

# What is a Disaster? Views from Research and the Field

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## Abstract

The paper draws on the work of E. L. Quarantelli and coauthors in *What is a Disaster?* to consider how a disaster is fundamentally defined. As indicated in Quarantelli's book, the definition of a disaster differs between professions, societies, cultures, and over time. This paper summarizes the major points of the proposed definitions and reflects on what, in a practical sense, the real definition of disaster is. In the end, it appears that when people think they are experiencing a disaster, their actions reflect this view regardless of what external assessments or academic definitions may indicate. The implication for disaster and emergency management is that the perception of a problem, rather than hard data, may be the most important factor defining response expectations and needs.

## 1. Introduction

Defining the obvious has few merits. Most people probably do not see a need for an elaborate definition of what constitutes a disaster. They have no doubts that when one affects them they will know it.

A similar view is probably held by those involved in disaster management operations. Dealing with disasters on a regular basis, they probably feel they are more than familiar with the nature of the beast. Researchers, who often try to look beyond the obvious, shouldn't really even be doing research without a clear and accepted definition of what they are investigating.

The reality is a bit different. As Quarantelli comments "... some disputes about what appear to be empirical findings mostly stem from different usages of the basic concept" ... of what constitutes a disaster, and "... some researchers use such a broad referent that any type of individual or group stress situation is seen as a disaster" (p. 3). Clearly, if any stressful event is defined as a disaster, then most days for most people include at least one disaster. And disaster managers are failing seriously in their responsibilities.

On a more practical level, the climatic, political, and economic problems in Indonesia, the earthquakes in Turkey, the aftermath of Hurricane Mitch, the social and economic transition in post-Soviet Russia, the conflict in Kosovo and AIDS are all commonly referred to as disasters. However, the nature of the responses, dictated by the nature of the events, include radical differences. It seems these events are

only lumped together under the heading of disaster because of a perceived need to *do* something about the events.

For people affected by the diverse types of events labeled as disasters, the moral and physical support which comes when experiencing a disaster can seem to be more related to access to political systems or the media rather than any obvious need. In other words, the better connected individuals (often the better off) may seem to get assistance while those in greater absolute need may not. Even if this is not true in most cases, the lack of a commonly held definition of the term disaster means there is no effective way to assess whether assistance is fair, appropriate, and equitable.

Most would probably not want every individual stressful event to be considered a disaster, if only because disaster assistance would become a daily entitlement and a new expensive form of welfare.<sup>1</sup> Creating a very tight definition excludes legitimate cases of need. This outcome is contrary to the societal solidarity, compassion, and help normally directed to people recognized as victims of disaster. Getting a handle on what a disaster is seems critical to ensuring that everyone recognizes and is dealing with the same problem, and that the assistance provided is fair, effective, and appropriate.

This paper makes a contribution toward developing a generally applicable definition of disaster through a review of some definitional arguments made by researchers, followed by a perspective based on experience and networking with disaster managers over the past 20 years. The researcher's arguments come primarily from *What is a Disaster*, a book which provides the first cross-disciplinary effort to define this term (Quarantelli:242). However, the book is written by and for researchers. There is a need to open up this exchange to a more practice-oriented assessment, if only to ensure that what researchers define has a better relation to reality.

## 2. Defining Disaster

One approach to defining disaster is quantitative, identifying a disaster based on numbers affected, killed and injured, and economic loss. The Bradford Disaster Scale (Keller), the record-keeping by the Center for Research on Epidemiology of Disasters, and reporting of such data in the annual International Federation of the Red Cross and Red Crescent World Disaster Report (IFRC 1999), exemplify this quantity-based approach.

There are three weaknesses with this quantitative approach. First, data on possible disaster must be accurate, of the types used in the relevant calculations, and readily available. These requirements create a bias against events that are not easily accessible or well-quantified.

The second weakness is that there is not universal agreement on the thresholds for quantitatively defining a disaster. (see, for instance, the Natural Hazards-Disasters email list discussion about disaster and hazard scales at [www.mailbase.ac.uk/lists/natural\\_hazards\\_disasters/archive.html](http://www.mailbase.ac.uk/lists/natural_hazards_disasters/archive.html)). Efforts at setting quantitative thresholds seem to reflect more a sector's limited interests (e.g., the insurance industry) than establishing a broadly applicable way to identify threats and misfortune experienced by individuals and society.

<sup>1</sup> Admittedly, some disaster assistance programs already fall into this category.

Third, there is a growing view that the number of small disasters (those that fall under the quantitative thresholds or fail to gain media attention) are much greater than generally realized, and result in cumulative damages greater than those experienced from larger, media-acknowledged, disasters (Mitchell:25). This view suggests that, at a practical level, disasters need first to be considered as local events, and definition and quantification are based on the local impact on people and society. This type of information is rarely collected or considered at the national and international levels where the compilation of disaster statistics takes place.

Interestingly, the disasters-are-local-events view has a strong link to efforts in the international humanitarian assistance community to include local populations in disaster relief and preparedness (IFRC, 2000). This point will be returned to later in the paper.

Another definitional divide comes in deciding what type of event should be considered as a possible disaster. The traditional approach classifies events under headings such as *natural*, *technological*, or more recently *social* or *complex* disasters (see Kelly, 1996, 1998, and Mitchell:35-42). This can be seen as a continuation of the view of disasters as *acts of god*, that disaster is caused by some external force (Dynes:214, Mitchell:36). An alternate view holds that a trigger event, e.g., an earthquake, is something quite different from the reasons for earthquake damage, which are the result of human action or inaction (Mitchell:42-46).

There is also an issue as to what types of events can be considered as triggers. One side holds that triggers which involve antisocial behavior, e.g., war or terrorism, should not be considered since the damage is intentional. In short, there is a difference between rugby and hooliganism (see Quarantelli:238-242 for a fuller discussion of this position). Others hold that triggers involving antisocial behavior are legitimate disaster initiators (Drabek:243).

There is also an evolving view that disaster triggers are developing in new ways (Quarantelli:3), and that new combinations of previously common events can trigger unprecedented disasters (Mitchell:36). Yet, as comments by Dynes (214) suggest, some limit to the definition of disaster is needed, if only to permit an individual to divide the day into normal and disaster periods.

So, what can *What is a Disaster?* contribute to setting limits to a definition? The book is a compilation of the views of thirteen researchers from fields including sociology, political science, geography, economics, anthropology, public administration and social psychology (Quarantelli:6). By reference, the book expresses the views of a wide range of researchers in North America and Europe. Given this broad base, one might expect the views expressed would help form a consensus definition. The book does contain a number of possible definitions, including that disasters are<sup>1</sup>:

- "... a reflection of the nature of the *market* in which disaster research became an institutional demand" (Gilbert:12).
- Like war, in that they are caused by external agents (Gilbert:12).
- Social vulnerability (Gilbert:14-15).

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<sup>1</sup> Author names and pages below refer to *What is a Disaster?*

- Uncertainty caused by danger which threatens the community, complexity in the operation of a community, or the inability of community members to address serious concerns in traditional terms (Gilbert:16-17).
- "... the failure of protection measures ... the inadequacy of means (the cultural protections) in relation to given ends (to avoid their collapse)" (Dombrowsky:26).
- "... an unplanned and unintended result of human activities ... not only the human interaction itself, ... but also the interaction with nature and its own autodynamic and self-organizing processes" (Dombrowsky:29).
- "... sociological" (Dombrowsky:30).
- "... nonroutine events in societies or their large subsystems (e.g., regions, communities) that involve social disruption *and* physical harm. Among the key defining properties of such events are (1) length of forewarning, (2) magnitude of impact, (3) scope of impact, and (4) duration of impact" (Kreps:34).<sup>1</sup>
- "... an incident, accident or other harmful occasion resulting in losses and sorrow," quoted from Explanatory Dictionary of the Great Russian Living Language (Porfiriev:57).
- "... a state/condition destabilizing the social system that manifests itself in a malfunctioning or disruption of connections and communications between its elements or social units (communities, social groups, and individuals); partial or total destruction/demolition; physical and psychological overloads suffered by some of these elements; thus, making it necessary to take extraordinary or emergency countermeasures to reestablish stability" (Porfiriev:61-62).
- "... problems that are, by implication and in fact, out of control, in that they break out of the modern mold, or challenge its effectiveness" (Hewitt:89).
- "... normatively defined occasion in a community when extraordinary efforts are taken to protect and benefit some social resource whose existence is perceived as threatened" (Dynes:113).
- "... fundamentally disruptions of routines ... just one among many types of exceptions that one can observe occurring within a social system ... We know them to be exceptions because participants ... designate them as such ..." (Stallings:137).
- "... a large, pitch black wall in a room with no light ... " with legislative definitions of disaster, and other definitions arising from personal experience and perspective, only illuminating small parts of the wall (Knoll-Smith and Gunther:163-166).
- "... a collectivity of intersecting processes and events, social, environmental, cultural, political, economic, physical, technological, transpiring over varying lengths of time. Disasters are totalizing events" (Oliver-Smith:178).
- "... a process/event involving the combination of a potentially destructive agent(s) from the natural, modified and/or constructed environment and a population in a socially and economically produced condition of vulnerability, resulting in a perceived disruption of the customary relative satisfactions of individual and social needs for physical survival, social order and meaning" (Oliver-Smith:186).
- "... a socially defined occasion, serving as a context for human behavior, recognized across social time as a radical change in the effectiveness of social structures (norms, practices beliefs, etc.) to meet human needs, and framed in a social change perspective" (Perry:211).
- "... a sensitizing concept, ... a research topic, an administrative decree, an ordinary

<sup>1</sup> Bold in original.

language description or metaphor for human experience, and a popular genre for B movies . . .  
” (Kroll-Smith and Gunther:230).

These possible definitions of disaster cover a lot of ground. However, the diversity of views does not seem to help much in establishing a functional definition for use in field operations.

One characteristic does seem common to most of the definitions: disasters have a negative connotation. Yet Quarantelli points out that this view (1) represents a value judgement, something researchers are supposed to refrain from making, (2) is contradicted by research identifying positive long-term economic and social changes following disasters, and, (3) ignores some circumstances, such as violent conflict, where the winners may see themselves as being better off despite having suffered the disaster of war (265-266).

At the practical level, the act of defining disaster is done by three groups: —

- (1) Those who believe others are having a disaster,
- (2) Those who see themselves as experiencing a disaster, and
- (3) Those charged with providing assistance in response to one or the other group’s belief that a disaster is happening.

In most cases, the third group is constrained by some written (and often legal and quantitative) definition as to what should be considered a disaster. These definitions are usually close to those cited by Kreps, Porfiriev, and Oliver-Smith, and focus on conditions that pose an immediate threat to life and welfare, or new, significant and threatening uncertainty. There are clearly value judgments involved. Rarely, if ever, is the positive side of disaster considered (although the vulnerability of disaster-affected populations may be seen as an opportunity by outsiders for positive social change).

The other two groups, the affected and unaffected, base their definitions on a combination of objective and subjective (i.e., perception) factors. These definitions change over time and reflect different combinations of factors seen as indicating a disaster.

This latter process of defining disasters, using objective and subjective factors, has a strong link to a pervasive theme in *What is a Disaster?*, that disasters are socially defined. To paraphrase Quarantelli’s reference to Thomas, (273), *when people think there is a disaster, their actions will reflect this view.*

Turning this into a definition, *that disasters are what happens when people think there is a disaster*, has significant implications for field operations. Most disaster assistance deals with tasks such as moving assistance, or implementing processes to support victims and minimize damage. If the target population does not believe they are at risk or suffering from a disaster, these efforts lack utility, and may even be resisted by the supposed victims.

The opposite, where one group sees itself as experiencing or at risk from a disaster, but this view is not held by the unaffected, leads to unmet demands for assistance. The result is a serious tension between the self-identified victims and the disaster assistance group, acting as the interface between the affected and unaffected group.



The more common situation is of agreement across groups as to the risk or reality of a disaster, but a lack of agreement as to the specifics of magnitude, damage, and needs. This places the assistance group in a quandary as to whether to provide aid based on what the victim group wants or what the unaffected group believes is needed. Often, decisions are based on the latter, as the assistance group is more beholden to the non-affected than the affected in terms of access to resources.

Obviously, reducing the gap between what affected and unaffected groups see as the characteristics of a disaster can lead to more appropriate assistance, and less suffering by those experiencing a disaster. And reducing the tension between the groups makes the work of the assistance providers easier. Yet, given the difficulty which disaster researchers have in agreeing on a definition, creating agreement across all the possible groupings of those who can be affected or not affected by each type of disaster is impossible.

A more practical approach is to seek to understand different subjective perceptions of what constitutes a disaster (as suggested by Knoll-Smith and Gunther, in Quarantelli:160-176), define areas of agreement, and work to forge agreement in those areas of potential disagreement. This process probably works best with the assistance group, the on-site link between affected and unaffected, as the facilitator and translator of information and views between the two groups.

A trend in this direction is already underway in international assistance. The Sphere Project seeks, among other objectives, involvement of disaster victims in identifying needs and planning assistance in response to a disaster (IFRC 2000). This approach works best at the community level, shifting the focus of disaster definition away from large anonymous levels of society. As disasters are socially defined, so are they events that first affect communities.

### 3. Conclusions

If the attitude of "I cannot define disaster, but I know it when I see it" (Quarantelli:236) is true, is there any practical need to answer the question "What is a disaster?" At the level of the affected and unaffected groups, rigorous definitional efforts are probably a waste of time. Like Quarantelli, either group will know it when they see it.

However, defining disaster is critical for the assistance group (and of course researchers, who do need to know what they are talking about). To be effective in moving assistance from the unaffected to the affected, this group needs cross-group agreement on the nature of the problem. The greater the agreement, the better the match between assistance and needs, and the quicker the recovery from the disaster.

Thus, the assistance group should seek less to create their own definition of disaster than synthesize the range of interrelated definitions based on different community-level perceptions. The challenge is to redefine, reduce, and bridge disagreements and create functional definitions which enable disaster field operations to be effective and provide appropriate assistance to those in critical need.

This paper does not reach a single functional definition of what a disaster is. Definitions used by the

research community have not begun to converge. It is likely that disputes about “empirical findings” referred to by Quarantelli (3) will continue. Victims and non-victims will continue to define and refine their respective definitions of disaster based on information and perceptions, with little regard for researchers’ views, to the consternation of each other and the frustration of those involved in disaster field operations. Yet, the dark clouds of confusion over what constitutes a disaster may lift, however slightly, if those involved in providing assistance work aim to build a bridge between victim and non-victim views, and establish a common understanding.

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