

# Psychological Reverberations of a Disaster: A Study of *Wave* by Sonali Deraniyagala

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## **Abstract**

A disaster is often portrayed as a sudden, awful, and hostile encounter between the natural environment and a human population. Experiences of natural disasters reflect human vulnerability and disturbs the network of a society, causing disruptions at man-made, materialistic, economic and ecological levels. 'Disaster' in this definition includes tsunamis, earthquakes, blizzards, tornados, hurricanes, and volcanic eruptions, as well as war, accidents, physical and/or sexual assault, child abuse, domestic violence, terrorist attacks, airplane crashes, nuclear emergencies and countless other natural and man-made occurrences. Natural disaster on its own is catastrophic, resulting in millions of deaths every decade and leaving countless others destitute. Even when one is not harmed physically, these calamitous events can take an emotional toll. The psychological consequences of surviving a natural disaster appear more sweeping in scope, often intensifying over time, and are more insidious in their manifestation than the physical ones. Post-Traumatic Stress Disorder is a common outcome. In this article, I will focus on the concept of psychological reverberations of disasters on Sonali, with reference to Judith Herman's trauma theory of hyperarousal, intrusion, and constriction. Attention will also be paid to determining to what extent the protagonist Sonali in Sonali Deraniyagala's *Wave* is affected by the tsunami she witnesses, and whether she achieves success in regaining her lost self and identity after such a terrible disaster.

**Keywords:** Natural Disasters, Man-Made Disasters, Vulnerability, Trauma, PTSD, Loss of Life.

## **Defining 'Disaster'**

A disaster is often portrayed as a sudden, awful and hostile encounter between the natural environment and a human population. Often disruptive, raging and unmanageable, it debilitates the activities, processes, resources

and safety of a society. Experiences of natural disasters reflect human vulnerability and disturbs the network of a society, causing disruptions at man-made, materialistic, economic and ecological levels. Disasters often result in mass death, serious physical injury, illness, and ongoing psychological impact on survivors. Other consequences may include food scarcity, environmental degradation, loss of public as well as private property, and ecological disruption. The World Health Organization (WHO) defines a disaster as “a sudden ecological phenomenon of sufficient magnitude to require external assistance.”<sup>1</sup> The Australian Institute for Disaster Resilience defines disaster as,

A serious disruption to community life which threatens or causes death or injury in that community and/or damage to property which is beyond the day-to-day capacity of the prescribed statutory authorities and which requires special mobilisation and organisation of resources other than those normally available to those authorities.<sup>2</sup>

It is a crisis of such seriousness and magnitude that the estimate of deaths, wounds, ailments, and property harm cannot be adequately handled with routine methodology or assets. Disaster is additionally characterised as an occurrence in which people experience intense hardships of sustenance and other essential necessities to such a degree that the ordinary capacity of the general public, or a society at large, is disturbed and cannot survive without outside intercession.

Disasters can be comprehensively split into two categories: natural and man-made. Natural disasters, which are generally acknowledged as devastating yet unavoidable, are the result of ebbs and flows in the natural environment. They are commonly associated with the loss of life and infrastructure. Michael K. Lindell and Carla S. Prater in their article ‘Assessing Community Impacts of Natural Disasters’ state, “A natural disaster occurs when an extreme geological, meteorological, or hydrological event exceeds the ability of a community to cope with that event.”<sup>3</sup> These

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<sup>1</sup> Lelisa Sena and Kifle Woldemichael, *Disaster Prevention and Preparedness* (Jimma: Ethiopia Public Health Training Initiative, 2006), p. 2.

<sup>2</sup> The Australian Institute for Disaster Resilience, *Australian Emergency Management Glossary, Manual 3* (Hobart: Tasmania State Emergency Service, 1998), p. 58.

<sup>3</sup> Michael K. Lindell and Carala S. Prater, ‘Assessing Community Impacts of Natural Disasters’, *Natural Hazards Review*, vol. 4, no. 4 (2003), p. 176.

create devastation at mass level and endanger both human life and access to basic necessities such as medicine and shelter. They damage the production distribution of resources and health services, and also hinder the normal functioning of a society. Natural disasters in this definition include tsunamis, earthquakes, blizzards, tornados, hurricanes, volcanic eruptions, floods, plagues, famine, and drought.

In terms of their impact, these events can be categorised into either 'intense' and 'moderate'. Cataclysmic events with intense impacts are more alarming, ravaging and harmful. They include earthquakes, storms, avalanches, tropical storms, tornados, tidal waves, floods, fires, and volcanic eruption. According to the World Bank and United Nations reports, these disasters unravel the aggregate impact of choices made by humans for the developmental purposes, long-term financial gains, as well as the lack of preventative or cautionary measures.<sup>4</sup> David O'Hare refers to "ergonomics", or the human factor, as one of the catalysts for the effects of these disasters.<sup>5</sup>

Disasters of moderate impact often take longer to build up and have fewer effects than those of intense effect. Indeed, these events are sometimes in contention as to whether they constitute disasters, in spite of the fact that they have similar sources and results to larger events. Their effect cannot be belittled, as they can be catastrophic in their own right. They similarly result in environmental and economic devastation, as well as a loss of human life and property, though the latter is often due to human factors rather than the disaster itself. These are also referred to as "invisible disasters".<sup>6</sup> These include landslides, deforestation, storms, droughts, and famines.

Man-made disasters occur because of intentional or accidental missteps by humans in managing resources or operating machinery. They may be the result of a single action, or due to a number of smaller failures that ultimately result in a major failure. Although these disasters are often hard to anticipate, though they are easier to prevent than natural disasters. Wars, mass violence, large-scale accidents, economic crises, assault, child

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<sup>4</sup> Herlander Mata-Lima, Andreilcy Alvino-Borba, Adilson Pinheiro, Abel Mata-Lima and José António Almeida, 'Impacts of Natural Disasters on Environmental and Socio-economic Systems: What Makes the Difference?', *Ambient & Sociedade*, vol. 16, no. 3 (2013), pp. 45-46.

<sup>5</sup> Nestor L. Osorio and Jitka Hurych, 'Literature of Disasters from the Human Factors Point of View: A Descriptive Analysis', *Collection Building*, vol. 23, no. 2 (2004), p. 64.

<sup>6</sup> Mabel C. Marulanda, Omar D. Cardona, and Alex H. Barbat, 'Revealing the Socio-economic Impact of Small Disasters in Colombia Using the DesInventar Database', *The International Social Science Journal*, vol. 34, no. 2 (2010), p. 553.

abuse, domestic violence, terrorist attacks, airplane crashes, nuclear emergencies, industrial fires, gas leakages, and pandemics are among those occurrences classed as man-made disasters. These may vary in terms of impact, which can range from mostly individual to mass devastation. Similar to natural disasters, man-made disasters result in human affliction, death toll, loss of personal and public property and livelihood, and economic disruption. These man-made disasters can broadly be divided into three categories: critical emergencies, industrial and technological disasters, and transportation disasters.<sup>7</sup>

Critical emergencies include circumstances in which communities endure setbacks including deaths, injuries, and loss of property. This mainly caused by war, mass violence, assaults, child abuse, domestic violence, economic crisis, or political clashes. These can also arise because of unprecedented pandemic, such as COVID-19 or HIV. Survivors in these situations are often compelled to leave their homes permanently or for a short period of time; many becoming displaced peoples and seeking refuge elsewhere.

Technological catastrophes are those in which large groups of people, property, infrastructure and economic assets are straightforwardly influenced by major mechanical mishaps, extreme contamination occurrences, spontaneous atomic discharges, fires, or exposure to perilous substances (for instance, fuel synthetic compounds, explosives, or atomic materials). Transportation disasters occur when modes of road, rail, air or marine transport are disrupted and either trap passengers in place, or prevent passengers from undertaking journeys, or both. Injuries and deaths due to these accidents have been increasing with each passing year.

Despite the existence of these man-made disasters, however, it is usually natural disaster that is the most devastating, impacting millions and causing mass economic disruption. Often occurring with little warning, they cause sudden, violent disruption and disorder. Even for survivors, these calamitous events can take an emotional toll. Living through the devastation of one's home and community has significant psychological consequences.

### **The Psychological Consequences of Disasters**

Psychological injury or trauma is a type of emotional disturbance that occurs as a result of a seriously upsetting or disruptive event. Survivors of disasters

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<sup>7</sup> Eric K. Noji, *The Public Health Consequences of Disasters* (New York: Oxford University Press, 1997), p. 7.

are often overwhelmed with stress that surpasses their capacity to adapt or coordinate the feelings required fully process the experience. The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, defines trauma as, “a discrete event or events with threat to life or bodily integrity that result in fear, helplessness, or horror”.<sup>8</sup> The individual may become numb and lose their capacity to think and act appropriately in response to stimuli, particularly when it is reminiscent of the event. Wendy D’Andrea, Ritu Sharma, Zelechowski, D. Amanda, and Joseph explain, “Trauma sets the stage for ongoing psychological and physical distress, which can mutually affect one another, possibly for the duration of the survivor’s life span.”<sup>9</sup> It can arouse anxiety, numbness, nervousness, denial, depression, sorrow, and sleep disturbance. If such conditions persist for a certain period of time, these can result in Post-Traumatic Stress Disorder (PTSD). PTSD is a serious anxiety stress disorder that is generally experienced by persons who are exposed to “actual or threatened death, actual or threatened serious injury, or actual or threatened sexual violence”.<sup>10</sup> Survivors relive their past experiences through nightmares or dissociative episodes often referred to as ‘flashbacks’. This can lead to isolation, depression, issues regarding memory, self-harm, and suicidal behaviour. Symptoms of PTSD may occur immediately following a catastrophic event, though in many cases they develop over time.

Judith Herman, one of the pioneers in trauma theory, refers to trauma in which, “the victim is rendered helpless by overwhelming force. When the force is that of nature, we speak of disasters. When the force is that of other human being, we speak of atrocities.”<sup>11</sup> She believes that traumatic incidents are unprecedented, not on the grounds that they happen infrequently, but in that they overpower the common human adjustments to life. In contrast to ordinary and commonplace events, traumatic events for the most part include dangers to life or somatic wholeness, or close encounter with violence and mortality. Unfortunately, it is difficult to predict the effect of a traumatic

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<sup>8</sup>American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> edition* (Washington, DC: American Psychiatric Association, 2013), p. 275.

<sup>9</sup> Wendy D’Andrea, Ritu Sharma, Amanda D. Zelechowski, and Joseph Spinazzola, ‘Physical Health Problems after Single Trauma Exposure: When Stress Takes Root in the Body’, *Journal of the American Psychiatric Nurses Association*, vol.17, no. 6 (2007), p. 378.

<sup>10</sup> American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, p. 275.

<sup>11</sup> Judith Herman, *Trauma and Recovery: An Aftermath of Violence- From Domestic Abuse to Political Terror* (New York: Basic Books, 2015), p. 33.

event on an individual, as each person experiences their own distinct set of physical, emotional, and psychological reactions to a shared traumatic event.

Herman posits that traumatic or psychological reverberations happen when human precautionary measures fail to prevent a disaster. The human mode of self-protection becomes disorganised and ineffective. In such instances, the traumatised survivors may go through acute feelings without clear memory of the incident, or may recall every detail minutely without any feeling. Sometimes survivors find themselves as dissociated from the world and experience an unending feeling of impatience and irritability. This sort of fragmentation in their personality, whereby trauma attacks the complex system of self-security, which typically functions in a disintegrated form, is a key to Post-Traumatic Stress Disorder. Its symptoms include hyperarousal, intrusion, and constriction. According to Herman, “Hyperarousal reflects the persistent expectation of danger; intrusion reflects the indelible imprint of the traumatic moment; constriction reflects the numbing response of surrender.”<sup>12</sup>

After a traumatic event, the human arrangement of self-protection appears to go into a lasting mode of caution, as though the peril may return at any moment. Physiological excitement becomes intense. In this condition of hyperarousal, the first cardinal indication of PTSD, the damaged individuals startle easily, respond disproportionately to small disruptions, and often have issues with sleep. They experience emotional agitation more regularly, especially during the evening. In this way, traumatic incidents intensely recondition the human sensory system.

Traumatic memories have a number of unusual characteristics that often manifest in a non-linear manner. Moreover, they are often deficient in “verbal narrative and context” and are encoded as distinctive sensations and pictures. Traumatised individuals may remember the snapshot of trauma not only in imagination, but as a result of everyday activities. Treatment is often complicated as while some patients benefit from recalling the situation and accepting its reality, others can be re-traumatised by the very same strategy. Since remembering horrendous affairs incite an acute pain, traumatised individuals often go to considerable length to keep these memories at bay. This aversion often worsens their condition.

The third fundamental symptom of PTSD is constriction, or the numbing response. At the point when survivors are totally helpless, any type of noncompliance is ineffective; they may go into a condition of surrender.

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<sup>12</sup> Herman, *Trauma and Recovery*, p. 35.

Often, this leads to a permanently disrupted sense of self-preservation. Vulnerable survivors try to escape from traumatic situations by altering their state of mind; substance abuse is common. Additionally, they may experience dissociative states even without substance use. These detached conditions of cognizance are trance like stupor states. According to Herman,

They share the same features of surrender of voluntary action, suspension of initiative and critical judgement, subjective detachment or calm, enhanced perception of imagery, altered sensation, including numbness and distortion of reality, including depersonalization, derealisation, and change in the sense of time.<sup>13</sup>

Constriction can severely impact that way a survivor envisions the future. A lack of hope is common. It confines and spoils the personal life of survivors, which sustains the impacts of the traumatic event.

### **Disaster and Psychology in *Wave***

In her memoir *Wave*, Sonali Deraniyagala experiences the same psychological reverberations that are experienced by other victims of natural disasters. The text recounts her experience of the 2004 Indian Ocean earthquake and the resulting tsunami. Sonali, an accomplished economist, recalls holidaying with her parents, her husband, Steve, and two sons, Vikram and Malli, at Yala National Park, Sri Lanka. While visiting a beach, they suddenly become witness to a tsunami. Sonali attempts to save her family from the disaster but fails; they are swept away and ultimately drown. She wonders, “Something came for us. I didn’t know what it was then, and I still didn’t. How can something so unknown do this? How can my family be dead? We were in our hotel room?”<sup>14</sup>

Sonali is saved by clinging to the branch of a tree. As her family’s lone survivor of the tsunami, she experiences acute physical and mental pain after the sudden demise of her family. She wonders, “Why didn’t I die?”<sup>15</sup> To move ahead in life without her loved ones is impossible as she deals with not only grief, but intense survivor’s guilt. Her whole house reminds her of what she has lost. She expresses, “I’d lumber into the shower, and unable to work out how to get the water going, I’d stare at the taps and get dressed again, squirm back into bed.”<sup>16</sup> She loses control of her emotional state. In a state

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<sup>13</sup> Herman, *Trauma and Recovery*, p. 43.

<sup>14</sup> Sonali Deraniyagala, *Wave: A Memoir of Life After the Tsunami* (London: Virago Press, 2013), p. 33.

<sup>15</sup> Deraniyagala, *Wave*, p. 33

<sup>16</sup> Deraniyagala, *Wave*, p. 36.

of hysteria, she attempts suicide a number of times. She eventually resorted to drug and alcohol use to quell her memories: “Half a bottle of vodka down by six p.m... Then wine, whiskey, whatever I could stumble around the house and seize.”<sup>17</sup>

She becomes hysterical when her brother rents her parental house to a Dutch family. She begins torturing the tenants, calling them at midnight, repeatedly ringing their doorbell at 2 PM, and constantly honking at their doorsteps. She reflects, “Strangers in our home. It’s ghastly. The Dutch family, settling in there like nothing has happened. They must be dancing around in their fucking clogs.”<sup>18</sup> Unable to uphold the assault of undesirable memories, she experiences episodic moments of impulse and anger. It takes almost four years for Sonali to visit her actual home in England, but even this does not free her. She says, “Pieces of me hovered in a murky netherworld, timeless day after timeless day.”<sup>19</sup>

Vito Zepinic explains that self-disintegration among trauma victims often results in, “intrusive memories of the trauma, as well as thoughts, images and dreams (nightmares) with compounded levels of hyperarousal or flashbacks.”<sup>20</sup> Sonali exhibits all of the tenants of PTSD: a sense of stimulation in terms of awe and horror (hyperarousal); instability and discontinuity of her personality into present, past and future (intrusion); and partial or total lack of sensation in a part of the body (constriction). These stress reactions make her incapacitated and terrified to proceed in life. She feels as if a part of her has been lost. The “stability and continuity of her personality”<sup>21</sup> is marred by the traumatic event “wave” that hinders her progression in the external world.

Along with foregrounding the causes of trauma, Herman has also suggested measures for recovery. She states, “the ordinary response to atrocities is to banish them from consciousness.”<sup>22</sup> In order to move forward, a survivor must confront the reality of what happened to them. Recovery subsequently depends on the emancipation of the survivors and the making

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<sup>17</sup> Deraniyagala, *Wave*, p. 46.

<sup>18</sup> Deraniyagala, *Wave*, p. 67.

<sup>19</sup> Deraniyagala, *Wave*, p. 33.

<sup>20</sup> Vito Zepinic, ‘Disintegration of the Self-Structure Caused by Severe Trauma’, *Journal of Psychology and Behavioral Sciences*, vol. 5, no. 4 (2016), p. 83.

<sup>21</sup> John Searle, ‘The Self as a Problem in Philosophy and Neurobiology’, in *The Lost Self: Pathologies of the Brain and Identity*, eds Todd E. Feinberg and Julian Paul Keenan (New York: Oxford University Press, 2005), p. 9.

<sup>22</sup> Herman, *Trauma and Recovery*, p. 211.

of new associations. Key to this is the patient undergoing new experiences. Recovery unfurls in three stages: establishment of safety, remembrance and mourning, and reconnection with ordinary life.<sup>23</sup>

The first and foremost constituent of recovery is establishment of safety. Without the restitution of safety, the other measures can do little. The foundation of safety, as indicated by Herman, relies upon “a safe living situation, financial security, mobility, and a plan for self- protection in daily life.”<sup>24</sup> As Sonali’s mental state is disturbed and she is into the regular practice of harming herself, relatives and friends step in to ensure her safety. At one point, she is placed under suicide watch. In order to clear out the memories of the wave, she must build new memories in new places. A psychologist is also arranged to help her to come out of the traumatic memories of the past. Sonali’s recovery is greatly assisted by her support network.

Once the safety of the trauma survivors is ensured, the next stage is remembrance and mourning. Herman asserts, “After many repetitions, the moment comes when the telling of the trauma story no longer arouses quite such intense feelings. It has become part of the survivor’s experience-but only one part of it.”<sup>25</sup> James Pennebaker explains, “the art of disclosure is a powerful therapeutic agent that may account for much of the healing process. When people put their emotional upheavals into words, their physical and mental health seems to improve remarkably.”<sup>26</sup> Sonali realises the fact that remembrance can bring her closer to her loved ones. She realises, “I can only recover myself when I keep them near. If I distance myself from them, and their absence, I am fractured. I am left feeling I’ve blundered into a stranger’s life.”<sup>27</sup>

As Herman states, “...the choice to expose oneself to dangers can be understood as yet another re-enactment of trauma.”<sup>28</sup> In the final stage survivors try to reconnect themselves with the ordinary life. They learn to fight and try to reconnect themselves with the people and society around. They become aware of the fact that continuous mourning will not heal them and help them to come out of their emotional trauma. In line with the above

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<sup>23</sup> Herman, *Trauma and Recovery*, p. 211.

<sup>24</sup> Herman, *Trauma and Recovery*, p. 160.

<sup>25</sup> Herman, *Trauma and Recovery*, p. 195.

<sup>26</sup> Sara Baker, ‘Tell It Slant: History, Memory and Imagination in the Healing Writing Workshop’, *Traumatology*, vol.15, no. 4 (2009), p. 16.

<sup>27</sup> Deraniyagala, *Wave*, pp. 207-208.

<sup>28</sup> Herman, *Trauma and Recovery*, p. 197.

statement, Sonali realises the fact that ceaseless bereavement will not alleviate her from her traumatic memories and perturbed cognitive state. She has to fight with her traumatic memories to get back to normalcy. Therefore, she starts consulting a psychiatrist. At his advice she starts recording and narrating her past experiences. This eventually culminates in the very book that describes her experiences, *Wave*.

### **Conclusion**

Resilience and access to support play a key role in the reinvigoration process of a survivor. Venkat Ramana states, “a sense of self is needed to better organize our lives.”<sup>29</sup> In the same way Sonali loses her “self” during Tsunami and finds herself again in alliance with Herman’s three stage model of recovery, achieves success to overcome her traumatic situation and regains her lost self by communicating with people and consulting a medical practitioner. His continuous support and guidance prove fruitful to her. Thus, she tries to regain her lost identity, and also achieves success in overcoming her losses after a severe disaster.

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<sup>29</sup> Venkat Ramana, ‘Jorge Luis Borges and the Nothingness of the Self’, *Literature and Aesthetics*, vol. 26 (2016), p. 107.