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Is There Such a Thing as a “Natural” Disaster?

By Jonatan A. Lassa

Synopsis

Being vulnerable to the forces of nature is entirely social and political economic decisions. This article provides an overview of 40 years of critical disaster studies and why critical approach to understanding disasters can save lives.

Commentary

AMIDST GROWING calamities globally, it may be time to ask a fundamental question: Is there anything natural about natural disasters? Vulnerable housing and buildings that collapsed in recently in Italy and Haiti this year and in Nepal last year are examples of public policy failures to ensure resilience of new and old buildings to earthquakes in places around the world. Critical disaster studies have long argued that natural disasters do not exist. The overemphasis on the naturalness of the natural events such as earthquakes and storms as the root cause of disasters have been long contested for many good reasons at least in the last 260 years.

So let's be critical. Most planets experience quakes. On earth such quakes are called earthquakes. On Mars, there are marsquakes. On the moon, there are moonquakes. In a year, here on earth, we have at least 1.44 million earthquakes each year as documented consistently by the United States Geological Survey. And remember, the earth is a moving spaceship. It moves like a giant airplane orbiting the sun and in that process its stresses and strains get released to the surface. People just do not see it this way.

Critical Disaster Studies

Therefore, earthquakes are normal planetary phenomenon. Every year, our planet shakes at least one earthquake with 8 or higher magnitude; about 17 earthquakes

with 7-7.9 magnitude and 140 earthquakes with 6-6.9 magnitude and 1600 with 5-5.9 magnitude. Data suggests that in the last 100 years, every day we have at about 36 recorded earthquakes with 4-4.9 magnitude and 3917 earthquakes with 2.0-3.9 magnitude. Many go undetected because they either hit remote areas or have very small magnitudes.

This year is the 40th year anniversary of an article published in Nature 1976 entitled ["Taking the naturalness out of natural disasters"](#), written by Phil O'Keefe and his colleagues (based at Bradford University in the United Kingdom at that time). Using empirical global economic loss data, they showed that social-economic and not natural factors should be responsible for both the loss of many lives and the loss/damages of the assets in developing world. And fortunately, they are not the only group that has been viewing this way.

After years of consistent research and advocacy within critical disaster research communities to convince the policy makers at the global stage, finally, the United Nations, especially the United Nations International Strategy for Disaster Reduction (UNISDR), adopted the critical approach to disasters by suggesting that ["There is no such thing as a 'natural' disaster, only natural hazards."](#)

UNISDR now maintains that natural hazards are natural processes and/or events that may cause the loss of life, assets, livelihoods and services and so on depending on their degree of vulnerabilities and exposures. UNISDR further explains that the degree of severity of a disaster depends on our "choices (and) relate to how we grow our food, where and how we build our homes, what kind of government we have, how our financial system works and even what we teach in schools. Each decision and action makes us more vulnerable to disasters -- or more resilient to them".

Insights from Lisbon

One famous story on the event that later became a revolutionary shift in thinking about disasters among social science scholars - at least from the context of continental Europe of the late 18th century - is both the story from the Lisbon Earthquakes on 1 November 1755. It was not an ordinary Saturday morning.

Suddenly at about 9.30 am estimated earthquakes of 8.5-9.0 magnitude hit the city and trigger large-scale tsunamis. According to some estimates, about 17,000 out of 20,000 buildings collapsed and caused about 70,000 deaths. Half could have probably died because of the collapse of the buildings; while the rest died due to both post-earthquake fire and lack of post-disaster response as the wounded outnumbered the number of first responders and rescuers.

Portugal was one of the great nations then, and Lisbon was the symbol of progress of human civilisation. One of the great French philosophers of the time, Voltaire, wrote deep emotional poems that might encourage the suffering Christians to be repentant and resilient in their faith in God as the event was seen as how God showed His power, glory and might. But the young French philosopher of the time, Jean-Jacques Rousseau with very fresh eyes challenged Voltaire in a letter by simply mentioning the obvious, noting that nature did not construct thousands of buildings and houses of six to seven stories that collapsed in the earthquakes.

In the context of Western philosophical thinking, we can accept the claim from some academics that Rousseau's letter to Voltaire symbolised the beginning of the first shift in thinking leading to the new interpretation of disaster events.

Debate Moving in Right Direction

Some primitive responses to misfortunes and calamities from natural events often automatically activate certain interpretations that lead to strengthening certain norms, values and beliefs. Even religions often seek well-suited theological interpretations that justify certain natural events as divine interventions to correct the behaviour of the sinners. In Southeast Asia, I have seen similar narratives often repeated in Aceh after the Indian Ocean Tsunami 2004 and Padang earthquakes in 2009.

Today scholars of different disciplines have lesser disagreements on the issues surrounding the need to adopt more proper terms and definitions to provide adequate mental energy for paradigm change towards proactive disaster reduction. However, the debate on the term continues for good reasons.

Counting the amount of scholarly work on natural hazards, one might argue that overall we are moving in the right direction. Understanding the reality is one important thing. However, translating that learned reality and ideas into the reality of policy making and practices is another.

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