passerby who demonstratively picks it up and tosses it into the trash. The child immediately hangs her head and brings her right shoulder up in a decidedly foreign gesture, holding this pose for a count of three. This is the defensive posture of an unrepentant Israeli child of any ethnic background who is confronted by an accusing adult. In this case it is the body language of a kid who would no more handle a discarded popcorn cup – or pick up a wallet on the street or kick a Pepsi can whose chain of custody has not been established – than she would accept a ride from a passing stranger with a pocketful of candy. … Sure, it's a war mentality. Coping with unremitting violence carries a heavy cost. But, looking back, I feel that we adjusted to terror better than we knew. We opened our handbags and turned out our pockets before we entered public places and we got used to the sight of middle-aged druggists or lawyers in the uniforms of civil guard patrol. If, after an attack on a school bus, our kids' tour of nature preserves was cancelled, we – and they – took it in stride."

– Judith Rosenfeld, "Home from the Mideast: Terrorism's Long Grip," *The Washington Post*, January 20, 1991.

- California: People who live in earthquake or hurricane zones also seem to accommodate themselves to ever-present threat when it is expected and they have had choice in their situation.

They wrap themselves in foxhole bravado and think little about where the next one may hit. It's hard to get them to read preparedness manuals, buy disaster insurance or even carry a simple survival kit of drinking water and bandages. A kind of massive denial operates for Californians – one way of living sanely in a place

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> *whose beguiling contours are known to harbor a calamitously unruly force of nature.*
> – Gelman, "Coping with Quake Fear," *Newsweek*, October 30, 1989.

Such a disaster subculture may compound feelings of anger or guilt by survivors after a disaster hits even as it also makes them less responsive to warnings of threat. Planners developing action guides for responding to such threats should know some of the pitfalls in communicating with disaster subcultures.

What makes a warning credible? First, warning messages need to identify the source of the information contained in the warning and include a mixture of references such as public officials, scientists, or experts in the field of disaster. These messages will be perceived as more relevant than others because of the source of the message. Second, it is useful to warn people through multiple communication channels. Seeing a warning on television is confirmed by hearing a warning on the radio or reading about a warning in the newspaper – it involves different sensory perceptions at different times. Third, the content of the warning should include a description of what is going to happen, where the danger exists, and how severe the potential impact may be. This helps the mind put the threat into an organized cognition. Finally, warnings should provide descriptions of specific and simple protective measures that those in risk may use to protect themselves.

Threat occurs when warning involves knowledge of imminent danger and potential death. Threat may last for brief moments or hours of time. Many people experience the impact of the disaster itself in the pre-impact stage of threat. Their reactions are triggered by the threat even when the feared threat does not occur. Hence, it is important to understand those reactions, the impact of appraisal of threats and coping responses.

Today's understandings of the role of appraisal of threats and ultimate coping strategies still rests significantly on the theories developed by Lazarus and Folkman (New York: Springer Publishing) in 1984. In their book, *Stress, Appraisal and Coping,* they define coping as "...constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person..." This definition fits well within the Maslow Model of response to trauma in Chapter One. While these coping or stress responses are examined in more detail below, the significance of the appraisal itself on the ultimate coping responses has been studied relatively little.

Lazarus and Folkman write about cognitive appraisals that determine, first, if events are relevant, benefits to the individual, or stressors. Stressors are defined as threats, losses, or challenges. What studies have been done seem to suggest that people responding to loss rely upon emotional coping skills such as expression of feelings and social support; individuals responding to threats may rely upon wishful thinking or religious coping skills such as wanting to be over what happened, believing that things can return to normal, or relying upon God or faith for help; and those responding to challenging situations focus on problem-solving or optimism, such as action planning or looking for positive outcomes of the stress. (McCrae, R.R., "Situational determinants of coping responses: Loss, threat, and challenge," *Journal of Personality and Social Psychology*, 1984; Bjorck, J.P., & Cohen, L.H., "Coping with threats, losses and challenges," *Journal of Social and Clinical Psychology*, 1993; Bjorck, J.P., & Klewicki, L.L., "The Effects of Stressor Type on Projected Coping", *Journal of Traumatic Stress Studies*, July, 1997).

These distinctions in the impact of the appraisals of stress and the possible combination in disasters of cumulative appraisals of loss, threat and challenge may be interesting considerations in responding to survivors after an event. Responders may want to try

to understand the retrospective perceptions by survivors of their appraisal of the potential catastrophe prior to impact.

The study of these stress responses has increased markedly over the last decade. Several patterns have been identified.

There is the emotion-focused response strategy, the problem-focused response strategy, and an avoidance or disengagement strategy. The latter strategy may incorporate both of the other strategies.

The *emotion-focused* strategy may be the most efficient in what is perceived as uncontrollable circumstances. It is an attempt to reduce or eliminate the emotional distress caused by the situation. However, some studies suggest that while this may be the most effective way to handle immediate emergencies where individuals feel powerless, it may also put the survivors at higher risk for long-term trauma.

The *problem-focused* strategy aims at removing the source of the threat. It is usually employed by individuals who see some latitude that allows for considering options and taking action. Such individuals often are able to integrate what happened in the disaster more quickly into their life story since their actions helped them make a productive transition through the catastrophe to the present.

Disengagement may be a process that allows the survivors to take a break from the threat while beginning to plan for problem-focused responses in the future. At times, this has been called "blunting." It may be associated with the release of opiates in the brain and the mediating effect of serotonin in monitoring stress hormones. It is manifested at times in denial of the event or the event's impact. Blunting may be an alternative coping mechanism to an emotion-focused strategy, but may also put survivors at higher risk for long-term stress reactions.

A study of coping responses among Israeli University students was made during the 1991 Gulf War. The students were given a warning period of one-and-a-half minutes, during which they fled into a sealed

room and stayed there while Scud missiles, possibly carrying deadly chemical agents, attacked. Three sets of coping activities observed.

The *instrumental* response – involving communicating with others, safety checks with each other, and helping others – were most common. An *emotional* response – feeling tense, trembling, or asking for a hug – was the next most common. Almost as common was the *blunting* response, defined as making fun of the situation or thinking of pleasant things. The latter two responses did not correlate with the instrumental response, and it is suggested that the instrumental response was implemented first and that, after everything was done that could be done, the other response options kicked in. (Klingman, Avigdor, & Kuper-mintz, Hagai, "Response Style and Self-Control Under Scud Missile Attacks: The Case of the Sealed Room Situation During the 1991 Gulf War," *Journal of Traumatic Stress*, July, 1994)

These response studies to the threat of imminent danger are helpful because they also relate to coping behaviors in the aftermath as control of the situation becomes more possible.

Community crisis responders have an obligation to help communities be prepared and vigilant about potential disaster. This means developing the skills and tools with which to respond when a disaster occurs; educating community members on crisis and trauma reactions; as well as developing a disaster plan for providing appropriate emotional aftercare.

C. Impact
1. Timing

Many victims and survivors think in retrospect that they had no warning of the danger. While this may be true, often such people simply do not comprehend the danger because the shock is so overwhelming and the timing of the threat adds to its unreality. For instance, when awoken from sleep, people may not be ready to respond appropriately. The suddenness of sleep interruption may cause

them to feel even more isolated. The abrupt departure from routine may also cause a mental shock wave when a disaster occurs.

2. Time warp

The effect of trauma on one's sense of time is dramatic. While animals have an innate knowledge of time, it seems to relate to the sense of light and degree of temperature such that they develop routines based upon when they can hunt, migrate, sleep, hibernate, or mate. In the human species, the sense of time extends itself through a knowledge of past, present and future in a linear extension that not only includes comprehension of history but a projection of a future. This sense of time is refined developmentally as it becomes correlated with motion, rhythm, and, eventually, "clock time."

When a traumatic event occurs, the "clock time" seems to cease and traumatized individuals go through a time warp. At impact, victims often feel time stops. Mariann Hybels-Steer recalled a beating in a riot in the following way:

I don't know how long it lasted. It seemed fast. It seemed slow. It seemed like the blink of an eye. It seemed like an eternity. Time compressed. Time elongated.
– Hybels-Steer, M., *Aftermath – Survive and Overcome Trauma*, Simon & Schuster, 1995.

When the sense of time resumes, it usually is experienced as if life were progressing in slow motion or at an extremely fast pace. The less control a person has during the crisis, the more likely that the crisis will be perceived as lasting a long time. The more control someone has, the more likely that the crisis will be compacted into what is perceived as a brief moment or moments of reaction.

In order to unravel the happening of an event, survivors must try to fit the event into a time sequence. A chronology seems to help individuals protect themselves against the extent of damage caused by the trauma. If time seems to stop, the cessation seems to allow the mind to be inundated by perception and to stop the mind's ability to comprehend the event. The perceptions, however, may become vividly imprinted in traumatic memory.

The understanding of time includes senses of rhythm, duration, sequence, and perspective. These senses help to order life. When the these senses are suspended, people may also stop adhering to everyday routines (usually governed by time) and rules or laws. If everything is perceived as chaos or as operating in a vacuum, why continue to obey order? Survivors are in an unreal but animated state. Time is suspended, as are normality, rules, and laws. One is no longer accountable to the previous social structure because that structure no longer exists.

There are practical aspects to this and there are moral aspects:

- Practical aspects: not going to work on time, social routines being disrupted, experiencing a coma-like state which is accompanied by temporary amnesic blanks in memory and understanding; losing sense of hours, days, and weeks.
- Moral aspects: the suspension of rules, laws, and order may contribute to the rise in violence during or after the disaster. Voyeurs or looters may see nothing wrong in trespassing and stealing if everything is destroyed already. Sexual assault and rape may be accepted as normal. Murder may not be illegal but mandatory under certain circumstances.

> *For the common soldier ... war has the feel – the spiritual texture – of a great ghostly fog, thick and permanent. There is no clarity. Everything swirls. The old rules are no longer binding, the old truths no longer true. Right spills over into wrong. Order blends into chaos, love into hate, ugliness into beauty, law into anarchy, civility into savagery. The vapors suck you in. You can't tell where you are, or why you're there, and the only certainty is overwhelming ambiguity. In war you lose your sense of the definite, hence your sense of truth itself, and therefore it's safe to say that in a true war story nothing is ever absolutely true.*
> – Tim O'Brien, combat veteran, "The Things They Carried," 1990 in *Trauma and Recovery*, Herman, J., 1992.

3. Duration of the event

   Even as the perception of time is distorted, the actual time elapsed during the impact of the event on the sensory perceptions, emotional and cognitive brain structures, and community will affect the severity of the trauma reaction. The longer that any of the following periods last, the greater the intensity of the experience of crisis.

   • Duration of immediate life-threatening event.

     The quicker one is removed from the threat and emotions are calmed, the less likely that the event will remain worrisome. There may remain an emotional memory of the event and the fear or anger that was caused, but that trace may not have solidified into chemical or hormonal changes in the brain messaging system.

   • Duration of ongoing survival concerns.

     Even if the immediate threat has been removed, if survivors are left in a state where they continue to feel that their or their loved ones' lives are threatened by ongoing danger, they may continue to associate and reassociate the event with danger.

- Duration of sensorial involvement.

    Threat may be reduced and survival may be assured, but the longer survivors are in contact with sensory information that reminds them of the event, the more likely they will integrate those reminders with their emotional map of the trauma.

- Duration of morbid preoccupation by a community.

    The impact of a community's response to the event can exacerbate anxieties and trauma reactions. People look to their society and their culture to confirm or deny what has occurred. When a community is traumatized, the communal entity tends to process the crisis in a similar way to each individual but the crisis reaction is multiplied exponentially by each member's experience. If the community dwells on the trauma as an aberration from communal life and does not seek to integrate it into its history, or if a community reprocesses the traumatic reaction over and over without developing a strategy for the future, individuals in the community may have their own trauma elongated by a lack of support or understanding of the need to continue to function and grow. On the other hand, if the community acknowledges the event and the trauma, and assists individuals in connecting with each other and finding meaning to the event, people are often able to successfully survive and thrive.

4. Low point *versus* no low point issues

    There is a point in time in most disasters when one can assess the total casualties or damage. That may be referred to as the low point of the disaster. However, for certain types of disasters, such as health epidemics, environmental spills, chemical or nuclear accidents, it may be impossible to assess the total damage during a lifetime. Such disasters are referred to as "no low point disasters." They have a beginning – the sudden

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knowledge of threat or danger, and they have a middle, the ongoing upheaval caused by the chronic threat. They don't have a foreseeable end.

Examples of no low-point disasters include the plague in Europe when from 1347-1400 over one-third of Europe's population died; the current HIV/AIDS epidemic; the Three Mile Island nuclear accident; and the Exxon-Valdez oil spill.

The nuclear explosion at Chernobyl in Russia is a similar disaster. Its long-term damage and effects are illustrated in the following:

> *"…how harmful will chronic radiation prove to be? There are many indications that steady low-level doses of increased radiation have a cumulative effect on cells and chromosomes. Only time – and generations – will reveal what damage Chernobyl really caused…. Life itself will be the evidence," said Dr. Alexander Urinan, a surgeon I visited at Kiev's Children Hospital Number 14. "Seven years after the accident, we're now starting to observe the effects we feared." Urinan confirmed that thyroid cancers in Ukraine and Belarus, especially among the children who received a dose of radioactive iodine from the initial blast, have far surpassed the numbers predicted. It is also clear that the immune systems of many children of Chernobyl, even those born far from the reactor, have become so depressed that old diseases like diphtheria are now reappearing. "We're seeing newborn children with liver and stomach cancers," Urinan said. The hospital has also reported record numbers of babies born with cleft palates, deformed limbs, and missing rectums. "We can't tell what to expect when affected children who are now adolescents begin to give birth … "*
> *~~[Need end and citation – Smithsonian]*

Kai Erikson refers to the special trauma of such catastrophes as a trauma that is inculcated with "dread." (Erikson, K., "Toxic Reckoning:

Business Faces a New Kind of Fear," *Harvard Business Review*, January-February, 1990)

With low point disasters, there is a point when people know that things can get better. They can describe the worst. They can complete their story and develop their truth. In no-low point disasters, anger vacillates to outrage, back to anger, to repressed anger, and simulated apathy. It may never subside. Fear is a constant – dread haunts the survivor's life. The question is how to learn to cope with constant fear instead of how to reestablish a sense of safety.

D. Inventory

The inventory stage of a disaster takes place immediately after the initial impact. Survivors who have been the victim of sudden, immediate trauma often experience a period of time in which there is silence. The silence is usually deceptive. Observers at a disaster scene may witness the noise of ambulances or natural forces, but the survivors and responders to the disaster may hear nothing.

"There were little bodies in piles dotted around the room and items of children's clothing like shoes around the floor," said the first ambulance man to reach *Dunblane Primary School. "The strange thing was the virtual silence that we encountered as we walked in. Children were just sitting there in total shock with bullet wounds to their limbs and bodies, unable to cry out or speak."*

~~[Need citation]Dunblane (population 9,000), Scotland, March 13, 1996 - Massacre in which 16 students and their teacher were killed.

This state of silence compounds the sense of isolation and abandonment that many victims experience in the midst of tragedy. Their disorientation is increased if the result of the catastrophe is darkness or

it takes place in darkness. Individuals need to have affirmation that the tragedy has happened and that they are still connected to the world.

The inventory stage is also the time when survivors make their first assessment of the amount of harm that has occurred. The usual progression of assessment is to find out whether they are injured, whether loved ones are injured or dead, and the extent of property damage or loss. First responders and survivors are often in the position of making immediate triage decisions at the scene. Afterwards, they may discover "mistakes" made about who, when and how to rescue. These discoveries may be the cause of additional guilt, self-blame, depression, or anguish. The inventory may extend into stages of rescue and remedy. This is particularly true of no low-point disasters.

Richard Williams is the buildings manager for the Federal offices here [Oklahoma City], and he was in the Federal Building when the bomb went off. A rescue worker found him, took his pulse and found none, and left him for dead. But later, he was told, another rescuer heard him moaning and carried him out. His right hand was smashed and his right ear was left hanging by cartilage, among other injuries.

– Bragg, Richard, "In Oklahoma City, Recovery a House at a Time," *The New York Times,* Sunday, June 8, 1997

E. Rescue

The period of rescue should be thought of initially in terms of meeting victims' emergency survival needs and then securing their mental and emotional senses of safety. It may last for a few minutes or days while rescuers work to assist victims find physical, financial, and emotional safety.

1. Emergency physical response

First responders must focus on emergency

physical concerns. Physical safety and survival must be assured as much as possible as soon as possible. However, other life, or connections to life, must be sustained as well. Safety and survival of farm animals, pets, or plants may be of great concern. Many survivors seek to save historical or sentimental property – relevant to both individuals and community.

> *Ron and Debbie Umbdenstock believe that they have sacrificed their 100-year-old farmhouse and the last of their chickens for the greater good of their village...*
>
> *The couple's property lies in the path of a slow-moving, man-made flood that was unleashed...*
>
> *If the strategy works, the flood gushing south from a levee break upriver...would be diverted through the broken section and directed back into the Mississippi...*
>
> *The diversion takes pressure off a main levee along Prairie du Rochur creek and, everyone hopes, it protects the 250-year-old town of quaint inns and French restaurants from the worst of the rushing waters.*
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> – Pressley, Sue Ann, "Town in Harm's Way Tries to Detour a Juggernaut," *The Washington Post*, Wednesday, August 4, 1993. Written during the "Great Flood of 1993.

2. Emergency emotional and psychological response

   At the time of immediate danger and immediately afterwards, emergency emotional or psychological aid is also needed. Good crisis intervention is predicated on immediacy. Outreach addressing the emotional trauma of disasters should be performed as soon as possible. Sometimes this means that crisis responders are also exposed to danger, and crisis response teams must plan for and confront issues of safety and security for team members.

   Ongoing interventions may be necessary if the duration of the disaster is for an extended period.

The length of actual impact affects the timeline of access and the method of access. The timeline of access for emotional "rescuers"/responders may be depicted in the following two ways communities tend to respond:

a. ***Sudden, Immediate, Short-Term, Low-Point Disasters***

• Impact: up to 48 hours later
  – Focus on survival issues
  – Reactions are blunted through numbing
  – Elation at surviving is complicated by grief, denial of the disaster, and sudden awareness of vulnerability.

  At this stage in the timeline of access, ideally, intervention should occur as soon as possible. Even if the trauma continues for days or weeks, initial intervention should be immediate. Early visibility of responders and interventions focused on practical needs facilitate later interventions addressing the psychological aftermath of the trauma event.

• Immediate aftermath: 7-14 days
  – Focus is on psychological numbing with emotional flooding.
  – The disaster becomes integrated in present life as routine.
  – Denial and defenses against the impact of the disaster are erected.
  – Depression and fatigue set in.

  Access at this point may be denied if no contact was made in the impact stage of the crisis. Communities sense their ability to react to the crisis and contain it. They feel like they have done "a good job." In many cases, they have, yet the job often has been done at the expense of their own emotional and psychological well-being. Crisis responders are best used to support community decision-making and to provide assistance in generating community involvement and contact for individuals who feel isolated. They are also useful in helping com-

munities and individuals begin to plan what will happen next in their response to the aftermath of trauma.

- Circle of control/exhaustion: 14 days to 6 months
  – Focus is on returning to routine and reestablishing community bonds.
  – Stress levels may be high due to fatigue and increasing secondary traumas.
  – Community members may reject any assistance because it serves to remind them of the original trauma.

  After trauma has enveloped a community for two weeks or more, the community and many individuals become exhausted and simply cannot deal with any continuing stimuli. Ideally, ongoing intervention begins and continues with group and individual crisis counseling. It is always useful to have responders available during the first six months after an event to help survivors cope with exhaustion and the sudden influx of emotion.

- Access through education: 6 months onward
  – Focus is on education and learning about what happened and how the event will affect the long-term health and relationships of the community.
  – Communities begin to prepare for the future, including learning how to prevent or mitigate the impact of future tragedies.

  After the exhaustive activities of responding to the catastrophe, individuals and communities often begin to reassess their need for intervention. If they have rejected help in the past, it may be more acceptable to receive information and education as a part of a training program for future events. Such programs provide a safe place for individuals to learn about their reactions as well as allowing communities and individuals prepare and train for other uncommon events. This training and preparation can

be a primary defense against future trauma when horrifying events may occur.

b. ***Sudden Immediate Long Term Low Point Disasters***

- Emergency Phase: first 3 to 4 weeks after event
    – Vulnerable and open about anxieties
    – High level of social contact
    – Willing to talk with anyone and tell individual stories
- Resistance Phase: 4 to 6 weeks
    – Frustration with reciprocal caregiving among support systems
    – Individuals want to talk about event but don't want to hear about it
    – Modification of routines and creation of new behaviors
    – Exhaustion with new demands
    – Return to inventory and self-assessment
- Conspiracy of Silence Phase: 6 to 8 weeks
    – Inhibitions on confronting consequences of the event
    – Focus on normality
    – Social conflict rises
    – Victims' physical health suffers
    – Stigmatization of long term psychological needs

    The problems of social conflict can be particularly intense and increase community vulnerability to rises in assaults, domestic violence, child abuse, and even workplace violence.

    A counselor's comment after Hurricane Hugo hit Florida in 1989 underscores this problem.

> *As long as people were dealing with survival needs – food, clothes, shelter – they didn't have a chance to focus on their emotions…. Now the emotions are surfacing. The level of frustration is very high. People are just worn out.*

> – Joyner as quoted by Leland, *The Virginian-Pilot*, March 21, 1990.

- Adaptation Phase: 8 to 12 weeks
  - Coping strategies employed effectively
  - Consolidation of resources
  - Focus on meeting future challenges
  - Consensus building for community alliances
- Repetition Phase: 12 to 24 weeks
  - In long-term disasters, communities may repeat the process of moving through their anxieties at each new major community milestone of reconstruction. For instance, after a major flooding, the process may proceed from the point of the flood's impact until there is stabilization in the initial relocation process. The process may begin again when community members return to their homes after the waters recede, and restart when they begin to rebuild.
  - Education and interventions should be available during each repetition.

F. Remedy/mitigation

The remedy or mitigation phase following a disaster is the period when a community or an individual attempts to regain control of life and face the short- and long-range consequences of the tragedy. It overlaps with rescue efforts when rescue has been extended over a period of time. The dangers in this phase come from those who cause "second injuries."

1. Disaster euphoria – the honeymoon period

Initially, there may be a euphoric reaction among the survivors, accompanied by many congratulations on heroic efforts in the face of the catastrophe. The community seems to pull together and the very survival of many may be viewed as an opportunity for change and elation. On June 14, 1990, the Wegee Creek/Pipe Creek flood in

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Southeastern Ohio left 24 people dead and 60 homes demolished. Two months later, one of the survivors remarked:

> *We lost everything we owned, but we have our lives, and it's time for a new beginning.*
> – Michelmore, P., "The Night the Creeks Ran Wild," *Reader's Digest*, January, 1991.

2. Disillusionment

Despite initial feelings of the joy of survival, communities and individuals are often plunged into disillusionment days or months after the event. This disillusionment may parallel individual feelings of survivor guilt or lasting stress reactions. However, some of the sources of disillusionment center around efforts to rebuild a life, to seek justice, or simply to function as a community whose primary bonds, now, are painful. Some of the sources of disillusionment arise from the construction of memorials, civil litigation, the response of the criminal justice system, media response, public policy responses, or social inequalities.

• Memorials as a divisive force

> *Almost a year after a tornado blew in the wall of an elementary school here, killing nine youngsters and injuring 17 as they ate in the cafeteria, parents are divided by an emotional dispute over how best to remember those who died.... The bereaved parents who helped design the stone – a slab of black granite etched with the victims' names and an illustration of a boy and girl ascending a light-filled staircase – say it is a joyful monument to their children. But many parents whose children survived say the memorial resembles a tomb*

> *stone and would be a grim daily reminder of a day they desperately want their children to forget.*
> – Foderaro, L.W., "Where Schoolchildren Died, Dissension Over a Memorial," *The New York Times*, November 2, 1990.

- Civil litigation

> *Four lawyers and a law-firm runner face misdemeanor barratry* [unethical "ambulance-chasing"] *charges for allegedly soliciting clients after last September's school bus accident in Alton, Texas. Twenty-one children died and 60 were injured when the bus plunged into a water-filled gravel pit.*
> – Marcotte, P., "Barratry Indictments," *American Bar Association Magazine*, 1989.

- Criminal justice system
  Despite federal legislation providing victims with the right to be present at a trial and to testify through a victim impact statement at the sentencing stage, Judge Richard Matsch, who presided over the *McVeigh* Oklahoma City bombing case, ruled in 1996 that victims who were present during the trial would not be allowed to testify at any sentencing. Succeeding legislation has sought to clarify the victims' rights, but because the judge entertained doubts about the constitutionality of the new law, the 40 victims selected as potential "impact witnesses" were advised that if they attend the trial, they might be later barred from testifying. Though the court eventually allowed victims who observe the trial to testify at sentencing, the ruling only affected a handful of the impact witnesses – all the others, fearing a contrary ruling, had stayed away.

After Betsy Parks was murdered on the North Carolina State University campus in Raleigh, her parents, Ross and Betty Parks, waited seven years for a murder trial. Betty Parks explained:

> *It was … six and one half years after Betsy died when Gary Coleman was extradited from a prison in Georgia to North Carolina and charged with her murder. For the next fourteen months he was able to delay going to trial with motion after motion – thirty-one of them at one point.*
>
> *These continued delays kept us off balance all of one year. I felt helpless, frustrated, and angry, wanting the trial behind us, but also wanting the preliminary steps done correctly. If Coleman had indeed murdered Betsy, I didn't want him escaping conviction through a technicality.*
>
> – Betty Parks, North Carolina (personal communication with the author)

- Media response

> *A controversial front-page photograph of a dead pressman sprawled on a conveyer belt after he was shot by a deranged co-worker has prompted a law suit against* The Courier Journal *of Louisville.*
>
> *The suit by the victim's family charged the newspaper with "extreme and outrageous conduct."*
>
> – "Newspaper sued for use of picture," *The Paducah Sun*, September 26, 1989.

- Public policy responses

> *But in the second year after the bombing, the families once united by tragedy are divided by rancor.*

What started at an organizational meeting at a restaurant on Route 17 near Paramus in February, 1989, split in two. The call for justice was touched by discord, as the former leader of the Victims of Flight 103 group became president of the breakaway Families of Pan Am 103/Lockerbie and is now voicing opposition to the bill [Proposed Aviation Security Improvement Act of 1990], which the original family group still supports.
    – "Lockerbie Aftermath: Split Among Families," *The New York Times*, August 12, 1990.

- Social inequalities

[In the aftermath of Hurricane Hugo, Mr. Parrish, a community organizer said] the donated food and clothing, which keep people going until the Federal grants arrive, add a disquieting effect in isolated and insular rural areas, allowing many poor people to see just how poor they are. It has been sort of like the forbidden fruit, they have eaten from the tree of knowledge.
    – "Pain Lingers for Poorer Victims of Hurricane Hugo, *The New York Times*, February 3, 1990.

- The process of rebuilding

Fire-damaged people, struggling to take care of themselves after a great loss, have in the process done even greater damage to themselves as well as to others. "I'm entitled to get everything that's coming to me," the survivors of the fire typically said, and the rest of this thought, although usually left unspoken, was implicit in their deeds. "Neighbors, planners, government officials: don't get in my way while I'm getting what's mine."
    Much of what has happened since 1991 bears witness

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> *to the triumph of selfishness: immense and ugly structures designed without a care for context or consanguinity, neighbors who coexist amid smoldering resentments. ...*
>
> – Kirp, D.L., "There goes the neighborhood: after the Berkeley fire, an architectural disaster," *Harper's Magazine*, March, 1997.

3. "Remedy concerns" for the crisis responder
   - Practical concerns include establishing rumor-control mechanisms, facilitating reliable, effective communication about disaster issues, mitigating media intrusions, assisting with funeral and memorial concerns, and providing training and education on crisis, trauma and appropriate interventions.
   - Group crisis intervention sessions can be a part of the remedial plan. Repetitive group crisis intervention and retrospective or reflective group crisis intervention provide useful tools for this remedial process.
   - Community organization activities can be a source of social reconstruction that is critical for many survivors. The crisis responder should be prepared to provide guidance to help survivors initiate such activities in a constructive way.
   - Planning and participating in long term trauma interventions. A devastating community disaster affects community members for years. Sometimes additional outside interventions are useful for months as well as on the first "anniversary" of the tragedy or when criminal justice processes continue for years.

G. Adjustment

The final phase in response to disaster is the period of adjustment. This phase can extend over generations.

1. Stage One

    The *first* stage of adjustment involves living through the first year after the event. During that time, survivors must get used to doing things they did before the disaster. Differences in physical environment and emotional or psychological responses will color everything they do.

2. Stage Two

    The *second* stage of adjustment involves the time period from the end of the first year through the next ten or fifteen years – until the beginning of the next generation of community memories. For many survivors, this will be a period of "reliving" and retelling the event over and over again. The transition from this period to the next will be marked when survivors realize that young people do not remember the disaster. It represents the aging of the first generation of victims and survivors.

3. Stage Three

    The *third* stage of adjustment is the time during which the catastrophe is remembered directly by fewer and fewer living survivors but the impact is evident on the next generation: there is often a yearning among both the survivors and their descendents to preserve the memories of the trauma.

4. Stage Four

    The *fourth* stage is a time when the initial catastrophe has been converted into history and legend by succeeding generations. Sometimes the stories of the disaster are changed, transformed or utilized to emphasize certain values and behaviors. At the third and fourth stages of adjustment, there may be cross-generational transfer of the traumatic experience. These stages begin with the children of the original victims and survivors and thus overlap with Stage Two but it often becomes apparent as these children reach adulthood and continue the story of the disaster through their own children.

> *The individual survivor's war history is crucial to the understanding of survivors' offspring. They seem to have consciously and unconsciously absorbed their parents' Holocaust experiences into their lives almost in toto. Holocaust parents, in the attempt to give their best, taught their children how to survive and, in the process, transmitted to them the life conditions under which they had survived the war.*
>
> *Many children of survivors, like their parents, manifest Holocaust derived behaviors, particularly on the anniversaries of their parents' traumata. Moreover, some have internalized, as parts of their identity, the images of those who perished and hence, simultaneously live in different places (Europe and America) and different time periods (1940 and the present).*
>
> – Danieli, Y., "The Treatment and Prevention of Long-term Effects and Intergenerational Transmission of Victimization: A Lesson from Holocaust Survivors and Their Children," *Trauma and Its Wake*, Figley, C., ed., Brunner/Mazel, NY, 1985.

> *…There's unfinished business in the second generation, for only when you acknowledge the past can you be free. Our task is to deal with it and not forget it. Even though it is painful, we can't – we mustn't – avoid this work.*
>
> – Werner Bohleber, in "The Pathways of Pain," Fellman, B., *Yale Alumni Magazine*, March 1995.

III. Spatial Dimensions of the Crisis Experience

A. Convergence

The concept of convergence refers to the phenomenon of the gathering of people, information, and attention around a disaster site. People who converge usually represent groups such as "returnees," those who were at the disaster but left and come back, "absentees," those who weren't there at the

time but, in their minds, could've or should've been there, people in the general area of the disaster who are anxious and frightened by the event, the curious, exploiters, voyeurs, and the helpers.

Convergence can be *positive* or *negative*.

1. Positive convergence

    Positive convergence occurs when people go to the scene with appropriate training and at the invitation of the community that has suffered the event. Some examples are firefighters, law enforcement officers, paramedics, disaster relief groups, and crisis responders. However, it should be noted that even when individuals or groups are well-trained, they may not be wanted or needed and can thus have a negative effect at the scene.

In the response to the PSA crash in San Diego in 1978, 60 ambulances arrived when only 6 were needed.
– "Psychological Counseling is Necessary to Help Employees Cope with Plane Crashes," O'Connell, R., *Crime Control Digest*, February 15, 1988.

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2. Negative convergence

    Negative convergence occurs when people assemble for their own purposes. They may be looters, voyeurs, ambulance-chasing attorneys, mental health professionals, media and others.

Even before the debris and human remains had been cleared from the Detroit site of the USA's second-worst air crash, lawyers and insurance adjusters were descending on the victims' grieving families.

Like circling vultures, lawyers swooped in to sign up clients. And the airline's insurers scrambled to head them off by offering settlements to the families of the 156 victims of Northwest Airlines Flight #255. Their ordeal is just beginning. They are the targets of a big-bucks tug of war between personal injury lawyers and

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> *the airline and its insurer. The bidding began within days of the crash.*
> – "When Tragedy Hits, Families Need Time," *USA Today*, August 26, 1987.

> *A man who identified himself as a Roman Catholic priest and counseled relatives of victims of the Northwest Airlines crash here last month may actually have been an imposter soliciting cases for a lawyer, officials say.*
> – "Priest Suspected as Imposter," *New York Times*, September 14, 1987.

B. Media convergence

Media convergence can have both positive and negative effects. Sensationalized coverage of traumatized or grieving survivors may add to their pain. A photo carried in both *The Washington Post*, December 23, 1988, and *News-week* accompanied the coverage of the Pan Am Flight 103 tragedy and carried the caption, *"The body of a passenger still strapped to a seat is lowered by a rescue worker from a rooftop in Lockerbie, Scotland."* The photo brought a wave of outrage from readers.

On the other hand, the media can be the most effective purveyor of useful information to communities on the impact of trauma. *The Gainesville Sun* included an eight-page supplement on the emotional aftermath of the serial murders of five college students at the University of Florida and the Santa Fe Community College in August, 1990.

C. Proximity

The closer one is to the center of the disaster, the more likely one is to be at risk for post-disaster crisis and long-term stress reactions. Individuals are increasingly subject to the intensity of sensorial information when they are directly involved in the disaster area. The center of the disaster is defined as the point of impact. Eye witnesses and survivors of loved ones who died in the disaster are at high risk, in addition to victims who have suffered major injury or certain

types of property damage. The concentric circles shown in the figure on the next page describe these risk factors.

> *I couldn't sleep. I couldn't eat. I lost twenty pounds in four weeks after seeing the wreck. It was so close to my house and the shock of being alive and whole seemed amazing. But at the same time I was desolate. My heart hurt for the people who died and those who were injured.*
> – Survivor of Amtrak-Conrail train crash, NOVA Crisis Response Reports, 1987

D. Remoteness

There is a human compulsion to want to be at the site of a disaster if one's loved ones or property are directly affected. The more remote the disaster from immediate access by rescuers, survivors of loved ones who are injured or dead, owners of homes destroyed, or other concerned community members, the more intense stress is experienced. If it is impossible to get to the site physically, the measure of remoteness may be affected by the availability of telephone or electronic access.

> *For two weeks following the storm, no outside organization – not the American Red Cross, the Salvation Army or even the media – realized that this isolated community had been virtually destroyed. "Most of the residents left Copahee just before the hurricane hit, and when they returned, they were too stunned to do anything. The town looked like a war zone. Houses were reduced to splinters. Trailers were destroyed. People were sifting through the rubble, trying to find any personal belonging – a family picture, a child's toy. It was a shocking, horrible sight."*
> – Claverie, L., "Hurricane!" *Family Circle*, September 25, 1990.

The Emotional Aftershocks of Disaster

The victims:
the dead, the injured,
and their loved ones

**Eyewitnesses
and rescuers**

**Converging
rescuers**

**Remote
rescuers**

**Immediate
neighbors**

**Community-at-large,
former disaster
victims**
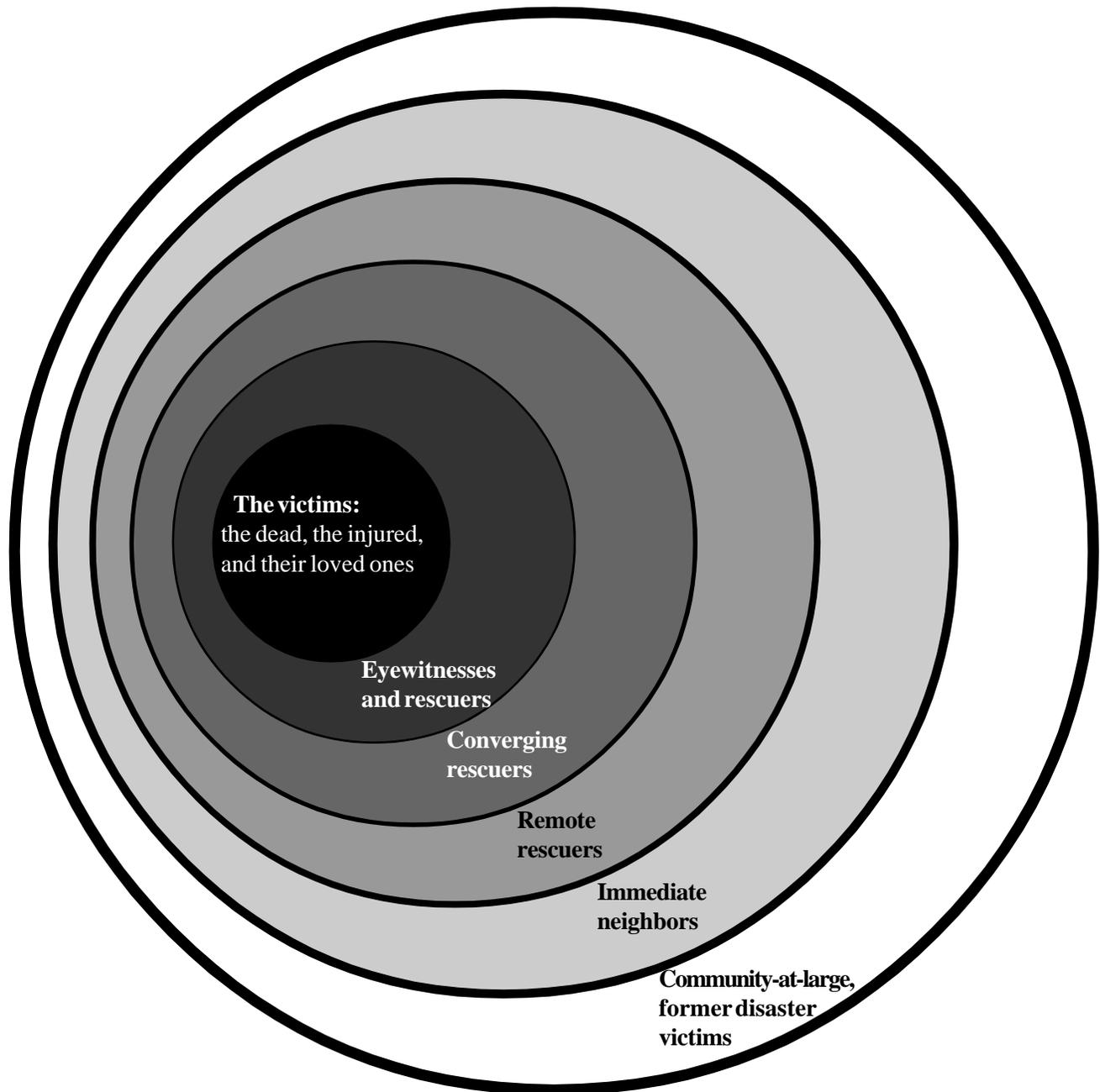
E. Geographic spread

The greater the area affected by the disaster, the more chance that it will become a community-wide tragedy. People identify with certain geographical areas as well as geographical symbols. If those are affected, they extend the range of community members who feel touched by the catastrophe.

Other storms piled up more snow, recorded higher winds, killed more people. But for combined extent and intensity, the Blizzard of '93, as it was called in most of the U.S., was in a class by itself. Tornadoes in Florida, record cold in Alabama (2 degrees F. in Birmingham), mountainous snows from North Carolina (50 in. at Mount Mitchell) to New York (43 in. at Syracuse), hurricane-force winds (110 m.p.h. in Franklin County, Florida) – all were part of the same monster storm system that from March 12 to March 15 spread death and destruction from Cuba, where three died, to the Canadian Maritimes (four killed). Deaths totaled 238, and that did not include 48 sailors missing from vessels that sank off Nova Scotia and in the Gulf of Mexico. Worst tolls: 50 in Pennsylvania, and 44 in Florida, where winds made deadly projectiles out of rubble still lying on the ground from Hurricane Andrew in August. Helicopters and search parties on snowshoes were still looking for hikers and campers stranded in Southern U.S. Mountains; nine were airlifted out of Tennessee's Great Smoky Mountains National Park as late as Thursday. Economic damages seemed sure to climb well past an early guess of $800 million; in New York State, Governor Mario Cuomo estimated snow-removal costs alone at $120 million. If it was not "the storm of the century," survivors hope they never see the real one.

– The Washington Post ~~ [date]

IV. Role Dimensions

A. How does one identify or define a victim?
1. A role classification system

    One suggestion comes from *Disasters and Disaster Stress,* AMS Press, New York, 1989, in a classification scheme developed by A.J.W. Taylor and A.G. Frazier. It follows:

    a. *Primary Victims* – those who are directly exposed to a large scale catastrophe with the potential for destroying life, disrupting well established relationships and patterns of behavior, and for destroying property;

    b. *Secondary Victims* – those with close family and personal ties to the primary victims who themselves have severe grief and, perhaps, guilt reactions;

    c. *Tertiary Victims* – those whose occupations and duties require them to respond to any major alert in the community and to assist with any subsequent rehabilitation and restoration work;

    d. *Quarternary Victims* – those concerned and caring members of communities beyond the impact area who express their intentions, often with inappropriate goods and services. They might also come from organizations that feel some responsibility for having perhaps contributed to the cause of a particular disaster;

    e. *Quinternary Victims* – those individuals and groups who lose control when in proximity to disasters and either reveal their underlying psychopathology by their ghoulish preoccupation with cadavers or by their unruly behavior in mobs;

    f. *Sesternary Victims* – miscellaneous people who

      (i) think that, but for chance events, they would have been primary or secondary victims;

(ii) refrained from expressing a premonition to somebody who subsequently became a primary victim;

(iii) actively induced people to enter situations in which they became primary victims;

(iv) were the close relatives and friends of the tertiary victims who waited at home for news that their people were safe and then shared the emotional burden of the post-disaster working situation;

(v) as clinicians and researchers, at a stage often far removed from the disaster-face, are liable to have their professional competence affected because of

1. the acute and prolonged demands presented by their own post-disaster work,
2. the risk of emotional identification with the suffering of some workers,
3. any compelling desire to appear to be doing something immediately "useful" as distinct from the indirect or abstract,
4. any thirst from seeking sustained dramatic experience;

(vi) suffer guilt from benefiting from a disaster.

2. An individual's subjective perception of role

While the definitions above are based on observation, an individual's subjective experience may record the tragedy from several different perspectives. That subjective experience may involve complex roles:

- The victim who is injured or who has lost property in the event.
- The sensorial witness, either as a bystander or a responder.
- The survivor of a loved one involved in the catastrophe – a loved one who has died, been injured, or had property destroyed.
- The rescuer who has helped others, sometimes as an on-scene responder or as a remote responder who has a job supporting on-scene responders.

The Trauma Response: External Factors

- A community member who has witnessed or survived a disaster which has threatened the community's existence.
3. Often rescuers have cognitively dissonant reactions to their roles.
   - Some were perceived by others as heroes when they were not.

Joshua Conyers, age 14, died in the Carrolltown bus crash. He was attributed with saving his younger brother Aaron, but other evidence suggests that those initial stories were untrue.
– Crisis Response Report, NOVA, June, 1988.

- Some are perceived as heroes, yet they, themselves feel they failed.

Robert Booker [later celebrated as a hero] *will never forget his descent into the smoky darkness of a crumpled Amtrak car where passengers lay injured and dying. He was the first one into the car – the first to try to douse flames and save a man whose legs and head he could partially see sticking through the choking smoke and wreckage. "There was a guy stuck. He was yelling, 'Help me,' … The man's legs and hair were in flames and he was coughing with smoke. I took off my shirt and put it over his face. He died right there. … I won't forget the fact that I couldn't get that one man out. His face will stay with me forever."*
– *The Baltimore Sun*, January 6, 1987.

- Other people, while successful in helping during the event, feel uncomfortable with being given "hero" status.

> *Ever since Capt. Al Haynes returned to flying DC-10s in October, strangers have been stopping him in airports to shake his hand. Passengers on his flights send notes to the cockpit saying they're happy he's the pilot. Haynes ... has never been comfortable in the hero role ... but he'll be in Sioux City for the reunion."*
> – Sharon, L. "Healing Process Continues at Crash Reunion," *USA Today*, July, 1990.

B. List of population attributes

In Appendix A to this chapter is a list of some attributes of certain populations in disaster. It is not meant to be exhaustive but simply to serve as a stimulus to crisis responders to think of special concerns of population groups.

V. Assessment of Social Disruption

A final consideration in examining the dimensions of a trauma event is the assessment of social disruption. The experience of trauma is rooted in the sensorial impacts, the perception of threat, the emotional and physical reactions to that threat, and the attempt to cognitively understand what is happening. It is also rooted in the trauma victim's formation of the disaster's chronology and the need to put the traumatic events into an organized narrative. But merely understanding the story of what happened leaves it unresolved. A final step to integrating the plot of this particular story with the narrative of one's life is to find a way to interpret its meaning and value in one's belief system. That system is tied to cultural and social values and to community relationships. The extent of social disruption may help indicate how difficult or dissonant the integration process will be. The following are some considerations for understanding the social disruption after a community wide catastrophe.

A. Practical indicators
1. Disruption of transportation and communication systems that interrupt the ability to reestablish social contacts.

2. Disruption of the community economic system. This includes lost and interrupted jobs; destruction of the economic base of a community such as agriculture, tourism, or a major corporate structure; or lost tax revenues.
3. Alterations in spatial arrangements of neighborhoods and businesses that disrupt behavioral routines and mobility.

B. Emotional indicators
1. Reduction in community wide participation at social and religious routines and events.
2. The loss through death or injury of key community or family leaders in addition to other community members.
3. The exacerbation of cultural tensions.
4. The incapacitation of the caregiving community.
5. The destruction of community symbols or rituals.
6. The lack of community history and traditions on which to rely in the face of disaster.
7. Intermittent and inconsistent assistance provided by external formal aid structures.
8. Preexisting cultural and social values that demean or isolate victims or survivors who openly manifest trauma symptoms or acknowledge the disaster as traumatizing.

VI. Possible Disaster Impacts

A. A classification system
[See "Disaster Typology" in Appendix B, which is adapted from a table prepared by A.J.W. Taylor in *Disasters and Disaster Stress,* AMS Press, New York, 1989, p. 12]

Causes of disaster are defined as *"natural,"* relating to disasters that have been caused by profound disruptions of the physical environment, *"industrial,"* relating to disasters arising from a serious disruption of the ecosystem from the products, by-products, and waste from the manufacturing system, and *"human,"* relating to disasters arising from errors of judgment, deliberate action, or incompetence.

B. Prominent issues relating to different causes of disaster

1. Natural disasters
   a. Often cause heavy casualties and severe damage to property.
   b. Mythological explanations, omens, and symbols often are used to understand what happened.
   c. Catastrophes may raise issues of faith or sin.
   d. Survivors often have a greater acceptance of the consequences of "Acts of God" or "Mother Nature" than they do of consequences of human-caused disasters.
   e. Many natural disasters have a clearer period of warning prior to impact.
   f. Since personal blame is not a primary issue, there may be a greater outpouring of altruism and compassion in efforts to help survivors.

Looking back in history, a description of an earthquake and its consequent explanations is useful. On November 1, 1755 a major earthquake occurred in Portugal that killed over 60,000 people. Following the earthquake were tidal waves and fires. The event was interpreted as a demonstration of God's anger at an evil population and many writings on the philosophies of God's revenge and the duty of making peace with God were explored.

– Kendrick, T.D. *The Lisbon Earthquake*. New York, NY. Lippincott, 1955,

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2. Industrial or technological disasters
   a. Political issues may have affected the installation or operation of a plant or industrial site and may be seen as the cause of the tragedy.
   b. Economic issues related to the reasons for the operation of the installation or the potential for community revival may compound the explanations.

c. There is a lack of personal accountability for the event and institutional depersonalization of the victims.
d. "Loss of faith in experts" may increase stress levels as well as resentments and dissensions in communities.
e. In many technological disasters, the fear of illness, cancer, or other diseases may increase even when there is no evidence of probable correlation with the event.
f. First responders and crisis responders may be reluctant to provide services because of their personal fear of contamination.
g. Many such catastrophes have long-term impact and no perceivable low point.

> *In technological disasters...the duration of the initial crisis period may be prolonged. For example, the accident at TMI[Three Mile Island] unfolded over several days, not several hours. Furthermore, the original leakage triggered a series of concomitant events, including the disruptions caused by evacuation, fears associated with the hydrogen bubble, continued uncertainty about how and when the decontamination process would be carried out, subsequent revelations that the accident came within 30 to 60 minutes of a meltdown, the venting of krypton gas the following spring, and the uncertainty of whether the undamaged reactor would be started up again. Thus, crisis intervention models usually employed in acute crisis situations may not be entirely appropriate.*
>
> – Bromet, Evelyn, J., "The Nature and Effects of Technological Failures," *Psychosocial Aspects of Disaster*, eds. Gist, Richard & Lubin, Bernard, New York: Wiley & Sons, 1989

3. Human disasters
   a. Issues of justice/fairness are critical when human beings cause disasters. In the United

States either or both the civil and criminal justice systems may become involved in investigations and court processes.

b. Most tragedies caused by humans are seen as preventable, yet in a social context, little has been done to concentrate on prevention strategies rather than intervention strategies after tragedy occurs.

c. If the disaster is caused by purposeful human cruelty, there may be issues related to evil or the impossibility of understanding the criminal mind.

d. If the disaster is related to social conflict such as riots or wars, there may be demonization of different cultural groups in a society.

e. When humans cause accidents, there are often issues related to the preventability of the disaster. Accidents often cause more intense anger in survivors than do crime-related crises.

f. Human caused disasters may significantly affect the abilities of individuals to trust each other and thus exaccerbate the deterioration of social bonds. This is particularly true when violence is committed by family members or friends.

The damage to the survivor's faith and sense of community is particularly severe when the traumatic events themselves involve the betrayal of important relationships. The imagery of these events often crystallizes around a moment of betrayal, and it is this breach of trust which gives the intrusive images their intense emotional power.
– Herman, J., *Trauma and Recovery*

C. Prominent issues illustrating different elements of disaster

1. Earth

a. The earth is assumed to be firm and safe. In some cultures, the earth is the source of life.

Earth disasters threaten the myth of "terra firma".

b. Earth disasters often involve events that imprison or enclose victims against their will.

c. Most earth disasters are sudden and often happen without warning even in geographical areas that may expect a disaster.

2. Air

a. The air is perceived as erratic and less under the control of human beings. Since God or nature seems to have control, resulting disasters may be more readily integrated into individual and community understandings.

b. Due to the unpredictability of the wind, the air and space, the randomness of community or individual impact often heightens terror during impact and confusion at inventory.

c. Explanations of wind events may take the form of trying to understand the "winds of change".

3. Fire

a. Fire is both terrifying and exciting to most people. Fire was a "gift from the gods" that allowed humans to expand their understanding of the world in old mythologies. There is still a sense of excitment over fires — even disasterous ones. This creates a cognitive dissonance for many after a major disaster.

b. Fire evokes concepts of hell and damnation for some cultures. It is particularly true among many cultures in the United States. Hence, death by fire poses many conceptual problems for those who confront it.

c. On a practical level, fire often consumes or distorts the bodies of people who are its victims and surviving family and friends may have difficultly dealing with these consequences,

4. Water

a. Disasters caused by water are varied. The consequences are also varied. A flood may destroy miles of property, homes and lives. The drowning of an individual or a community

when a ship sinks also involves the element of water. In either case, the catastrophe changes the landscape or seascape of life. In the Judeo-Christian traditions, water disasters are often equated with the great flood depicted in the Bible.

b. Natural floods may be equated with natural forces such as those that are found in wind disasters. Floods caused by manmade structures may be more difficult to deal with by survivors. Accidents on the waters are often viewed with horror due to a pervasive thinking that water is inherently unsafe.

c. On a practical level, water, like fire, may destroy or distort the bodies of those who die.

5. People

a. People victimized by other people are often the most angry. There is a difference between the anger manifested against a person who is perceived as mentally ill and a person who is simply negligent. The anger is usually greater toward to the latter. This accountability that individuals and communities impose upon other individuals or communities is especially agonizing since it often contributes to further social distress.

b. The particular dynamic that disasters based on human elements may include is the tension caused by cruelty and brutality executed by an offender. The idea that an individual or consortium of individuals is unfeeling or unrepentant for the damage that they caused is reprehensible to most.

c. When victims are subjected to specific acts of torture, mutilation, hate or degradation, the outrage of other individuals and communities in response may be especially high.

D. Differences between types of disaster threats based on conceptual, sensorial, and duration issues.

The following is a list of different kinds of disas-

ters and the issues they raise. These are not exhaustive but may help crisis responders to identify critical experiences and concerns of survivors in the aftermath of each disaster type. Similar experiences and concerns arise in many different disaster types, yet some are disaster-specific. For instance, in water disasters such as floods, death caused by drowning results in bloated bodies, while in fire disasters, dead bodies may be charred beyond recognition.

1. Earth disasters: avalanches, volcanos, landslides, and earthquakes
   a. Useful recent examples.
      - Mt. St. Helens volcano, 1980 - 68 persons dead
      - The Armenian earthquake, 1988
      - Loma Prieta earthquake, 1989 - 55 dead
      - Banff, Alberta, Canada avalanche, March 5, 1991 - 10 dead
      - Northridge earthquake, 1994 - 24 persons dead
      - Great Hanshin earthquake (Kobe, Japan) 1995 - over 5,000 dead
   b. The impact when the earth moves
      - Volcano
        The eruption of Mt. Pelee on Martinque in 1902 wiped out a city of 30,000 in a matter of minutes.

The destructive effect of the avalanche of white-hot particles mixed with gas and superheated steam traveling at hurricane speed was such that most people died instantly wherever they happened to be, for the temperature was estimated to have been 1000 degrees Centigrade. Only two men of the town of 30,000 survived: a shoemaker who survived by some accident, and a prisoner due to be hanged for murder who was protected by the bizarre condemned cell in which he was kept. Rescued after three days, he described his experience: "I smelled nothing but my own body burning. ... Soon I heard nothing but my own unanswered cries for help."

–Raphael, B., *When Disaster Strikes: How Individuals and Communities Cope with Catastrophe*. New York, NY. Basic Books, 1986.

- Earthquake

"It all happened in an instant," she said. "A noise, a terrible swaying, and then there was no one." ... the Armenian earthquake – which struck December 7, killing at least 55,000 people and ruining much larger cities – was unforgiving and surgically quick in Spitak. Everyone in Spitak describes the same feeling, a tremendous shock "like a bomb," the eerie feel of rocking, and then collapse.
–Remock, D. "In Spitak, 'We have No More Tears Left'," *The Washington Post*, December 15, 1988.

Decades of assumptions were shattered by those 20 seconds of the Great Hanshin Earthquake. The people of postwar Japan had put their trust in an elaborate "earthquake-proofing" plan that they were convinced would avert disaster.

... Indeed, Japanese building codes are among the strictest in the world. A national network of 200 seismic monitors measures and pinpoints every quake of noticeable magnitude and, among other emergency responses, sends out computerized instructions to shut down the bullet trains and keep them from derailing at speeds up to 170 m.p.h. Everyone takes part in drills at home and at work. Even the smallest child in nursery school knows what to do when the shaking starts: put on your helmet and crawl under the desk.

Twenty seconds was all it took to leave that faith in tatters and undermine all the certainties and resolve that stemmed from it.
–Elliott, L. "Earthquake at Dawn,"*Readers Digest*, November, 1995.

• Avalanche

> *It was a silent day. I was looking out on the snow and the mountain. It is hard to explain. I heard a strange rumble and then a roar. I didn't know what was happening. It was unlike anything I had experienced. And then I saw this incredible wall of ice and snow crash down the mountain. I screamed and screamed to no one and then prayed.*
> – NOVA Crisis Response Reports, 1989

   c. Sensorial issues
  • Touch: internal breathing difficulties; experiences of the earth's movement; cold or heat
  • Smell: toxic fumes and smoke
  • Taste: smoke, iron, heat or cold
  • Sounds: ominous noises, including rumblings and explosions
  • Sights: the destruction of "indestructible" buildings, earth forms, dams or other structures takes place in minutes

   d. Conceptual issues
  • Fear of being buried alive
  • Disruption of the myth of "terra firma"
  • Fear of suffocation
  • Fear of being pinned down – claustrophobia.
  • Fear of not being rescued.

   e. Duration issues
  • Earth movements cause relatively quick initial damage
  • Most earth movements are not complete in one event; there is lingering or continuing impact through aftershocks, sporadic small eruptions, and the like, which keep the disaster "alive" even after the low point
  • Sensorial involvement may be lingering due to long-term visual damage

- Survival issues may be prolonged and affect rescue and remedy efforts
- When there are multiple deaths and injuries, funerals or burials may take weeks or months to complete.

2. Earth: train and car crashes
   a. Useful case examples
      - Amtrak/Conrail train crash, Baltimore County, MD, 1987 - 16 killed
      - Truck/school bus crash, Carrolltown/ Radcliff, KY, 1988 - 27 killed
      - Pickup/car crash, Nageeze, NM, 1994 - 6 killed
      - Commuter train crash, Silver Spring, MD, 1996 - 11 killed
   b. The impact of crashes

I wake up at night in a panic – shaking, sweating, screaming, as I did then. The truck's coming towards me – I'm helpless – There is nothing I can do – It's like some dreadful monster. And then there's a crash and nothing and this dreadful silence. Then there's Emily and John and Mary and blood everywhere and their faces smashed – and they're all dead. ... And all I want to be is dead too. I'm tortured by my dreams and by the memories of what happened. I can't get them out of my mind. I try everything I can, but the shriek of brakes, the grinding noise of a truck, even the smell of petrol – It all comes back again.

– Raphael, B., *When Disaster Strikes*, 1986.

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   c. Sensorial issues
      - Touch: coldness and heat senses become more sensitive; crashes usually result in physical injuries for almost all involved even if they are relatively minor.
      - Smell: fuels, gas, fire, materials burning, blood
      - Taste: metal, fuels and gas, smoke

- Sounds: crunch of metal, glass shattering and explosions, screech of brakes
- Sights: appearance of massive property twisted, broken and strewn about like toys, physical injuries
  d. Conceptual issues
- Recovery of intact bodies unlikely
- Often many bystanders
- Usually little warning and passengers are helpless to avert the crashes
- Dispersion afterwards
- High anger and blame if substance abuse, other forms of recklessness, are involved
  e. Duration issues
- Usually immediate short-term impact
- Survival issues often determined immediately
- May involve long-term cleanup and sensorial involvement
- Often results in involvement with the criminal justice system or civil litigation
3. Earth: dam failures
  a. Useful examples
- The Johnstown dam disaster, 1889
- The Buffalo Creek dam disaster, 1972
  b. Impact of resulting floods

The dam gave way at 3:10 pm. The water first slashed a ten foot-wide notch in the top of the dam. Then the entire middle section caved in. The torrent spilled into the bed of the South Fork and climbed its sides, tearing trees out by the roots, and creating a cloud of dust and debris that whirled ahead of the flood. The wave smashed down the Little Conemaugh valley, churning up everything in its path. At one point, where the valley narrowed, the water reached a height of 89 feet (measured later by the flood lines); the consensus among witnesses to its awesome rush was that the wave was generally 30-40 feet high. The watchers at the dam stared dumbstruck as the entire two-mile long lake

emptied in 45 minutes. Roaring frightfully and rolling over itself, surf-like, the great wave plunged at a speed estimated variously at 20 to 40 miles an hour, billowing out and then hourglassing in where the valley does. ... [one survivor said] "It looked like an ocean with waves and surf, but it was the roar I remember best – a rolling sound like thunder, but not like anything I've heard since. I think it took about an hour and a half for it to pass." The whirling wall of water encountered its first major obstacle at the recently built stone railroad bridge. ... Timbers, houses, railroad cars, makeshift rafts and machinery crashed to a stop there, temporarily blocking the path of the flood. ... Floating houses and parts of houses, many loaded with people, smacked one after another into the debris at the bridge. ... Sometime around nightfall the debris at the bridge caught fire. Hundreds of people trapped in the wreckage, some with their arms or legs pinned, now faced the hideous prospect of waiting to burn to death.

Johnstown Flood survivors would never forget the screams from the blazing wreckage during the night ... A railroad man at the bridge said the victims were "a lot of flies on flypaper, struggling to get away with no hope and no chance to save them."

– Jackson, D.D., "When 20 million tons of water flooded Johnstown," *Smithsonian Magazine*, May, 1989.

   c. Sensorial issues
- Sight of "mud wave" and tidal wave effect
- Appearance of bodies in strange shapes and strange places, e.g., hanging from trees
- Desolation of landscape
- Smell of sludge and sodden property
- Sound of roar of waves of water
- Coldness and wetness

   d. Conceptual issues
- Suddenness of dam collapse
- Bloated and distorted bodies
- Complications of electrocution in aftermath

The Trauma Response: External Factors   **3-49**

- Little heeded warning
- Industrial blame not individual accountability
- Political implications where government is involved
- Economic implications where private industry is involved
  e. Duration issues
- Initial impact most likely to last 3-5 hours
- Long days of sensorial involvement
- Years of reconstruction of property
4. Air: Hurricanes, tornadoes, cyclones, blizzards
   a. Useful examples
- Xenia, Ohio, tornado, 1974
- Cyclone Tracy, 1974
- Hurricane Hugo, 1989
- Joliet/Will County tornado, 1990
- Hurricane Andrew, 1991
   b. Impact of wind disasters

In Darwin, Australia, Christmas eve and Christmas morning, 1974, were brutally disrupted by a cyclone. The very time of occurrence made the whole experience unreal. The primitive and overwhelming sounds of the wind, the force of the winds and the rain, and destruction of what had seemed to be solid structures were indeed frightening. It was estimated that gusts of winds exceeded 250 KM/hour. "As the full fury of Tracy struck, windows broke, houses were deroofed and finally disintegrated as families were left in the rubble of their own homes in the pitch black, the pelting rain and the shrieking gale,... Children were wrenched away from the arms of their parents, the possessions of a lifetime were blown away." There was then, "after four hours of this terrifying ordeal, a deadly hush," as Darwin stood in the eye of the cyclone. Then after a period of eerie calm, the winds returned from the opposite direction with renewed force, bringing further death and devastation, until the final period of calm several hours later. 65 people had died, 140 seriously injured, most of the population of 45,000 left homeless.

> – Raphael, B., *When Disaster Strikes*, 1986.

    c. Conceptual issues
- Isolation and a sense of abandonment
- Randomness of destruction
- Differences between hurricanes/cyclones and tornados
- Fewer immediate deaths but often deaths in the aftermath due to electrocutions from wires in the waters, or to heart attacks as people try to rebuild destroyed property

    d. Sensorial issues
- Appearance of whirling funnel cloud from dark heavy cloud
- Appearance of impact of heavy winds: property destruction, trees tossed around
- Appearance of yellowish gray just before impact
- Sound of roar of wind like a train or jet airplane
- Freezing cold or humidly warm

    e. Duration issues
- Tornados usually short impact; hurricanes usually longer impact
- Both have ongoing sensorial involvement
- Long-term reconstruction period

5. Air: chemical or nuclear pollution
    a. Useful examples
- Bhopal, India, toxic dioxin
- Chernobyl nuclear plant (Soviet Union), 1986 – Accident released cloud of radioactive pollution
- Three Mile Island (PA) accident, 1979
- Love Canal (NY)
- Times Beach (MO) - Dioxin dispersed in floods, 25,000 people evacuated

    b. Impact of pollution

> *On the morning of March 28, 1979, one of two generating units of a nuclear power plant called Three Mile Island experienced an odd sequence of equipment failures and human errors, resulting in the escape of several puffs of radioactive steam. It was a moment of considerable potential danger, as we all were soon to learn. It was a moment of considerable uncertainty as well.*
>
> *At the height of the uncertainty, Pennsylvania's governor, Richard Thornburgh, issued a calm and measured advisory suggesting that pregnant women and preschool children living within five miles of the plant might want to evacuate and that all other people within ten miles ought to consider taking shelter in their homes. In effect, the governor was recommending that 3,500 persons living in the shadow of the reactor relocate for at least the time being and that everyone else stay put.*
>
> *Instead, some 200,000 persons were alarmed enough to take to the public highways, and they fled, on average, a remarkable 100 miles. For every person advised to leave home, almost 60 did.*
>
> –Erickson, K. "Toxic Reckoning: Business Faces a New Kind of Fear," *Harvard Business Review*, January-February, 1990.

c. Conceptual issues
- Fear of slow death
- Sense of a foreshortened future
- Fear of illness and mutilation
- Fear of an invidious invasion of the chemical agent or radioactivity by stealth and treachery
- Dread of long-term consequences and fear of the unknown
- Mystery of pollution and its invisible attack
- Evacuation shadow phenomenon
- Contamination or contagion
- Deterioration of the immune system

    d. Sensorial issues
- Personal impact may be objectively low
- Invisibility of threat
- Deception of sensorial warning system
- "Imagined" sensory perceptions

    e. Duration issues
- Onset of catastrophe is prolonged: warning and threat period may last for a number of days
- No low point readily discernible
- Discovery of harm may be delayed for years

6. Air: airplane or spacecraft crashes, explosions

    a. Useful examples
- The Challenger, 1988
- Pan Am #103, December 22, 1988
- TWA #800, July 17, 1996

    b. Impact of crashes and explosions

At 3:15 p.m. one year ago, the chicken-finger snack was being served on United Flight 232, 37,000 feet above northeast Iowa, when the tail engine exploded. The plane rocked, banked to the right and began to fall.

Shrapnel from the engine had sliced through the jet's control lines. Precious hydraulic fluid drained away in two minutes, leaving the crew with no control over the plane's steering system. But by varying the thrust to the jet's two remaining engines, Capt. Al C. Haynes and his crew were able to keep the plane flying the 70 miles to the Sioux City's Gateway Airport.

The crash came with the warning "Brace, brace, brace."

Joseph Trombello, a Chicago auditor, clutched the seat in front of him as the other passengers tucked heads into laps, grabbed ankles and held children on the floor. He watched it all from his upright position: "You ever try to get into a brace position in coach?"

> *Looking across Row 18 to the other side of the plane, over knobs of ducked heads, Trombello saw the ground rise up as the plane dipped to the right. He is sure he saw the wing catch the ground the moment before the jet cartwheeled into a fireball and split apart.*
>
> *"I felt like a shoe in the dryer," he recalls.*
>
> *Then he was upside down, hanging from his seat, his glasses gone, smoke in his eyes, nose and mouth. In the dark, he heard moans. All he could think to do was to crawl through the smoke and debris toward a hazy patch of light in the cornfield."*
>
> – Ybarra, M.J., "The Memories that Burn Still," *The Washington Post*, July 19, 1990.

    c. Conceptual issues
- Small chances of survival and immediacy of death
- Massive carnage
- Massive property destruction
- Destruction's effect on earth
- Fear of flying
- Fear of heights
- Fear of falling
- Claustrophobia
- Lack of control
- Human error

    d. Sensorial issues
- Sight of exploding and falling materials
- Roaring sound
- Smell of smoke and fire
- Smell of metal
- Smell of fuel
- Taste of fuel, smoke, metal
- Earth may shake upon impact similar to an earthquake

    c. Duration issues
- Relatively short time of explosion or crash
- Long involvement in cleanup
- Long time for recovery of bodies

7. Fire: lightening
   a. Useful examples
      • St. Albans School, Washington, DC, May 17, 1991 - 11 people struck, 1 dead
   b. Impact of lightening

"Everything flashed orange and I felt like someone had whipped my head with something hot. ... It sounded as if a bomb had gone off right behind me. My body stiffened. For a second it seemed time had stopped. Then, black. ... Mom, there were bodies all around, they weren't breathing; I thought they were all dead."
– Shannon, S., "Lightening: How Not to Get Hit," *Woman's Day*, June 2, 1992.

I was on a hiking trip on a mountain near my home. It was supposed to be an overnight trip. I'd done others before. Well, four hours into the trip a storm blew up in the distance. I started to look for shelter. The sky was clear where I was, but I could hear the thunder roll. Then I remember seeing a flash of light and feeling a searing pain. I was not directly hit but a tree nearby was and one of its branches caught me in the chest. I thought I wouldn't live because all I could feel was pain. But then, my head cleared. I remembered tasting tin on my tongue. ... smelling a seared and nauseous charred smell, I couldn't identify. ... I later discovered it was my own flesh. I wondered why God did this?
– NOVA Crisis Response Report, March, 1993.

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   c. Conceptual issues
      • Suddenness and lack of predictability
      • "Wrath of God" or "Mother Nature"
      • Fear of electricity
      • General perception of the impossibility of being hit by lightening versus the reality that it is not an uncommon experience

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The Trauma Response: External Factors

    d. Sensorial issues
- Extremely hot
- Flash of bright light
- Cracking and crackling noise
- Smell of burning and smoke
- Taste of metal

    e. Duration issues
- Immediate impact
- May have long-term involvement because of brush or forest fires

8. Fire: explosions

    a. Useful examples
- Sterling, Louisiana, IMC Fertilizer Plant explosion, May 1, 1991 - 8 dead
- Charleston, South Carolina, Albright & Wilson Chemical Co. explosion, June 17, 1991 - 2 dead and 33 injured
- Mogo, Australia, Southern Asphalters, November 1, 1993 - bitumen explosion - 1 critically injured

    b. Impact of explosions

The flames shoot up to 150 feet high and burn at temperatures near 3,000 degrees Fahrenheit, hot enough to melt steel. They produce a roar like a jet engine and can be so brilliant that you have to squint at them up close.

If you're smart about it, which is to say if you're experienced, you carry a 10-foot-tall corrugated tin heat shield, wear flame-retardant cotton long johns beneath coveralls, keep your pockets empty and leave as little skin exposed as possible. Otherwise, your face and arms begin to burn about 40 yards from the flame and the keys in your pocket get so hot that they print little red welts on your thigh.

About 20 yards from the wellhead, where the desert sand is so hot that it shimmers and turns to glass, the rubber soles of your shoes get gummy and start to melt.

The firefighters who get that close tend to step lively, but even that's not a sure bet. One of the most experienced

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> *hands in the business, Ace Barnes of Houston's Boots and Coots, Inc. burned his feet last week – and not for the first time in his career.*
>   – Hockstader, L., "Fighting the Great Balls of Fire," *The Washington Post*, April 1, 1991.

    c. Conceptual issues:
- Adjunct to most crashes, earthquakes, volcanos, etc.
- Raises thoughts of damnation and hell
- Despite the danger of fire, there is also an attraction to fire for many people

    d. Sensorial issues
- Smell of smoke
- Smell of burning flesh
- Sight of flames
- Sight of soot or ash
- Sight of mutilated and burned bodies
- Sight of the dead in "live" positions
- Sounds of crackling
- Taste of smoke and fire
- Choking/suffocation
- Suffering of burn victims

    e. Duration issues
- May have short or long impact
- Length of time of cleanup may involve long-term sensorial involvement
- Length of time for personal individual revival from burns may be long-term

9. Fire: arsons and wildfire
    a. Useful examples
- Australian brush fire, 1983 - 14 people dead, 200,000 livestock, approximately 300,000 acres of land destroyed
- Dupont Hotel fire, 1987, Puerto Rico
- Rapid City fires, 1988, Rapid City, South Dakota - 15-1/2 homes destroyed
- Wildfires in Berkeley and Oakland, California, 1991 - 25 dead, 150 injured, 3,354

single-family homes and 456 apartments destroyed

b. Impact of fire

[Jose] Aponte climbed through the shards, severely cutting his arm as he did so, and stood on the small ledge just outside the window. He perched there, still hoping that he would not have to jump the 20 feet to the concrete below. But at that moment, he heard a howling sound, like that of a jet engine at close range, and looked back into the casino. Every detail of that scene is seared forever in his photographic memory.

A huge fireball was blazing through the room toward him. There were screams and crashing glass, and everything the ball of fire hit was completely consumed. He saw a friend and casino employee, Santiago Torres, scooping up money, or chips, and when the ball of fire hit him, the flesh of his face shrank tight against his bones, and then he burst into flames...

Then just as the room seemed to explode, Aponte shoved himself backward, shredding his hands on the glass, and fell toward the concrete below. He landed on top of another person, easing his fall, but broke an ankle. Somehow Aponte was able to drag himself away from the orange flames stabbing out of the casino windows.

"When I looked up, I knew everybody was dead," Jose Aponte says. "You could tell because there wasn't a human sound. For me, I guess it was the luckiest day of my life, but all I could do was cry."

– Hurt, H. "Hotel Fire, Cage of Horror," *Reader's Digest*, January, 1988.

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c. Conceptual issues
   • Perpetrator may be perceived as associating with the devil
   • Any destruction of homes may be a critical issue for survivors
   • Purposeful horror

    d. Sensorial issues
- Same as listed in analysis of explosions

    e. Duration issues
- Same as listed in analysis of explosions

10. Water: natural river floods
    a. Useful examples
- The Mississippi floods, Summer, 1995
- The Red River flood, April, 1997

    b. Impact of floods

> *It seemed as though I was grieving forever. I watched my heart bleed into the river when my son was taken. I watched my soul bleed when the church was gone. My grief has not been matched by love. Why has God forsaken me? Why has this lasted so long?*
> NOVA Crisis Response Reports, Kentucky, 1993.

> *From the air, Grand Forks looks like a large, dirty pond with church steeples and the tops of buildings popping above water. The crisped remains of the burned-out downtown contrast with the traces of snow still visible around the area.*
> *As he viewed the scene from Marine One [President] Clinton stared in silence and shook his head faintly. "Every one of those little houses is another life story," he said softly. After a pause, he started to add, "It's just -" and then stopped as if lost for words.'"*
> – Baker, P., "Flood Victims Cheer Clinton's Pledge of Aid," *The Washington Post*, April 23, 1997.

    c. Conceptual issues
- Fear of drowning
- Fear of suffocation
- Fear of the dark
- Loss of bodies
- Death in the water
- Unexpected, overwhelming property loss
- Destruction of flora and fauna

  d. Sensorial issues
   • Cold
   • Viewing bloated, discolored bodies
   • Smell of dankness, mildew, mud or sludge
   • Sounds of roaring water
   • Overwhelming sight of water covering land
   • Viewing change in environment from land to water
  e. Duration issues
   • Often extended over days or weeks
   • Long weeks of cleanup
   • Long sensorial involvement
11. Water: oil spills
  a. Useful examples
   • Exxon/Valdez shipwreck
  b. Impact of oil spills

The native story is a different story than the white man's story because our lives are different. What we value is different, how we see the water and the land, the plants and the animals is different. … We are invaded by the oil companies offering jobs, high pay, lots of money. We are in shock. We need to clean the oil, get it out of our water, bring death back to life. We are intoxicated with desperation. We know the water and the beaches, but we get told what to do by people who should be asking, not telling. We don't have a choice but to take what is offered. … We fight a rich and powerful giant: the oil industry. While at the same time we take orders and a paycheck from it. We are torn in half.

– Meganick, W. Chief, The Day the Water Died: A Compilation of the November, 1989 Citizens Commission Hearing on the Exxon Valdez Oil Spill, Levkovitz, T., ed., Alaska Natural Resource Center, National Wildlife Federation, Anchorage, Alaska, 1989.

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  c. Conceptual issues
   • Sense of uncertainty about the future
   • Human error and blame

- Impact of outside cleanup because of over-whelming environmental concerns
- Economic issues affecting fishing industries
- Deaths of animals and plant life
d. Sensorial issues
- Visual effects of oil on the water
- Tactile responses to greasiness and slimi-ness of oil
- Smell of oil
- Taste of oil as a result of smell and occa-sional oral input
- Sound of animals dying
e. Duration issues
- No low point
- Long-term cleanup
12. Water: maritime accidents
a. Useful examples
- The Titanic, April 15, 1912 - 1513 dead
- The Mont Blanc explosion, December 6, 1917, Halifax, Nova Scotia
- Capsize of the Herald of Free Enterprise, Zeebrugge Harbour, Belguim, April, 1987
- The sinking of the cruise ship Jupiter with over 400 school children aboard, October 21, 1988 - 2 dead
- Scandavian Star ship fire, April 6, 1990 - 158 dead
b. Impact of maritime accidents

Suddenly, there was a tremendous crash against the hull. In seconds Callahan was waist-deep in water, and the boat seemed about to sink. He grabbed a knife and tried to cut loose his survival duffel. The boat listed more steeply. She's going down, *he thought,* taking me with her! *He broke through the hatch. Waves lapped over the deck, and the bow completely submerged....His life depended upon getting that survival duffel....He ducked into the pitch-black water that filled the cabin.*

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> *He resurfaced for air several times as he cut away at the duffel tie-downs. Finally he freed the bag. When he turned to leave, the hatch was sealed shut by water.* This is it!
>
> Kelly, Sheldon, "Did I Come This Far to Die?" *Reader's Digest*, January, 1983

    c. Conceptual issues
- Human error and blame
- Fear of water
- Fear of the dark
- Fear of the cold
- Fear of drowning
- Isolation and abandonment
- Separation – particularly when women and children are saved, not men
- Struggle
- Suffocation
- Loss of body

    d. Sensorial issues
- Feel of coldness and wetness
- Smell of the salt and seaweed (if it is an oceanic disaster)
- Taste of salt or water
- Sight of blackness
- Sounds of screaming and waves

    e. Duration issues
- Usually relatively short impact – a few hours
- Post-impact evacuation may take hours or days

13. People: disease
    a. Useful examples
- The plague
- Yellow fever
- Tuberculosis/consumption
- HIV/AIDS

b. Impact of disease

> *Wherever the plague appeared, the suddenness of death was terrifying. Today, even with hand-me-down memories of the great influenza epidemic of 1918 and the advent of AIDS, it is hard to grasp the strain that the plague put on the physical and spiritual fabric of society. People went to bed perfectly healthy and were found dead in the morning. Priests and doctors who came to minister to the sick, so the wild stories ran, would contract the plague with a single touch and die sooner than the person they had come to help. In his preface to The Decameron, a collection of stories told while the plague was raging, Boccacio reports that he saw two pigs rooting around in the clothes of a man who had just died, and after a few minutes of snuffling, the pigs began to run wildly around and around, then fell dead.*
>
> – Mee, C.L., Jr., "How a mysterious disease laid low Europe's masses," *Smithsonian Magazine*, February, 1990.

c. Conceptual issues
   • Impact of chronic stress and slow death
   • Need to explain out of body experiences
   • Fear of contagion
   • Concern about physical appearance
d. Sensorial issues
   • Feelings of pain and discomfort
   • Smell of illness
   • Sight of distortions or abnormalities
   • Inability to taste
   • Dizziness and faintness
e. Duration issues
   • Individual illnesses vary
   • Duration of epidemic may last for years
14. People: building and bridge collapses
   a. Useful examples
      • Hyatt Hotel Skywalk collapse in Kansas

City, MO, 1981
- Collapse of L'Ambiance Plaza apartment building during construction in Bridgeport, CT, 1987
- Schoharie Creek Bridge collapse, Amsterdam, NY

b. Impact of accidents

> *Witnesses told of a sudden cataract of concrete slabs, of huge green steel I-beams crumbling like tiny toys, of enormous clouds of dust and of buildings nearby that shook with the force of an earthquake when the project [L'Ambiance Plaza apartment building] fell at 1:30 pm. "I saw it fall down like a deck of cards," said Steve Russo, a trucker who was passing. "There was no explosion. It just went. I saw people screaming and running off the top of the building. I heard metal bending."*
>
> – McFadden, R.D., "Ten Feared Killed in Fall of Building," *The New York Times*, April 24, 1987.

c. Conceptual issues
- Human blame
- Entrapment
- Suffocation
- Building collapses resemble earthquakes
- Bridge collapses involve water dimension
- Bridge collapses may also cut off communities

d. Sensorial issues
- Change in landscape: a building or bridge that used to exist is gone
- Sound of a thundering roar as the collapse occurs
- Sight, smell and taste of dust

e. Duration issues
- Suddenness of collapse
- Lengthy rescue

15. People: crime, terrorism, hostage taking, torture
    Crime
    a. Useful examples
       • Jeffrey Dahmer's serial murders, Milwaukee, Wisconsin, July 24, 1991
       • Multiple murders in Robert Taylor Homes, Chicago, Illinois, 1994
       • Mass murder of 23 people in Luby's Cafeteria, Killeen, Texas, October 16, 1991
    b. Impact of crime

Daylight Savings Time had extended the afternoon light, so there was plenty of time left after church and lunch with a friend for my mother to work in the garden. It was a quiet Sunday in Princeton, N.J., last April 2, and showers had softened the ground for planting. It was not a time for murder...

But that Sunday my worst nightmare came true. Someone jumped out of the shadows and stabbed my mother five times in the back. No one is sure why. The killer stole nothing, and quietly locked the door when leaving. My mother's body wasn't discovered until two days later.

The irony of my mother's death is that she was the type of citizen who is our first line of defense in what has become the third largest crime wave in our nation's history. She was actively involved in her community. She knew who her neighbors were and she watched out for them. ...Princeton lost its immunity that day, becoming one less town that can say, "It can't happen here." To miss the point of mother's murder is to weaken the defense of your own neighborhood and to bring closer the reality that next time the victim will be someone you know.

– Stuart, C.G., "Nightmare in Princeton," The New York Times*, May 26, 1989.*

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    c. Conceptual issues
       • Human cruelty

- Humiliation
- The role of provocation or precipitation
- Financial, physical, emotional injuries
- Issues of injustice and unfairness
- The impact of multiple victimizations of one or more victims

d. Sensorial issues
- Dependent upon the type of crime

e. Duration issues
- Usually short impact stage
- Long stage of community involvement

Terrorism

a. Useful examples
- Bombing of Pan Am 103, December 22, 1988, Lockerbie, Scotland
- Bombing of the World Trade Center, February, 1993, New York, NY
- Serin gas attack, Tokyo, Japan
- Bombing of the Alfred P. Murrah Federal Building, Oklahoma City, OK, April 19, 1995

b. Impact of terrorism

Then came February 26, 1993. The day started out happy. I was coming home from a business trip to be with Monica and Eddie. Then a fellow walked into a meeting and told me that there was an explosion at the Trade Center. I called Monica's office. There was no answer. And there would never be an answer.

I lost my wife, my best friend, my idol – and my son. I would never get the chance to tell Monica how much I loved her. We would never hold baby Eddie in our arms. We would never hear Eddie say "Mommy," "Daddy," "love." We would never see Eddie walk or go to school. We would never see Eddie grow up and experience all the love, respect, friendship that parents share with a child.

We lost all this because the four men you are to sentence today wanted to terrorize the people of the United States. What type of person shows no regard for

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> *human life and would bomb the most populated sky-scrapers in the world? What God would want people to die in his name? (Victim Impact Statement of Ed Smith in the World Trade Center Bombing sentencing)*
> – Dwyer, J., Kocieniewski, D., Murphy, D., & Tyre, P., "The Bomb That Shook America", *Reader's Digest*, February, 1995.

    c. Conceptual issues
- Incomprehensibility of political motivations to kill massive numbers of innocent people
- Most often buildings, airplanes or transportation systems that place hundreds or thousands of people in danger are the targets of attack
- Massive community fall-out from the terror
- Confrontation with human hatred
- Can cause reciprocal acts of terror or war
- Difficulties in identifying and prosecuting terrorists
- International terrorism may be complicated by legal barriers to extradition

    d. Sensorial issues
- Sensorial issues dependent upon type of terrorist attack
- Often involves those associated with bomb explosions, airplane crashes, hostage-taking, or chemical disasters

    e. Duration issues
- Lengthy clean-up stages complicated by investigation and concern about how to memorialize the victims and survivors
- Lengthy involvement in the criminal justice system
- Threats of follow-up attacks

Hostage-taking

    a. Useful examples
- Iranian hostage-taking 1979-1980
- Beirut hostage-taking

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- Japanese Embassy hostage-taking, Lima, Peru, 126 days, 1996-1997

b. Impact of hostage-taking

> *For a hostage … no escape is possible: the captor has blocked all possible exits. Under these conditions, the victim responds to this sudden overwhelming threat to his life with a paralysis of affect. The terrorized victim is frozen, even while his cognitive and motor functions remain operational."*
> – Symonds, M. "Victimization and Rehabilitative Treatment," in *Terrorism, Interdisciplinary Perspectives*, Eichelman, B., Soskis, D.A., Reid, W.H. (eds.) American Psychiatric Association, Washington, DC, 1983.

> *"It wasn't a pleasant experience. It was hell. But they weren't pulling out our fingernails. They weren't breaking our bones. They weren't torturing us. We were just kept like rabbits in a cage, without any privileges."*
> – Jacobsen, D., with Perez, R., "My Life as a Hostage," *Los Angeles Times Magazine*, March 1, 1987.

c. Conceptual issues
- Confinement
- Claustrophobia
- Torture
- Estrangement/isolation
- Political environment
- Worthlessness of life
- Stockholm Syndrome

d. Sensorial issues
- Dependent upon the type of incident

e. Duration issues
- Usually lengthy impact stage
- Threat of follow-up attacks

Torture
a. Useful examples
- Victims of domestic violence
- Victims of child abuse
- Victims of abuses of political power
b. Impact of torture

> *Unbearable marks of the terrible hardship which he has lived through, of his courage, a visible symbol of his new life, or a reminder of his weakness, of his own renouncement, proof of the truthfulness of his story, or vehicle for a false one – a scar may be all of these for a victim of repression.*
>
> *In such cases, these scars hold the evidence of suffering linked to barbarity, the statement of physical martyrdom, but also of a never-healing wound, one so deep that it can interfere in every instant of one's life. It is necessary to be able to unveil that which is behind what is "palpable" in the suffering endured, what is buried behind these marks. It is necessary to take the time to listen, to wait for confidence to become real and strong. I think it is important not to be demanding, not to transform ourselves into yet another interrogator; and to accept that the one who suffered be allowed to keep a private place where there are secrets just for himself."*
>
> – Duterte, Pierre, "The body's memory," *Torture*, Volume 6, No.4, 1996.

c. Conceptual issues
- Human brutality and sadism
- The body's memory may overwhelm cognitive memories
- Change in image and identity
- Conspiracies of silence upon return to "normal society"
- Alienation and isolation from community
- Reunion concerns with family members
- Helplessness and hopelessness

d. Sensorial issues
- All senses may be engaged during torture
- Torture usually involves the eliciting of pain and disgust
- Torture often interferes with normal awareness of time's passage as well as regular rhythms of bodily functions

e. Duration issues
- Usually lengthy and chronic impact stage
- Sensorial involvement may last a lifetime
- "Rescue or remedy" may not be perceived as real or lasting

War

a. Useful examples
- The war in the former Yugoslavia
- The Persian Gulf War
- The Vietnam war

b. Impact of war

In 1996, 30 major armed conflicts raged in different locations around the world. They took place within states, between factions split along ethnic, religious and cultural lines. In the past decade, an estimated 2 million children were killed in armed conflict and three times as many seriously injured or permanently disabled. There is no way to measure the impact on a child who sees her family killed or to quantify the emotional and psychological toll on children who live for years in fear of bombings, mutilation or death. In recent decades the proportion of war victims who are civilians has leapt dramatically from 10 percent to more than 90 percent ... The statistics are shocking enough, but they suggest something worse. ... More and more of the world is being sucked into a desolate moral vacuum. This is a space devoid of the most basic human values; a space in which children are slaughtered, raped and maimed; a space in which children are exploited as soldiers. ... There are few further depths to which humanity can sink."

> – Graca Machel, quoted by Frey-Wouters, E., "Armed Conflict's Impact on Children: A UN Report," *Traumatic StressPoints*, Winter, 1997.

    c. Conceptual issues
- Massive death, mutilation, injuries
- Not enough rescuers or helpers
- Genocide
- Differences in waiting loved ones and active troops
- Comparative issues between levels of involvement by various branches of armed forces
- Objectification of enemy may border on hate violence
- Massive property destruction
- Helplessness
- Political overtones
- Killing other people
- Postwar reunion issues
- Victory or defeat?
- Is the return worse than the war?
- Comparative success with previous wars
- Welcomed home?
- Special concerns of POWs and MIAs
- Burying the dead

    d. Sensorial issues
- Smell of death and rotting bodies
- Sight of death and carnage
- Sounds of screams or moans of the injured
- Taste of food

    e. Duration issues
- Usually impact is rather lengthy
- Postwar involvement may also be lengthy

D. Diagramming a disaster by type
1. The issues listed above involve, first, the causes of disaster – natural, industrial, technological, or human – and second the elements of the disaster –

earth, air, fire, water, or human. These two factors help to describe the dominant forces of concern in a specific disaster. However, most disasters also involve secondary forces. For instance, an airplane crash may also involve explosions and fires on the ground; a hurricane may be accompanied by flooding and may also result in human violence in the aftermath; a technological disaster may result in fires, disease, and illness over time. Therefore, it is important as crisis responders go to a disaster that they attempt to identify some of the critical issues that will occur to the community in the immediate aftermath as well as in the long range. This involves identifying both dominant and secondary forces in any disaster situation.

2. The outlining process.
   a. Determine whether the disaster is caused primarily by nature, industry or technology or a human source.
   b. Identify the dominant element involved.
   c. List the issues relating to the dominant source and element.
   d. Determine the secondary sources in the disaster.
   e. Identify the secondary elements.
   f. List the issues relating to the secondary sources and elements.
3. Example of Outline of a Disaster: San Francisco Earthquake
   a. *Dominant Source:* Natural Disaster
      Dominant Element: Earth
      • Sensorial issues
      • Conceptual issues
      • Duration issues
   b. *Secondary Source:* Fire
      Secondary Elements: Explosions and eruptions
      • Sensorial issues
      • Conceptual issues
      • Duration issues
   c. *Secondary Source*: Earth

Secondary Elements: Landslides
- Sensorial issues
- Conceptual issues
- Duration issues

d. *Secondary Source and Element*: Human
Secondary Elements: Crime, sexual assault and
   domestic violence
- Sensorial issues
- Conceptual issues
- Duration issues

VII. Believability

> *What was incapable of happening never happened, and what was capable of happening is not a miracle...Consequently there are no miracles*
> – Cicero

Many victims and survivors measure their reactions against a continuum of what is believable about the disaster and what is unbelievable.

If the event is considered to be *impossible*, then survivors may feel more anger and less fear. They are angry about the fact that something happened that could never have happened, but they generally have little fear because they do not believe it will happen again.

If an event is considered *improbable* – believable but not expectable – then fear of the unsafety of the world is increased, although fear of a repetition may be reduced.

The more *possible* the event is, the less the shock of sudden, unexpected danger. However, even with the possible there is often anger because people think the possible should have been impossible if protective devices could have been employed.

The more *probable* a disaster is, the less anger will be felt. Many who knew they were at risk may adjust their pre-disaster concerns to accommodate the possibility of disaster and use that adjustment to reconcile their world view in the aftermath of the disaster.

There are *predictable* events that are perceived as disasters. These differ from possible or probable disasters since there is time for warning and a chance for choice. If adequate warning is given, there will be less likelihood of anger or fear in the aftermath, although if individuals do not respond to the warning, there may be guilt. If adequate warning is not given, there will be exacerbated anger or fear.

VIII. Distinguishing Features of Community Tragedy

A. The extent of death and mayhem
1. In most cases, the greater the number of dead or injured and the greater the amount of carnage, the more likely that the tragedy will be perceived as affecting a broad community.
2. In some cases, the extent of death and mayhem will not be as relevant as who is killed or injured. Children attract extra concern and attention. If a person who has a special degree of public importance or a special position in the community is killed, it may affect the community at large. When President John F. Kennedy and Martin Luther King, Jr. were assassinated, millions in the nation were united in shock and mourning.

B. Massive dislocation and relocation.
1. Home, school and workplace usually are invested with a sense of extended personal identity. The longer one has worked or lived in a particular place, the more it is seen as an extension of self. Fracturing that identity can be as damaging emotionally as physical injury.
2. If the dislocation or relocation involves establishing a temporary home in a shelter or other facility, the strange surroundings may cause increased anxiety and a sense of loss.
3. The strangeness of new environments will be more strongly felt if pre-disaster social networks are not able to be maintained.

C. Unemployment, job loss, or severe individual financial losses.

Disasters that are accompanied by long-term unemployment or financial losses can threaten the survival of individuals, families and communities. Since employment is an important part of many people's sense of social support, wide-scale layoffs or company reorganizations can cause community-wide crisis.

> *Many of the Ramada Inn employees were left destitute in the aftermath of the Air Force plane crash in Indianapolis. Since they were in the hotel/restaurant business, many received minimum wage and counted on tips to make a financial difference. They did not pay large amounts into unemployment insurance and were unable to collect enough to meet post-disaster bills. Some faced eviction and the inability to feed their families. They also experienced feelings of a fractured community because they were a very close-knit employment community that would, in all likelihood, never work together again.*
> – Crisis Response Report, NOVA, November, 1987.

D. Extent and kind of property destruction
1. Wide-scale property destruction may demolish the physical structure of a community and thus change the landscape, transportation routes, and normal routines.

> *Maj. Gen. Robert Moorehead, Commander of the Virgin Islands National Guard, said of the scene on the morning after the storm, "In all my military experience, I had never seen anything like it. It appeared to me that we had been the victims of a nuclear blast."*
> *Not only was Christiansted strewn with uprooted trees, broken utility poles, shattered cars and tons of debris from buildings that looked bombed, but the verdant tropical island suddenly had turned brown. So*

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> *strong were Hugo's winds that most trees still standing were shorn of leaves.*
>
> *This desolate, end-of-the-world landscape and sense of isolation contributed to the disorder that followed.*
> – Branigan, W., "A Slow Recovery from '12 Hours of Terror,' " *The Washington Post*, October 31, 1989.

2. The destruction of "indestructible" property or the distortion of such property may also overwhelm survivors.

> *Pieces of the fuselage – some folded literally in an accordion pleat – still showed the orange, red, white and blue colors of United, as well as the black letters spelling out the airline's name and the plane's number, N999UA. ... "Everything was in that crater," [John] Lauber said, referring to a 9-1/2 foot deep hole that measured about 24 feet by 39 feet. ... The plane was compressed six times its normal density, said NTSB spokesman Brent Bahler. "If you had to put all this back in the hole, you couldn't."*
> – "737 Careened Wildly Before Springs Crash," *The Denver Post*, March 6, 1991.

3. Property that is destroyed in which survivors have invested sentimentality may be a source of extreme grief.

> *One woman in the aftermath of the fires in the Black Hills near Rapid City, South Dakota, wept over the complete destruction of her home. But she wept more because her only photographs of her son who had died at age 5 had been destroyed as well."*
> – Crisis Response Report, NOVA, August, 1988.

4. Landmarks in the community, memorials, or community meeting places may also hold special emotional value to community members. If they are destroyed, it may be the final blow that rips the community apart.

E. Number of people affected

The more individuals involved as victims, survivors, helpers, bystanders, and the like, the greater the community impact. It is almost impossible to comprehend the numbers involved in a massive disaster such as the Great Hanshin earthquake or the Oklahoma City bombing.

… the physical extent of the damage caused by the bomb was much greater than would be inferred from the focused publicity on the Murrah building. In fact, glass was broken in buildings two miles distant from the explosion; and the sound and accompanying shock wave were sensed simultaneously by almost half a million people. … Amongst the victims, 759 persons were injured, 167 [sic] fatally. Eighty-eight percent of the occupants of the Murrah building were injured; and 19 children were killed. Utilizing a case definition of injury that required medical treatment in order to qualify, 101 of the rescuers sustained injury, including one death. … Almost 40 percent of Oklahoma Citians knew someone who was killed or injured and 19 percent reported attending one or more funerals for bombing victims.

– "Predictors of Perceived Recovery Among Oklahoma City Firefighters in the Aftermath of Their Participation at the Alfred P. Murrah Federal Building", Vincent, R.D., Nixon, S.J., paper presented at 4th World Congress on Stress, Trauma, and Coping in the Emergency Services Professions: Research and Practice, April 2-6, 1997.

F. Sensationalism and voyeurism

Intrusions by media representatives or onlookers who are simply there to see the rubble, or carnage, or grief of the community enhance the feelings of abandonment and anger of survivors. While people will turn to other community members for support, there will be a great deal of resentment towards uninvited outsiders who have no positive assistance to offer.

> *From time to time throughout the search, scenes of emotion and sometimes ugly confrontation have been played out in and around the collapse.*
>
> *Yesterday, members of two families awaiting word on the fate of loved ones cried softly as they stood at the edge of the rubble near an American flag fluttering on a pole. Outside Kolbe Cathedral High School nearby, another grieving family was approached by a photographer.*
>
> *"Get that woman away from me," one member of the family screamed, breaking into sobs. ... a rescue worker asked for comment by a reporter turned suddenly, his face flushed with anger. "I don't care where you're from or who you're with," he said. "Leave us alone!"*
>
> – McFadden, R.D., "Building Collapse Takes a Toll on Exhausted Rescue Workers," *The New York Times*, April 27, 1987.

G. Depth of involvement of the community: relative loss and deprivation

If this has not been the worst thing that has happened to the community, the impact of the latest disaster may not be perceived with the same intensity that an outside observer may have projected. However, if this is seen as the worst thing that has happened or this represents an accumulation of disasters, it may be perceived as a representation of the "end of the world," or the recognition of an ultimate confrontation with evil.

Clay Foreman describes this perception in the aftermath of an accident in which a freestanding tower crane at a San Francisco building site collapsed and killed four construction workers and a school bus driver, and injured twenty-two others on November 19, 1989. This was two months after the Loma Prieta Earthquake. In the following conversation, the worker's family was in a shelter. Eght hours before, he had witnessed another worker drive a truck off the top of the construction site and crash 100 feet below. Foreman recounts the dialogue between a counselor (C) and the construction worker (W) "who seemed to believe the end of the world was at hand."

C. This is a horrible scene, right here on this structure.

W. Matthew 24 says, "The two men will be in the field: one will be taken and the other left." [His reference appeared to relate to the random deaths on the structure.]

C. Armageddon, the final destruction before the second coming of Christ. Is that what you are talking about?

W. [Referring to the sky.] The lightning comes from the east and flashes to the west, so also will the coming of the Son of Man be.

C. Where is Christ?

W. In heaven sitting at the right hand of God the Father. See the lightning. It starts there and travels there. … Lightning comes from the east and travels to the west, just like it says in Matthew 24. [His voice had risen from a whisper to a shout.]

Lightning in the east was reflected on the edges of breaks in the clouds to the west. The moon had disappeared.

– Foreman, C., "Immediate Post-Disaster Treatment," in *Handbook of Post-Traumatic Therapy*, Williams, M.B. and Sommer, J.F., Jr., Greenwood Press, CT, 1994.

The Trauma Response: External Factors

H. The "star" effect: compounding stress within and across social circles [see chart, next page]

The chart illustrates how the individual crisis reaction is multiplied horizontally across the community. While an individual tragedy may affect the individual and his loved ones, the effect of a community trauma is that each individual and his loved ones are affected, but they, in turn, react to and affect others who are also suffering from the same trauma. The direct victim becomes one of many co-victims. Multiple reactions occur in different forms and at different times.

"The … the … your mother's plane … it crashed, Shep. It crashed on takeoff at Orly, and I'm afraid they're all gone. … One hundred and six members of the Art Association. One hundred and fourteen people from Georgia. A hundred and twenty-nine in all…" [I walked into Mayor Ben Cameron's office] His face was bone-white beneath the permanent tan and the scattering of dark freckles across his cheekbones, and the flesh of it looked stretched and flayed, almost hanging from his thin, good bones. He looked older by years than I had ever seen him, and his gray eyes were almost as red and swollen as his daughter's had been that morning. For the first time I thought what exquisite anguish he must be living. Not only had he lost nearly a hundred of the people who were the mainstays of his life, but he must bury his own grief deep and act with coolness, grace and authority for their families and the city at large; swallow his own pain that theirs might be more quickly assuaged. … It would be a long time before Ben Cameron could weep, or even sleep. "Ah, God, no," he said, and his voice broke. "Christ, Shep, this was … my entire generation. I grew up with most of these folks. Laura Rainey was the first date I ever had; we went to a swimming party at Sibley French's house, and she had a two-piece bathing suit. We all talked about that for weeks. And If I hadn't met Dorothy I probably would have married Jane Ellen Alexander. And the first time I ever got drunk – practically the last – was with Tommy Burns, up at Tate one Fourth of July, on sloe gin. Whit

The Trauma Response: External Factors

The Clash of Social Constellations
in the Aftermath of Trauma

The family circle

The circle of colleagues and social institutions

The circle of friends
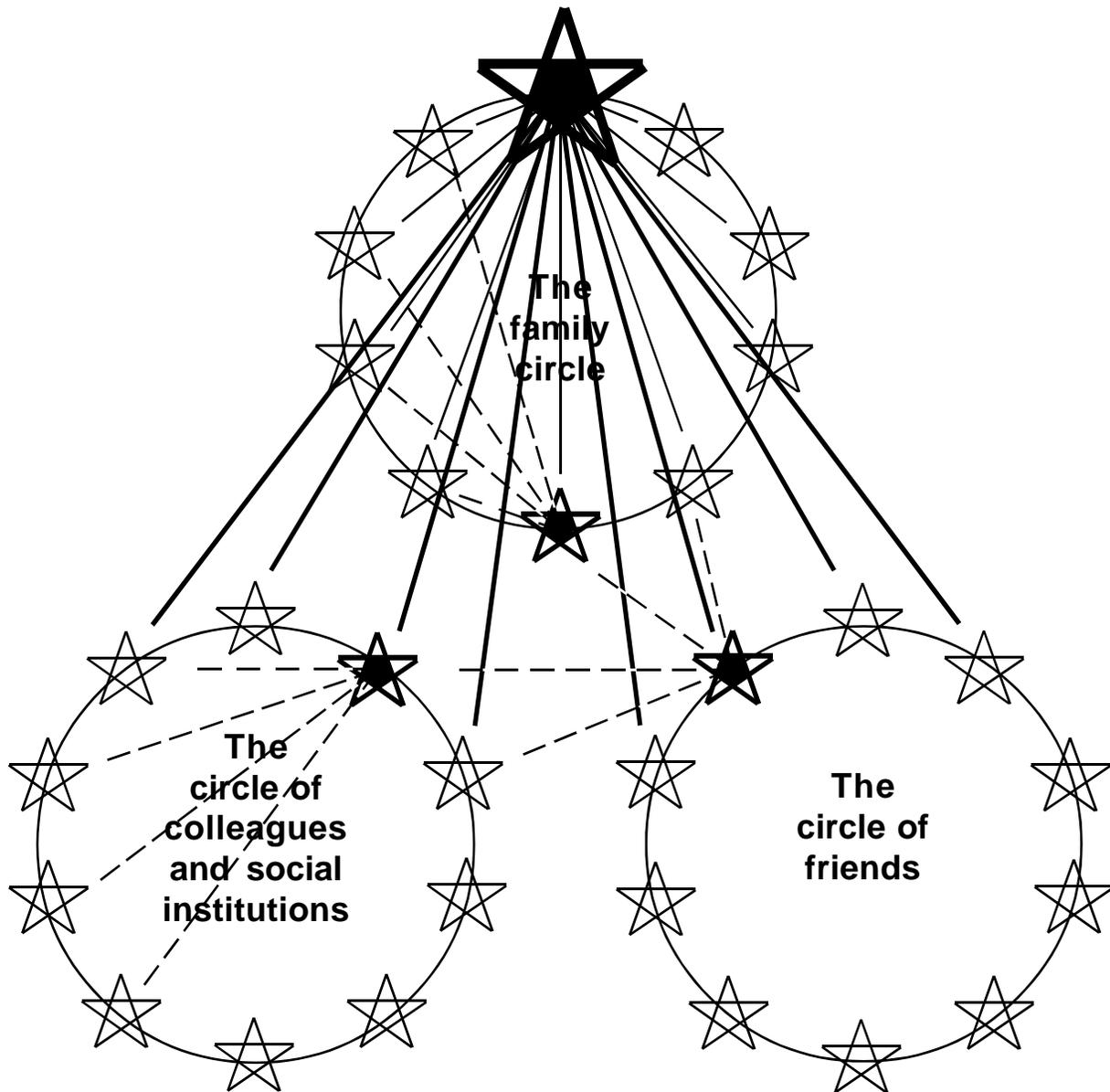
Key:
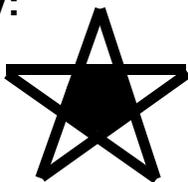
Trauma victim

A representative of the victim's social circle experiencing stress within and across the victim's social circles.

A representative of other members of the social circle.
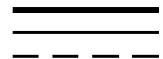
Stress lines in social re-lationship.

> *Turner and Howard Shelton and Marjorie Callahan … dear God, it's like a small city was just wiped out, or a little country." And, in a way it was…*
> –Siddons, Anne Rivers, *Peachtree Road*, New York, NY, Harper & Row, 1988.

I. The "pinball" effect, whereby stresses bounce well beyond the immediate place of crisis into history
[see chart, next page]

The chart illustrates how the crisis effects change over time. The individual crisis reaction may subside more quickly than a community reaction. For the community in trauma, there is a reinforcement of the crisis even when it is a reinforcement of disillusionment. Estrangement, isolation and anger may cause irreparable rifts between the support systems and may cause total community reformation. It may also reshape history, values, and attitudes in ways which reinterpret the present as well as the past.

> *Michael Holquist, a comparative literature professor who chairs Yale's Council on Russian and East European Studies, recently watched two videotapes that focused on Bosnia. One highlighted Bosnian Serbs involved in "ethnic cleansing," the other was devoted to some of their victims, Bosnian Muslims who have resettled in New Haven and whose testimonies are compiled into an archive similar to that for Holocaust survivors. "Accounts of trauma are never pretty, but some stories are more horrifying than others," says Holquist. "These were particularly grisly."*
>
> *The Serbian soldiers, noted the scholar, kept bringing up Kosovo, the site of numerous battles more than 500 years ago, each of which was mentioned to fan the flames of nationalism. "There's a timeless world of Serbian glory that's caught up in the Kosovo epic," says Holquist. "The way it is constantly being invoked to justify the unthinkable demonstrates the way a subject in the present negotiates the past."*

The Trauma Response: External Factors

The Direct and "Pinball" Effects of Trauma

"Pinball"
effects

Direct
effects

Victim

Family

Friends

**Colleagues,
social institutions**

Contemporary society

**Traumatic
event**

Future generations
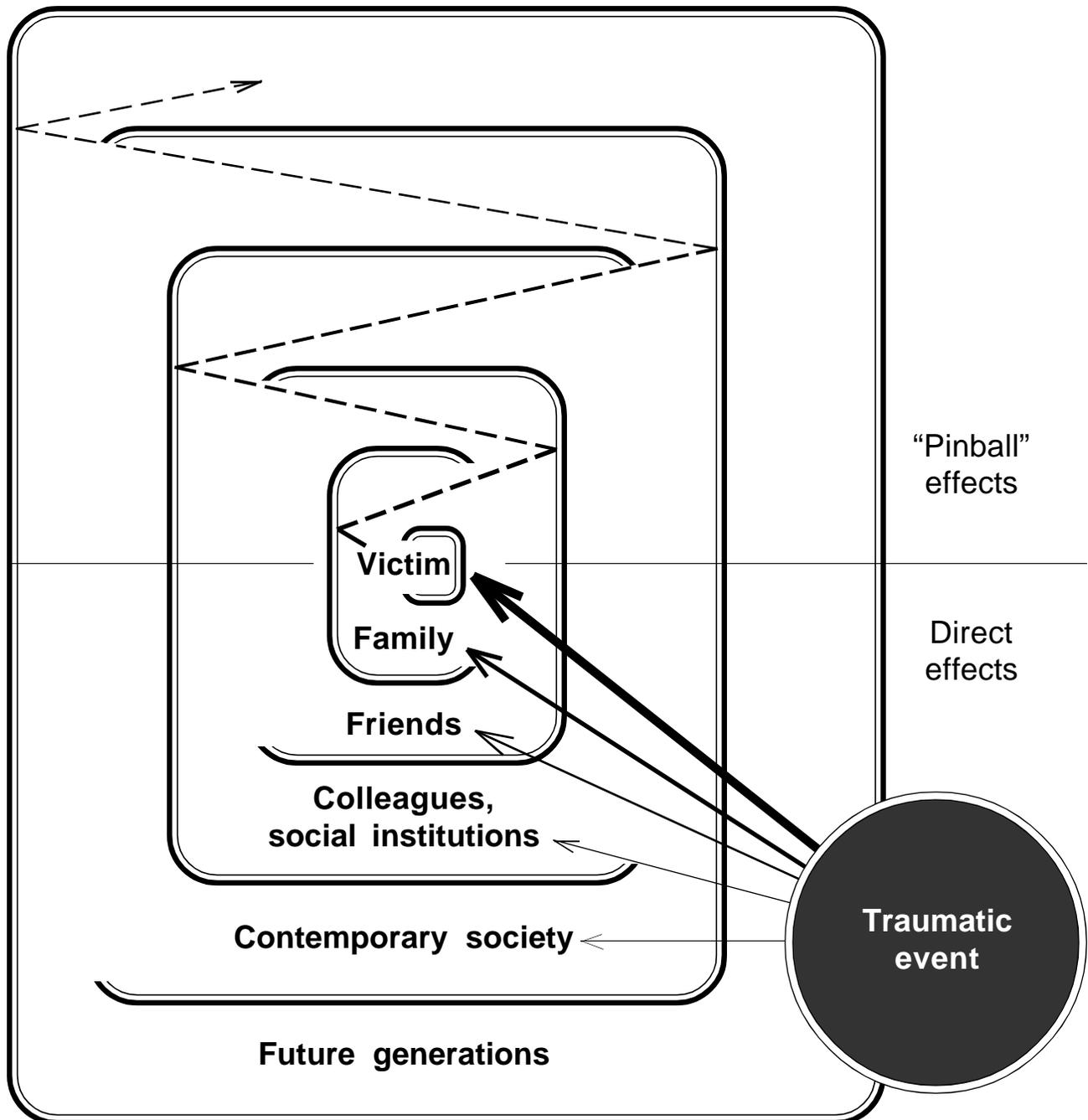
–Fellman, B. "The Pathways of Pain," Yale Alumni Magazine, New Haven, CT. Yale Alumni Publications, March, 1995.

J. Multiple histories

In a community situation, each individual brings to the crisis his or her own history. In addition, each may bring a history of a former community crisis. And finally, the community brings its own history. The community and subcommunities all have their own personalities and histories. They, in turn, compound the history of the individual. It is not unusual for such other traumas to surface during group and individual crisis intervention efforts.

Dryden High School students came to class Monday morning after a weekend speculation about the whereabouts of two teens. By mid-morning, they had learned that their worst fears were true. … evidence had been recovered to suggest the girls were dead. … "It was unbelievable hysteria … you just can't grasp the gravity of what's happened."

This tragedy was only the latest to hit the school district in recent years, with several occurring within the last months. … Monday's news of two more violent deaths brought numbing shock to many of the nearly 15,000 town residents.

– Wilensky, J. and Zito, K.A., " 'I can't believe I won't be seeing them again' Grief overwhelms Dryden School," The Ithaca Journal, October 8, 1996.

It is also not uncommon for a series of trauma histories to collate in the minds of a community to produce community-wide crisis and sometimes a drive for change.

> *Although it was the death of 15-year-old Kylie Smith that became the catalyst for a massive petition, hers wasn't the only death that has outraged New Zealanders. We have been sickened by murders such as the killing of 6-year-old Theresa Cormack in Napier, Kirsa Jensen also of Napier, taken from her house in broad daylight with her body still remaining unrecovered. The school-girl Karla Cardano, abducted and murdered after visiting a dairy in the Lower Hutt suburb of Taita; Louisa Damadran, a little girl killed and thrown into a river in Christchurch. Another small child, Sarah Currie of Invercargill, who was sexually molested and murdered in the inner sanctuary of her own home. These are but a handful of the dreadful crimes that spring to mind in New Zealand, a country we are so proud of.*
>
> *Disgraceful as all of these crimes are, it seems that the outrage on Kylie Smith was what tipped the balance.*
>
> –O'Brien, B., *Shattered Dreams*, Birkenhead, Auckland, David Ling Publishing, Ltd., 1996.

K. Immobilization of helpers

Caregivers are often immobilized by the same shock, disbelief and denial that afflicts direct victims or survivors. Hence, their helping mechanisms and techniques may not be implemented as quickly or efficiently.

L. Politics and the chaos of disaster organizations

Perhaps one of the most problematic issues in the immediate aftermath of catastrophe is community politics. The question of "who is in charge" is compounded by the fact that normal responding agencies may be in chaos, but also may be reluctant to let anyone else seize the credit. Leadership may become fragmented and the normal bonding for survival may be interfered with as survivors worry about who gets the credit for rescue operations or other actions.

> *The obstacles put up by government bureaucracy took a terrible toll … Offers of help came pouring in from 76 nations and districts, as well as from the United Nations and the World Health Organization. Incredibly, the Japanese government either turned them down or delayed aid with time-squandering bureaucratic procedures. As people lay dying undiscovered in the wreckage, officials spent one whole day debating a Swiss offer to fly in 20 trained sniffer dogs – and then accepted only 12. A French team of trauma specialists, also belatedly admitted, were not allowed to work at all because they lacked certain Japanese medical qualifications.*
>
> – Elliott, Lawrence, "Earthquake at Dawn," *Reader's Digest*, November, 1995.

> *It was apparent that there was absolutely no coordination among the twenty-two or so agencies who were involved in the aftermath of this disaster. There was a kind of confusion as to where responsibilities lay and it was also apparent that various territorial battles were being fought on the back of a terrible tragedy.*
>
> – [In the aftermath of the downing of TWA Flight 800] O'Flaherty, J., "Handling Catastrophe Despite Official Help," *Airport Press*, September, 1996.

VII. Conclusion

In examining the nature of catastrophe one is struck by the fact that tragedies happen and that survival depends upon our ability to reconnect with a community. That community may be one that existed prior to the disaster or it may be created by the disaster itself. Lewis Mumford's words seem to describe that need and prescribe our responsibilities:

> *The very extension of the range of community in our time, through national and worldwide organizations, only increases the need for building up, as never before, the intimate cells, the basic tissue, of social life; the family and the home, the neighborhood and the city, the work-group and the factory.*