

## **Proposing a Marketing Disaster Severity Index: Measuring the Dimensions of Damage as a Preface to Recovery**

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*A contemporary part of business life is the ever-present possibility of a marketing disaster. Disaster could come in the form of a product recall, product liability action, product tampering, or action of an employee. It could stem from a natural disaster, an unfavorable court ruling, or an un-envisioned surprise. In response to a disaster, organizations should have disaster prevention plans in place. Should these measures fail, a disaster recovery plan would address the resulting damage. What is currently missing from this discussion is a mechanism for assessing the level of damage to recovery- marketing needs to respond.*

### **INTRODUCTION**

Our interest in developing a marketing disaster measure grew out of work done in the area of redemptive marketing, a concept similar to recovery marketing or counter-marketing (Kotler 1973). It has only been in relatively recent years that organizations have recognized the importance of applying marketing efforts to the task of bringing a company's image back from the brink of failure. Today's environment provides more favorable conditions than ever for a marketing disaster as a result of dependence on technology, the effectiveness and speed of communication, susceptibility to natural forces, social unrest, the growth of consumerism, and the phenomenon of an increasingly litigious society. A single hurricane or earthquake, an act of terrorism, a *faux pas* committed by a corporate official, an unfavorable court ruling, or an injurious product defect can have disastrous effects on the reputation, profitability, and survivability of an organization.

Notable marketing disasters in recent time includes Johnson & Johnson's nightmarish experience with Tylenol capsules, Firestone's problem with its "500" tires and later with the Wilderness XT, Ford's roll-over situation, and debacles like the General Motors Cobalt key fiasco.

The events of September 11, 2001 dramatically prompted interest among many organizations to think seriously about disaster-recovery systems, yet managers acknowledge that they have yet to follow through on many of their intentions. According to a Gartner survey, one in three businesses would lose critical data or operational capabilities if struck by a disaster. "The flurry of activity and interest in disaster-

recovery services didn't translate into a lot of people necessarily doing anything about it," says David Palermo, vice president of marketing for SunGuard Availability Services, a company with a big stake in the business continuity market (Conner 2003).

It is important to make a distinction between assessing the threat of a disastrous occurrence, and measuring the effect once the disaster has commenced or concluded. This effort is directed primarily toward the latter, though it is not without implications for the former.

Disaster management, when planning for any type of disaster, tends to focus on four areas which include:

1. Mitigation – activities taken prior to an event that will lessen the probability or effect of the incident.
2. Preparedness – efforts taken to enhance the response capabilities of an organization in order to handle the resulting problems.
3. Response – the activities that occur during an event to improve the outcome through a well-developed plan that will activate needed resources within the disaster response system.
4. Recovery – includes the short and long-term measures to bring the system back to normal operation (Mothershead 2003).

Even though the focus of a lot of attention today is on the recovery phase, we contend that to correctly specify the form that recovery actions should take, the response stage is missing an ingredient: evaluation of the problem. Every organization, as part of its contingency planning, needs a mechanism for evaluating the severity of a disaster in order to match the response to the problem. With the current hazards that face any business, as well as the potential for disasters of any number of descriptions that have struck businesses in recent years, it is startling to discover the dearth of literature addressing assessment of business harm. Ideally, a device for scoring harmful effects -- a severity index -- should exist and should guide the degree and scope of response to a marketing disaster.

Much has been written about the need for recovery programs (e.g., Conner 2003, <http://www.networkworld.com/article/2336421/lan-wan/disaster-recovery-plans-still-need-work.html>, Kessler 2001, <http://usatoday30.usatoday.com/money/tech/2001-10-02-recovery-plans.htm>, D'Souza 2003, <http://www.psychotactics.com/internet-marketing/how-to-turn-an-internet-marketing-email-marketing-disaster-into-profit/...>), but little has appeared in the marketing literature concerning the need for a relevant, sensitive measure of harm to an organization's marketing effort. Failure to have a mechanism in place to measure the extent of, or potential for, damage, leaves an organization without a gauge to direct proper response. The danger of this gap is that, without a severity index, the organization may easily over-respond, wasting valuable resources and diluting the potency of these measure in the future, or under-respond, leaving the organization vulnerable to further damage. Damage in this context refers to harm to the organization's image, reputation, market, positioning efforts, or competitiveness.

## **NEED FOR CLASSIFICATION**

The classification of phenomena is basic to all intellectual and pragmatic endeavors. It helps to define the boundaries of a subject and facilitates scrutiny, comparison, and modeling. In the marketing context envisioned here, the problem concerns the conceptualization of different kinds of disasters, different victims, and their inter-relationships. This conceptualization and classification can help bring together the appropriate personnel, resources, and measures to meet the organizational needs generated by exposure to the effects of disaster. Beyond this, empirical classification helps move an organization past shame or other emotional reactions to unfortunate circumstances and on to more productive responses.

While the profession has some handle on modes of recovery from a marketing disaster, we do not have a measure that provides a gauge of the severity of the calamity and in turn permits a measured, appropriate response. This need has led to a review of disaster literature in hopes of finding clues to how this "severity index" should function. What is certain is that classification is necessary if comparisons are

to be made between different kinds of victims and the different kinds of intervention intended to help them.

## GENERAL DISASTER TERMINOLOGY

In the 16<sup>th</sup> century, the astrological attribution for the occurrence of major calamitous events found society looking to the heavens for an explanation. This astrological attribution led directly to the construction of the word – ‘dis-a-star’, i.e. disaster, a person or community without the protection of a guiding star or religion (NSOD 1993). That is to say that one is experiencing disaster when their source of help is removed.

Later mankind began to seek causative explanations for disasters other than those that were metaphysical and superstitious. This quest led to the broadening of the concept of disasters to include the deliberate as well as the accidental effects of technological development. The implication was that mankind had sometimes to shoulder responsibility for having brought about tragedy by incompetence, ignorance, and negligence, rather than indirectly by moral turpitude, as was thought before. Such was the case when the side effects of early industrialization included dam bursts, factory explosions, fires, mining tragedies, and various transport accidents (Hoehling 1973, Perkes 1976, Kingston and Lambert 1980). The fallout of later technological development included the pollution of the land, sea, and air by radioactive and toxic waste.

One of the difficulties in achieving precise nomenclature for disaster preparedness and response is that the very word “disaster” means different things to different people. There is a tendency to have a single “disaster” plan and to provide the same “disaster” response regardless of the particular circumstances. Most authorities in the area of disaster response agree that, when describing an event, the most important consideration is the functional impact of the affected domain (Koenig et al. 2002, de Boer 1990, Dinerman 1990, Koenig 1994, Schultz et al. 1996). Therefore a nomenclature for describing “disasters” should focus on the effects on the organization and society. It is important that a universal vocabulary be in place so preparedness, assessment, and response will be in harmony.

A variety of approaches have been employed in attempting to describe disasters. For example, a geographic basis for characterization is sometimes used. Geographically a disaster could either arise “internally” or “externally.” Or sometimes the breadth of the impact of the disaster is local, regional, national, or international. However, the specific location of an event is usually only an important issue in understanding how to address the problem insofar as it reveals evidence of impact. A class 4 tornado touching down in uninhabited prairie is quite a different event from the same class funnel cloud dropping into a densely populated metropolitan corridor.

Another traditional descriptor is whether the disaster is “natural” or “man-made.” Some regard this as an inefficient and unnecessary conceptual scheme, since it is of no consequence to the community being affected. Whether operations are disrupted from natural or man-made causes may have little impact. It is the effect on the system that is relevant, rather than what caused the problem. However, an analysis of *neglect* issues would weigh *natural* and *man-made* differently.

Currently, there is no uniformly accepted terminology for disasters, even in the medical or other disaster response, communities. De Boer (1990) recognized the problem of the lack of a meaningful definition for the word “disaster” in the medical field and proposed a “severity index.” This index is a product of the casualty load and the severity of the incident and is compared with the available total capacity of services to deal with the resulting problems. The question becomes one of the severity of the disaster relative to the community’s ability to cope.

The situation is worse in the arena of marketing where, arguably, the need for a severity index is just as pressing. Asking a group of managers to define “disaster” would likely result in a confusion of explanations. A common, precise terminology is important because markedly distinct responses are required for each type event. Clear, concise language is critical not only for preparation, but also for requesting appropriate levels of assistance under conditions of severe disruption of services.

With a common, concise nomenclature, managers can be educated to communicate clearly. Then responders can assess the degree of destruction, improvise on a set framework, and communicate more effectively. The plea for help can be modified so that the specific resources requested will lead to the most effective and efficient response.

In thinking through the lists of possible kinds of disaster, it becomes clear that what an organization considers a disaster depends upon its ability to cope with the phenomenon. A crisis that might be devastating to one organization can be quickly and harmlessly absorbed and addressed by another. In fact, it is critical to distinguish between three terms that tend to become confused: *crisis*, *catastrophe*, and *disaster*. A crisis is a point at which a decision could lead to disaster. It occurs when an organization cannot see a solution for a problem, which if not solved, could turn disastrous. In other words, not all crises turn into disaster, only those that are not handled in a way that releases the tension of the situation gently (Kutz 2000).

Catastrophes are short-lived changes that bring about disaster when the organization is not paying attention, or has not sufficiently prepared, as opposed to disasters that have enduring aftermaths. It is only when the organization fails to perceive that conditions for catastrophe are good, and does not take proper precautions, that disaster can befall (Kutz 2000). There are a number of mathematical treatments of Catastrophe Theory that spin off of Rene Thom's work in the late 1960s which can be used to get a good idea of how fundamentally *catastrophe* and *disaster* differ.

Therefore a "disaster" is *any event that occurs unexpectedly with destructive consequences*. Generally speaking, disasters can be put into three main categories: natural disasters (e.g., flooding, hurricanes, blizzards, storms, landslides, etc.), technical disasters (e.g., power outages, breakdown of computer networks, gas leaks, communication failure, cooling/heating/ventilation system failure, etc.), and human disasters (e.g., theft and criminal damage, neglect, sickness/death, war/terrorism, a strike, etc.). Marketing disasters frequently fall under the heading of *human*, but certainly marketing disasters may grow from *natural* or *technical* origins. This complexity calls for a guide to definition and usage.

## MARKETING DISASTER TERMINOLOGY

We are defining marketing as *any activity that facilitates exchange*, therefore it embraces the activities of selling, advertising, public relations, distribution, pricing, product image, competitiveness, and the such like. In a marketing context, when we talk about readying for disasters, what exactly is it that we are supposed to be prepared for? Several hallmarks of a marketing disaster are: (1) a disturbance which profoundly affects the life of the organization, (2) an event which cannot be accommodated by everyday coping mechanisms (standard operating procedure), (3) a change which exceeds expected extremes, or (4) a sudden explosive loss of convergence between processes which had seemed well-converged.

Described thus, a disaster could be the result of either a horrific natural destruction, like an earthquake, which had a significant disruptive influence on the organization or the death of a senior officer off whom the organization cued. The disaster caused by the earthquake could be of two sorts: (1) the devastating effects caused by the physical damage it caused that directly affected the organization (Toyota parts supply disruption) and (2) the residual effects of the storm as when an insurance company is materially affected because much of the damage brought by the hurricane was insured by this one company.

Therefore, a marketing disaster could be defined as *a condition of devastating consequence to an organization's marketing posture brought about by a poor decision, lack of preparedness, or an event which had a marketing impact beyond the organization's ability to cope*. A marketing disaster could involve irreparable damage to an organization's reputation, significant tainting of a brand, loss of trust, a sudden catastrophic erosion of its client base, an abrupt, devastating downturn in the economy, an unfavorable and overwhelming lawsuit, or a sweepingly effective move on the part of competition that wins them incontestable and sustainable advantage.

## DISASTER CLASSIFICATION

Social scientists have not traditionally been interested in disasters as a topic, but the few who were, focused on the major dimensions of disaster rather than the major types of disaster. One of the first, Carr (1932), classified disasters with the scales of instantaneous/progressive onset, and diffuse/focalized impact. Powell, Rayner, and Finesinger (cited in Baker and Chapman 1962, p. 30) identified the progressive stages of warning, threat, impact, inventory, rescue, remedy, and recovery. Barton (1969) added scales of duration and of social preparedness.

Then Drabek (1986) presented an analysis of over 1000 disasters from which he derived the four phases: preparedness (planning and warning), response (evacuation and emergency), recovery (restoration and reconstruction), and mitigation (perceptions and adjustment). About the same time, Britton (1986) proposed a useful continuum of emergency service activity, according to the extent of disruption that ranged from accidents, through civil emergencies, to disasters. More recently Granot (1998) made it clear that disaster can be (a) of insidious as well as of sudden onset, (b) of longer as well as shorter duration, and (c) created as much by mankind as by the natural forces of the environment.

Interestingly, none of these researchers applied their dimensions to warfare. The omission is far from trivial for the marketer because the warfare of the twentieth and twenty-first centuries saw the development of technology and communications which would serve as two of the major instruments of marketing disaster in the current age. The United Nations Disaster Relief Organization (UNDRO) only began including 'deliberate acts of man' in the definition of disaster in 1993 (DHA News, p. 54).

Some of the major elements of a disaster that have found treatment in the literature follow.

### Impact

The World Health Organization defines a disaster as a "sudden ecological phenomenon of sufficient magnitude to require external assistance." The American College of Emergency Physicians states that a disaster has occurred "... when the destructive effects of natural or man-made forces overwhelm the ability of a given area or community to meet the demand for... care" (Mothershead 2003). Other definitions exist, but the common denominator is a disruption of such magnitude that the organization, infrastructure, and resources of a community are unable to return to normal operations following the event without outside assistance.

Usually it is possible to identify a single major domain for the classification of most disasters, but some disasters will defy easy classification because they have a succession of components that create a cascading effect similar to a "cusp design" (Pyrcell 2004). For example, human error may have led to a fire which in turn shut down computer connections and communications. Was this disaster of human or natural causes? Was it of local scope or regional? And what happens if one disaster befalls an organization immediately on the heels of another?

### Scope

There are many different kinds of circumstances which accompany disasters, but all have essentially the same effect on thinking -- there is extreme stress, a sense that life has changed and there's no going back, and the feeling that control has been lost. In terms of scope, disasters can range from effects on the individual to effects felt globally. Scope could operate at the *individual disaster* level -- a sudden imposition on the individual of drastically-changed priorities from outside. Or the disaster could be on the *regional disaster* -- draws on societal coping resources -- or *global disaster* -- on the scale of the entire planet, a global disaster is irreversible and causes fundamental changes in culture -- levels. The ultimate disaster would occur at the *Composite disaster* -- the state of affairs when individual or regional disasters overlap, tending to create further complications -- which could also be regarded as pandemic.

### Victims

The first classification of victims seems to have emerged from the Napoleonic wars when front-line medical staff introduced a triage system for assorting casualties according to whether they (1) could

recover without aid, (2) needed help to recover, or (3) were beyond recovery. More recently another system was produced by sociologist Barton (1969) when he classified victims by the magnitude of the external social chaos, disruption, and havoc which they experienced. Other classification systems like those of Milne (1979) and Collins, Baum, and Singer (1983), differentiated victims by the particular methods they used for coping with their circumstances. Beinlin (1985) sorted victims by the extent of injury they sustained, including loss of property. Still others (Kilijan and Drabek 1979) have addressed the physical and emotional vulnerability of victims, and Bromet, Parkinson, Dunn, and Gondek (1980) and Lystad (1985) treated the effects on special vulnerable communities.

These studies point out several demands on a disaster classification system. First, they suggest that, along with a consideration of the nature of disaster victims, there also needs to be a consideration of types of intervention and support which each of these categories are likely to require. Second, it seems prudent to make an attempt to appraise the positive as well as the negative outcomes of disaster that may offset, or compensate for, some of the damage done. It also seems wise to think in terms of secondary, tertiary, quaternary, etc. victims as well as those who are directly affected by the disaster, recognizing that the disaster has spill-over effects on the larger community.

### Contributing Factors

Another useful way to think about disasters is to look at “contributing agents;” those factors which define the effects of catastrophes as they cascade into a *disaster*. Kutz (2000) proposes a system of classification based upon this view, which includes:

- **Base-state disaster** - catastrophic events which occur, but don't have to be dealt with (e.g., a power outage which occurs over the weekend and doesn't affect the way business is conducted)
- **“Outback” disaster** - only has an effect on peripheral members of society or elements of the organization
- **Mainstream disaster** - affects the majority
- **Tech-enhanced disaster** – the type of disaster that happens solely because some technology exists which creates a special environment (e.g., information loss because a computer virus inhabited the system)
- **Institutional disaster** – the kind of disaster that is caused in some way by institutions and which would otherwise not occur (e.g., poor disaster-preparedness)

Therefore, the key to some disasters is the initiating or contributing agent that brings it about. In this case, the key to appreciating and responding to the disaster rests in an understanding of the agency that stimulated it.

### Surprises

Another factor to take into consideration when classifying disasters is that not all disasters are foreseeable and avoidable in the same way. A special class of disaster is one which comes swiftly and without reasonable expectation, thus making it virtually impossible to plan for. “Surprises” are unprecedented events that cut across all types of hazards. Surprises are events which confound our expectations” (Holling 1986). As a result we have to make a distinction between routine crises and true surprises.

Surprises are classified by Mitchell (1996) into (1) unique events (one of a kind), (2) precursor events (first of a kind), and (3) superlative events (worst of a kind). Because each of these occurrences catches the organization off guard, not always because it had no ability to cope, but because it had no way of knowing coping mechanisms might be called for. Because surprises are unprecedented events, it is difficult to design specific anticipatory measures of the sort that prove successful with routine crises. When surprises exceed the marketing organization's coping capabilities or the absorptive capacities of environmental systems, they give rise to marketing disasters of a unique kind.

## COMPARISON OF EXISTING SEVERITY MEASURES

To construct a severity-rating device for marketing disasters, it can be instructive to look at those which have addressed this issue in other arenas. Comparing rating systems commonly used for indexing the magnitude and/or intensity of a variety of phenomenon can yields valuable insights. The nature of these ratings vary from estimating potential damage, to evaluating the extent of impact, to proposing the nature of response, and they can focus on the physical damage, or the level of disruption, or the resources needed to repair. Some of these systems for classifying natural disasters are captured in Table 1. A representative couple from each of three categories should suffice for illustration.

### DISASTER INVOLVING NATURE

#### Earthquake

An earthquake occurs when the energy from forces, stored within rocks, are suddenly released. The severity of an earthquake can be expressed in terms of both *intensity* and *magnitude*. Intensity is a measure of the observed effects on people, structures, and natural features. Magnitude is related to the amount of seismic energy released at the hypocenter of the earthquake and is based on the amplitude of the earthquake waves as measured by instruments which have a common calibration. Therefore, intensity is a rather subjective measure, while magnitude is more objective (<http://pubs.usgs.gov/gip/earthq4/severitygip.html>).

The magnitude of an earthquake is determined from the logarithm of the amplitude of waves recorded by seismographs. On the Richter scale, magnitude is expressed in whole numbers and decimal fractions, with each whole number representing a tenfold increase in amplitude. However, the Richter scale cannot be used to express damage, since damage from a shock is more a function of population density and degree and type of construction in the area of the shock.

On the other hand, when one measures the effect of an earthquake, they appeal to the concept of intensity. Intensity scales have been developed over the last several hundred years to evaluate the effects of earthquakes. The one currently used in the United States is the Modified Mercalli (MM) Intensity Scale. The scale is composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction designated by Roman numerals. The scale does not have a mathematical basis; instead it is an arbitrary ranking based on observed effects.

**TABLE 1**  
**EXAMPLES OF REPRESENTATIVE DISASTER RATING SYSTEMS**

Source	Phenomenon	Category	Description
Nature	Earthquake	I - XII	Ranging from Barely perceptible (not felt by most/felt by only a few) to Extreme damage (few structures remain standing/damage total)
	Effects: Mercalli Intensity Scale		
	Storm Effects: Saffir-Simpson Scale	1 to 5	Ranging from Minimal damage (primarily to shrubbery, trees, and unanchored mobile homes) to Catastrophic (severe and extensive damage to residences and industrial buildings, small buildings overturned or blown away)
Health	TNM System to Cancer Staging	1 to 4	Ranging from disease confined to a metastatic disease
	Trauma Scoring: Abbreviated Injury Scale	1 to 6	Ranging from Minor to Unsurvivable
Society	Information Technology Disaster Index	1 to 3	System Failure (workplace severely disrupted, systems breakdown) to Routine (no impact on work flow, work-around possible)
	Terrorism Threat Conditions	Green to Red	Low (small risk of terrorist attacks; exercise preplanned protective measures) to Severe (extreme risk of terrorist attacks; redirect resources to critical emergency needs)

The Modified Mercalli Intensity value assigned to a specific site after an earthquake is the most meaningful measure of severity to those that have to respond to the consequences because it refers to the effects actually experienced at that place. After the occurrence of a widely felt earthquake, the Geological Survey questions to postmasters in the disturbed area requesting information so that intensity values can be assigned. The results of this postal canvass are used to assign an intensity value and to compile isoseismal maps that show the various levels of intensity experiences, and hence, damage. (See top of Table 1)

### **Storm**

A number of storm categories exist, but two of the most common are the Saffir-Simpson Scale and the Fujita Intensity Scale. The Saffir-Simpson Scale is a 1 to 5 rating of hurricanes based on the hurricane's intensity. This rating is used to provide an estimate of the potential property damage and flooding expected along the coast from a hurricane landfall. Wind speed is the determining factor in the scale. The prognosis factors include extent of structural damage, degree of flooding, and need for evacuation.

The Fujita (or "F" scale) Tornado Intensity Scale also rates storms, primarily based on wind speed, and has six classifications that range from "light" to "incredible." The primary difference between these two scales is that the Fujita scale breaks the final category of the Saffir-Simpson scale into two levels, allowing sufficient description of the rarest and most unimaginably destructive storm.

A key point of these rating systems is that the size of the storm is not necessarily an indication of its intensity. Large storms can be weak, and small storms can be violent. Another important consideration is the stage in the life cycle of the storm. The scales are based on judgments of potential damage or on estimate of sustained damage after the fact, not on the size or appearance of the storm itself. A spectacular tornado funnel might be capable of F4 damage, but if it did not pass through a congested area and did only foliage damage, it would receive a rating no higher than F2 (<http://www.tornadoproject.com/cellar/fscale.htm>).

Any number of other natural disasters could be discussed, many of which have unique rating systems to classify the nature and severity of the event. Some of the more common of these disasters are droughts, fires, landslides, avalanches, floods, eruptions, dust storms, meteorite impact, lightning, and erosion. What these all have in common is the potential for devastation, the need to anticipate and prepare for the consequences, and the need to respond once disaster strikes.

## **DISASTER INVOLVING HEALTH**

A variety of examples could be displayed to demonstrate how the health sciences utilize staging systems to classify various diseases (see middle of Table 1). The following representative cases are selected for illustration purposes.

### **Cancer**

For cancers, like mesothelioma (usually lung cancer), "staging" is the process of describing how localized or widespread the cancer is. It describes how far the cancer has spread. The treatment and prognosis depend, to a large extent, on the cancer's stage. CT scan, MRIs, bone marrow biopsies, and blood tests are used to stage the cancer.

One of the most common systems for staging cancer is the TNM staging system, also known as the American Joint Committee on Cancer (AJCC) system. In this schema, "T" stands for **tumor** (its size and how far it has spread within the affected organ), "N" stands for spread to **lymph nodes**, and "M" stands for **metastasis** (spread to distant organs). In TNM staging, information about the tumor, lymph nodes, and metastasis is combined and a stage is assigned to specific TNM groupings (<http://www.cancer.org/cancer/cancerglossary/index>). Other systems used to stage cancer are the Butchart System and the Brigham System (<http://www.mesothelioma-cancer-treatment.com/pages/stages.html>).

## **Trauma**

An injury severity score is used to assess patients involved in traffic accidents and makes use of the Abbreviated Injury Scale (AIS). The score's value correlates with the risk of mortality. Injuries are assigned to five body regions (i.e., general, head and neck, chest, abdominal, and extremities and pelvis). Each type of injury is assigned a score from 1 to 6 with the highest score representing the most severe injury for each region selected. The three highest values are then used to calculate the injury severity score according to the following formula: Injury severity score = (highest region score)<sup>2</sup> + (second highest region score)<sup>2</sup> + (third highest region score)<sup>2</sup> with a maximum score of 108 (Champion and Sacco 1989).

These are just two of the health-related severity rating indexes. Others indices that are in common use include: Alzheimer's Severity Index, Joehn and Yahr's Staging of Parkinson's Disease, Addiction Severity Index Self-Rating, Pneumonia Severity Index, EEG Severity Index of Traumatic Brain Injury Neuro-Severity Index, Influenza Epidemic Severity Index, and a Comprehensive Severity Index for Adult and Pediatric Patients.

## **DISASTER INVOLVING SOCIETY**

While some disasters come about due to "acts of God," and others stem from disease or human weakness, still others are brought about as a result of the interaction of humans in society or their actions in communal activities. Representative examples of these disaster sources include: unemployment, white water rafting, skiing, hazards to information technology, and terrorism. The potential for disaster must be evaluated for each of these in order to ensure preparedness or to apply proportionate response. Examples of rating systems employed in these areas can be seen at the bottom of Table 1.

### **Information Technology**

Even though disaster plans put people first, loss of information technology (IT) function can plunge any company into operations disarray, triggering revenue losses and negative publicity. The seeds of major technology failures may occur within the systems themselves. Therefore management must be aware of the need to maintain detailed back-up plans for systems and data ([http://hotel-online.com/Trends/Anderson/1999\\_DisasterRecovery.html](http://hotel-online.com/Trends/Anderson/1999_DisasterRecovery.html)).

Plans for maintaining the integrity of the IT system within a company, including disaster prevention, impact analysis, planning, disaster recovery plan audits, recovery testing, and resumption of normal business activities, is known as "business continuity." One provider of these services has borrowed the term "precovery" from the science of Astronomy to describe the efforts which go into preventing and pre-planning for recovery before disaster strikes ([http://www.technews.co.za/ourmags\\_hss.html](http://www.technews.co.za/ourmags_hss.html)).

### **Terrorism**

After the 9/11 disaster, the U.S. created the Department of Homeland Security to provide a means to disseminate information regarding the risk of terrorist acts to the American people. The system provides warnings in the form of a set of graduated "Threat Conditions" with corresponding "Protective Measures" to reduce vulnerability or increase response capability during a period of heightened alert.

The system is intended to "...create a common vocabulary, context, and structure for an ongoing national discussion..." about the nature of threats that confront the homeland and the appropriate measures that should be taken in response. The system seeks to inform and facilitate decisions appropriate to the nature of the problem (<http://georgewbush-whitehouse.archives.gov/news/releases/2002/03/20020312-5.html>).

There are any numbers of other disasters that stem from social interaction or activity, but those mentioned provide a representation of the genre. An expanded list would include disasters brought about by industrial accidents, unemployment, space debris fallout, radioactivity, toxic waste disposal, aircraft accidents, overpopulation, criminal activities, and, clearly, warfare.

## Discussion

Every now and then there are organizations that disappear because they failed to recover from a marketing disaster. In most cases, this was the result of poor planning or the belief that such events would never materialize. But disaster can strike at any time. Since organizations are not just self-contained, but rely upon assets, employees, records, stock, facilities, and suppliers, the disaster does not have to be their own for it to have devastating collateral effect.

What we see in the various severity indexes that were reviewed, are algorithms which point to step-by-step problem-solving procedures to address these disasters. An algorithm can be defined as *a systematic response based on existing conditions*. The problem which often confronts business, in the absence of a measure of disaster severity, is a vacuum that confuses attempts to successfully and proportionally address the problem because no gauge of the problem is available to point the way. Hence, a critical component in the creation of a workable algorithm is missing.

What can we learn from this review of common indexing approaches that can inform the creation of a measure of disaster severity in marketing?

- Limit the number of categories to 3 – 6.
- Opt for tangible factors that allow for differentiation.
- Place anchors at either extreme.
- Measure “effect,” not just intensity and/or magnitude.
- Realize that categories can be multiplicative.
- Make sure the resulting severity categories can relate to recovery approaches.

One thing that is immediately clear when perusing the indexes of severity outlined in Table 1 is that they all confine the resulting classifications to at least three and no more than six. Very few situations lend themselves to a simple either/or response, but it is patently unhelpful to stretch the range beyond five or six. To employ a system that results in too many severity categories is to complicate the instrument beyond helpfulness. When faced with a disaster, and the need for prompt and targeted response, the marketer needs a tool that allows for ready assessment and decisive action. Too many categories render the tool cumbersome and ineffective.

Another dimension of the indexes had in common was that they all employed measures that the trained eye in the discipline could easily see and distinguish between. These factors were typically tangible and quantifiable. In the throes of a disaster, the evaluator needs straightforward, unambiguous factors that can be quickly assessed and related to others. These will vary by industry or strategic approach. One way to facilitate the process is that, once the appropriate factors are identified, anchors should be found to mark the extremes at either end of the continuum.

An additional characteristic of some of the identified scales was that they captured the net effect of several components simultaneously. They did this by being composed of a variety of components that were merged to represent several facets of a situation in one measure. These scales tended to be factor-by-factor multiplicative and collectively summative.

A final piece of wisdom one gleans from this review is that intensity may be more relevant than magnitude and impact may be more important than the scope of the event. These two concepts are related in that they each recognize that where and how forcefully an event occurs, i.e., the context of the event, is a better measure of the havoc it will wreak than would be a mere objective measure of its size. The outcome must also be meaningful in terms of how it can connect to, and inform recovery efforts.

Of course, any instrument will have to be tailored and calibrated to the industry and relevant situational variables confronting a particular organization to be of the greatest assistance. Therefore, what is presented below is a generalized model to serve as a starting point for adaptation. An organization should be able, with a modicum of insight and effort, to modify this model to fit the particular conditions it faces, and use the index as guidance to lead to recover efforts.

## Recommended Application and Model

Extrapolating from the rating systems devised to address various large-scale disaster scenarios, we propose a three-dimensional model for evaluating the severity of a marketing disaster, which includes:

- the *scale* of the problem,
- the *nature (impact)* of the damage, and
- the degree of *culpability* of the organization.

Following is an elaboration of the elements composing this SNC (scale-nature-culpability) model.

**Scale** is important because it signifies the *reach* or *scope* of the problem and the region over which the recover activities must be directed. In this case, scale employs a measure using a local, regional, or pervasive rating to designate how far-reaching the problem. The scope of a problem, whether localized or expanding into every facet of the operation, is a significant determinate of the kind and level of response required to address the damage. When a disaster is localized, its effects may be contained, minimized, and addressed with little impact on the entire enterprise and may even go unnoticed externally. At the other extreme, a pervasive disaster denotes that it has invaded a large portion of the market, society, or organization and requires significant recovery efforts.

Table 2 sets out the criteria for classification of scale. The scale of the crisis is given a weight based on a cross reference of knowledge and effect.

*Knowledge* is defined as the spread of information regarding the crisis to ever expanding areas, some controlled, and others uncontrolled.

- None – no knowledge at all.
- Internal or local - can be seen as those areas within the span of control of the company. These are crisis scenarios that are contained within the culture and scope of the organization or town.
- Market or Regional - are those areas, where some control is kept over the flow of information and the spread is contained within the market. Crises in this category are contained to the market for this particular product or service.
- Non-Market or Pervasive - represents the spread of information beyond the market into regions uncontrolled by the corporation. Crises in this category have spread outside of the market and influence perceptions in society as a whole.

*Effect* can be defined as the containment area for the physical problem.

- None – no effect at all.
- Internal / Local - indicates that the physical outcome is contained within the corporation.
- Market / Regional - indicates that the physical outcome of the crises is contained within the known market area of the company.
- Non-Market / Pervasive - indicates that the physical outcome of the crisis has moved outside of the market area into society as a whole.

The scale is determined by selecting the category which best determines the combination of knowledge and effect. A crisis that is known only by those within the company and its effect has been contained to those within the company receives a Low – Low rating of 1 x 1 or 1. Crises where the knowledge is contained within the market and where the effect is contained within the region are assigned a multiplier of Medium – Medium or 2 X 2 or 4 for scale. Crises that are known outside of the market and in society as a whole and affect Non-Market regions physically are assigned a multiplier of high – high of 3 x 3 or 9 for scale.

The higher the score for scale the more unmanageable the crisis has become, the lower the score for scale the more manageable the crises.

**TABLE 2  
DIMENSIONS OF SCALE**

SCALE		Knowledge			
		None - 0	Internal / Local - 1	Market / Region - 2	Non-Market / Pervasive - 3
Effect	None - 0	0	0	0	0
	Internal/Local - 1	0	1	2	3
	Market/Regional - 2	0	2	4	6
	Non-Market/Pervasive - 3	0	3	6	9

**Nature** is the term we use to designate both the kind of disaster and the number and type of victims of the disaster which combine to result in the degree of impact. Nature can be categorized as duration (short-term, medium-term, or long-term) and impact (low, moderate, and high).

*Duration* refers to the span or interval of time over which the disaster might run its course. The definition and interpretation of duration is heavily dependent on the industry or activity being reviewed.

- None – no duration involved.
- Short-Term – business can carry on almost as usual or the problem can be corrected and ameliorated within a day or two with internal resources.
- Medium-Term– problem can be addressed within a week or so with little use of outside help.
- Long-Term - response may take a month or more, even with significant external assistance and, in extreme cases, may result in complete business failure.

*Impact* refers to directly to the number of victims that are affected by the disaster.

- None – No impact involved.
- Low impact - affects a relatively small number of customers or clients.
- Moderate impact - affects a significant share of customers or clients.
- High impact – affects all customers or clients and may affect additional persons outside the usual control of the company.

Table 3 sets out the classification scale for Nature. This figure compares both the duration and impact that the crises might have on a corporation.

**TABLE 3  
DIMENSIONS OF NATURE**

NATURE		Duration			
		None - 0	Short Term - 1	Medium Term - 2	Long Term - 3
Impact	None - 0	0	0	0	0
	Low Impact - 1	0	1	2	3
	Moderate Impact - 2	0	2	4	6
	High Impact - 3	0	3	6	9

“Low impact / short term disasters” are assigned a scale of 1 x 1 or 1 and can have a temporary debilitating effect on the organization, but its cause is typically localized and directly affects a relatively small number of customers/clients in an annoying, but non-critical manner. An example of a low impact / short term disaster would be a temporary disruption of airport computer service, brought about by atmospheric conditions, which delayed flights and inconvenienced travelers. If no backup system for manually checking-in passengers and routing baggage can be brought on-line, airport operations can be disrupted and, while the immediate impact may be of short duration, the lingering memory among customers of the problem can affect long-term behavior – qualifying it as a disaster.

“Moderate impact / Medium term disasters” are assigned a scale of 2 x 2 or 4 and are distinctly noticeable among a significant share of both customers and employees and lead to enduring and more debilitating consequences. A scandal concerning pervasive sexual harassment within an organization

would be such a disaster. Not only are the employees that are directly involved affected, but customers learn to distrust the organization and this distrust is reflected in their response to the organization's offering. It is difficult to repair the kind of damage done when trust has been broken and the collateral damage can be far-reaching.

“High impact / long term disasters” are assigned a 3 x 3 or 9 and can have life- or business-threatening consequences. Knowledge of the problem is widespread, many people are affected, and damage is devastating. Sometimes a disaster is such that the organization is left literally fighting for its very survival by an event or decision that brings into question its integrity. Falsifying data, misleading consumers or stockholders, fraudulent accounting practices, taking deliberate shortcuts in production to the harm of customers, or deliberately producing products known to be harmful can all lead to a high impact disaster.

**Culpability** is the state of being responsible for the wrong or injury inflicted and deserving of blame and censure. It certainly raises the severity quotient when an organization directly contributes to the decision or event which brings about the disaster. In harmony with the three-part rating schema employed thus far, culpability can be rated as follows:

*Contribution* defines the corporation's involvement and ranges from no contribution to direct contribution to the disaster at hand.

- None – where the corporation has no involvement.
- Incidental – where the corporation has incidental involvement and is not one of the contributing factors.
- Indirect – where the corporation may be one of the contributing factors, though not the immediate cause.
- Direct – where the corporation caused the problem as a direct result of organizational choice.

*Intent* measures the level of intended actions by the company.

- Innocence – where the corporation had no intent.
- Ignorance - where the corporation should have known what was happening, but did not act through their ignorance.
- Negligence – where the corporation knew but did not act to prevent the crises from occurring.
- Guilt – where the corporation knew of the contribution to the crises and acted improperly.

Table 4 sets out the classification scale for culpability. This scale is based on a comparison of *contribution* and *intent*.

**TABLE 4  
DIMENSIONS OF CULPABILITY**

CULPABILITY		Contribution			
		None - 0	Incidental - 1	Indirect - 2	Direct - 3
Intent	Innocence - 0	0	0	0	0
	Ignorance - 1	0	1	2	3
	Negligence - 2	0	2	4	6
	Guilt - 3	0	3	6	9

The instance of “Incidental Contribution / Ignorant Intent,” is assigned as score of 1 x 1 or 1 and is where an organization may be implicated in a disaster, but it did not participate directly. When Johnson & Johnson had its Tylenol brand headache remedy capsules laced with strychnine by a malicious non-employee villain, the company received some blame for not controlling the security and integrity of the packaging, but certainly no one held them directly responsible for the contamination itself. The sustainable damage can result from charges that the organization was too passive and should have taken more preventative measures.

A case of “Indirect Contribution / Negligent Intent,” is assigned a scale of  $2 \times 2 = 4$  and is one in which the organization allowed the damage by virtue of its action or inaction, but had it not been for other coinciding events, the disaster would not have occurred. In other words, the organization was co-culpable. This was the positioning in which General Motors found itself when sued for “invited misuse” of its Pontiac Grand Am. The suit was occasioned by an accident due to excess speed which the litigants charged was induced by GM commercials.

A “Direct Contribution / Guilty Intent” is assigned a scale of  $3 \times 3 = 9$  and would be one resulting from the organization trying to “pull one over on” the market. Cases of deception, malfeasance, and clearly faulty product design or manufacturing would fit into this category.

The greater the culpability of the organization in a disaster, the greater the need for the organization to; involve key representatives, accept responsibility, and be overt in its response.

## APPLICATION SUMMARIZATION

The conditions of a marketing disaster can be visualized as a summation of the  $3 \times 3 \times 3$  matrix as follows as seen in Table 5. The value of this matrix approach is to provide guidance in the nature and extent of recovery response. By applying a three-dimensional designation to each of the 27 cells in the matrix (with the convention 1 to 3 representing the levels of severity in ascending order), one can categorize each combination of scale-nature-culpability by its cell coordinate. For example, an extremely mild disaster case could be represented by the cell designation 111 and the most severe set of condition would be designated 333.

The SNC Severity scale has a visual component that sizes the crises based on the sum of the three base scales. See Table 5 for visual sizing of the SNC Severity scale. The summation of the  $3 \times 3 \times 3$  grid reference for each component in the crises scales the crises for evaluation.

**TABLE 5**  
**SNC MARKETING DISASTER SEVERITY SCALE**

<i>SNC Severity Index</i>	
Low	< 7
Moderate	7 – 17
High	> 17

For manageability, three relatively broad categories of response have been designated. It is important to remember that these responses are generic and must be tailored for the individual organization. It is also important to note that the response categories are deliberately broad for discussion’s sake, but an individual organization may find it useful to narrow each of these divisions to reflect finer definitions of response.

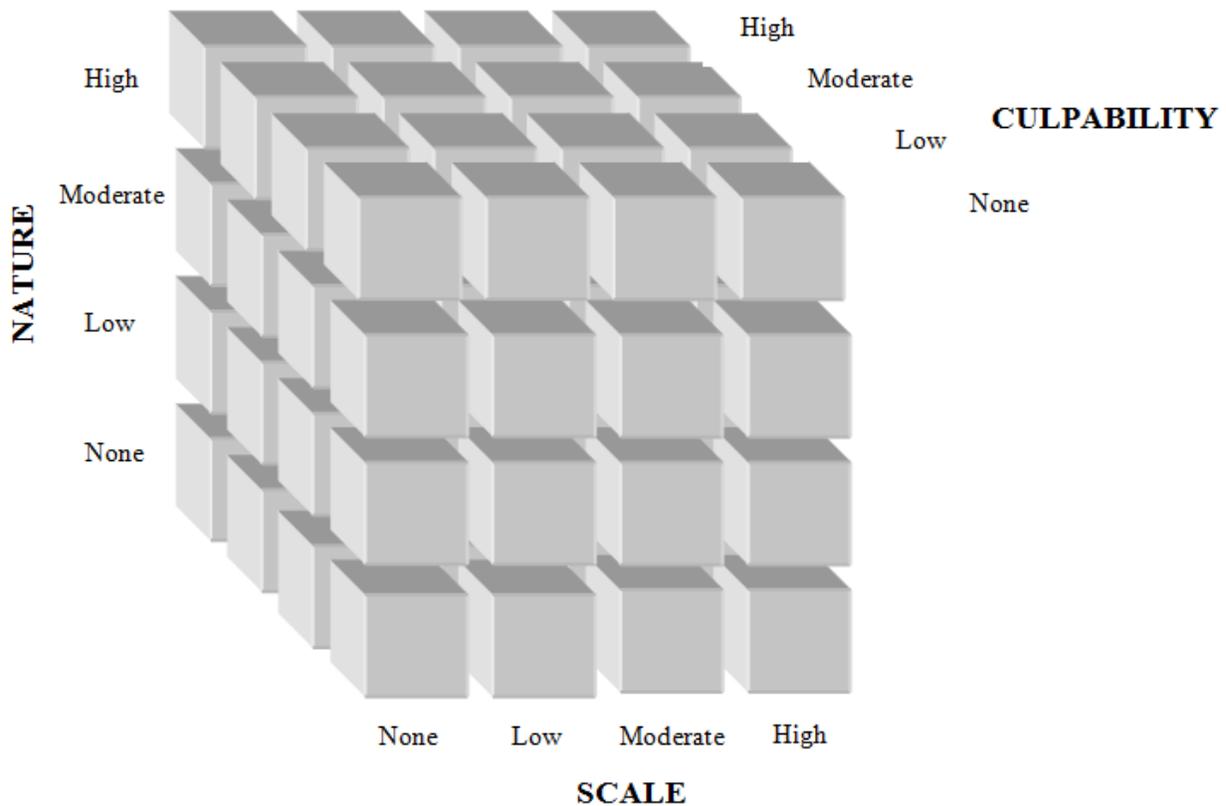
An egregious set of confluent conditions, all of which are on the high end of their respective SNC severity, would call for forceful, robust action to demonstrate that the organization comprehends the magnitude of the disaster and understands the need for swift, decisive action to minimize harm and to do what is right. This would be where the top guns are brought in to address the problem directly, offering assurances that every action that the situation calls for will be taken.

At the other end of the continuum are a confluence of SNC conditions which suggest that, while there is definite reason for concern, the situation is manageable and the recovery responses indicated are best addressed by lower-level officials. To bring in top management and to respond with overwhelming force (shock and awe) would represent overkill and could serve to exacerbate the problem by suggesting that it is greater than it actually is. Of all times, this is one of the most important to remember that *perception is reality* for customers. Anything that feeds the perception of “major disaster” by over-representing the severity of the harm, could add the sensation of severity, much in the way wind can intensify the

perception of cold, hence “wind chill factor.” Positions in-between these two extremes call for a moderate response.

In order for an organization to protect itself from the consequences of disaster, it must anticipate the attendant risks and provide prevention and planning measures. Then, when a disaster has occurred and while the emergency is still at its height, an organization must be able to identify and quantify its effects as accurately as possible as a minimum guide for designing rehabilitation and reconstruction programs and for identifying resources that will have to be channeled to the affected business or constituents.

**FIGURE 1**  
**SCALE-NATURE-CULPABILITY (SNC) DISASTER SEVERITY INDEX MATRIX**



**APPLICATION OF THE MODEL**

To illustrate how the model could aid a company in coming to a realistic assessment of its situation, and thereby select an appropriate response, consider the Ford marketing disaster when its vehicles experienced rollover due to defective product design combined with the tread separation of their Firestone tires leading to fatalities. The Ford Explorer situation qualifies as a disaster, having started out as a relatively minor crisis, but as the result of subsequent decisions, led to *devastating consequences to the organization’s marketing posture*.

With respect to **Scale**, this disaster easily rated a 9 since the situation ranked “high” on both the measure of *effect* and *knowledge*. The reach of the Ford debacle extended into international markets as reports of tread separation, blowouts, and rollovers were eventually reported through Ford dealers in Saudi Arabia, Venezuela, Malaysia, Taiwan, Thailand, Columbia, Ecuador, and throughout North America. At least nine fatalities occurred in Texas alone. As a result of media coverage and litigation, the

extent of this problem was known throughout the world. Not only was this developing disaster known among the general public, but it received scrutiny from the National Highway Transportation Safety Administration (NHTSA) and the insurance industry. The score on this characteristic is the function of the “3 X 3” or “9” factor rating.

Concerning **Nature**, the timeline of Ford’s awareness of this problem goes back to at least 1989 when Ford knew of tire failures reported by the Arvin/Calspan Tire Research Facility, which conducted tests at Ford’s request. This fifteen year journey speaks to *duration*, which was long-running. The culmination of one stage of the saga was in June 2004 when a \$368.6 million settlement was handed down in San Diego against Ford. In terms of *impact*, the SUV was linked to at least 271 rollover deaths, with Ford settling dozens of lawsuits out of court. Again, this disaster rates a 9 (i.e., a score of 3 on duration and a score of 3 on impact) because of (1) the long-running episode of accidents, reports, legal action, denial of responsibility, and court battle and (2) the effect on the public as a result of the deaths involved and the loss of trust between consumers and the corporation.

Then, in terms of **Culpability**, we have to look at both *contribution* and *intent*. There is a sense in which culpability is a more potent ingredient in the disaster brew than any of the others by virtue of the fact that it addresses motivation and deliberation. Consumers understand that some things just happen, but when the organization has been complicit in the act, this intensifies the victim’s reaction. *Contribution* refers to the degree of contribution made to the problem. In this case Ford was directly responsible for the design features that made the vehicle subject to instability of the SUV, however it was the integrity of the tires that often contributed the first link in the chain of events that led to a rollover. Ford had no direct responsibility for the design and manufacture of the faulty tires, but realizing that there was a problem, they passively allowed the tires to serve as original equipment on their Explorer models. The combination of these considerations leads to a score of 2.5 on *contribution* (i.e., Ford would score a 3 on their design contributions to the problem, but a 2 for their contributory negligence in continuing to use Firestone tires that they had reason to know had serious problems, hence an average of 2.5).

Ford clearly demonstrated itself *guilty* of passing this defect off on an unsuspecting public. Internal memos at Ford, as far back as 1989, indicated they knew of a problem with the tires in concert with the type of vehicle on which they were installed and yet took no decisive action to address it. This one characteristic of the disaster may be the greatest contributor to the public’s anger with Ford and subsequent lawsuits and deserves a rating of 3. It seems clear that Ford willingly and intentionally passed this compromised product onto consumers. Therefore, on the culpability scale, this situation rates a 7.5 (i.e., 2.5 on *scope* X 3 on *intent*).

Employing the SNC disaster severity scale, Ford’s situation rates a 25.5 (i.e., Scale = 9 + Nature = 9 + Culpability = 7.5). As such, this placed Ford in the “> 17” or “High” severity range. Had they been sorting through their situation in this manner at the time, they would have had the opportunity to more fully appreciate the severity of their position and taken proportionate moves to respond.

What kind of response is called for by a rating of 25.5? Well, it certainly would not prompt an action in which the manufacturer attempted to shift the blame for the Explorer’s problems to drivers or to component suppliers. It would have been to take the findings of test very seriously and to not only make critical changes in the configuration of the vehicle, but to issue a public acknowledgment of the problem from the highest levels within the corporation as a sign of its crucial nature and the regard they had for their customer’s well-being.

## FURTHER CONSIDERATIONS

The illustration above was an extreme example, to be sure, and, of necessity, very general. However, the illustration served to depict how an organization might, in concept, apply the notion of a severity index. The specific application would have to be tailored industry by industry. What constitutes a significant time frame (*duration*) in one industry might be completely inappropriate for another. And what comprised significant impact in the automotive industry might be quite different from that in marketing research or academics. So thoughtful molding of the tool must occur to create an acceptable fit.

The process of creating this fit between the composition of the severity index and the particular industry or organization should take into consideration several factors, including: relevant factors for each category of measure, relevant units of measure, and responsibility for generating the subjective ratings.

Determining the relevant factors and how to measure them could be the product of an iterative Delphi approach in which relevant members of management are independently polled for their thoughts about the best way to measure scale (i.e., effect and knowledge), nature (i.e., duration and impact), and culpability (i.e., contribution and intent). Once consensus is reached, the same process could be used to negotiate the relevant units of measure and rating scale. An individual or department should be assigned the responsibility for conducting this review when triggers indicate disaster potential.

Shepherd and Vardiman (Shepherd, 2015), have modeled the General Motors Cobalt disaster using this scale. Their practical application of the model (referred to in their paper as the SNC model) overlays the disaster timeline on the scale, assigns attributes relevant to GM, and then follows month-by-month for 14 years the decisions and costs as the GM disaster unfolds. Their application of the model and suggestions for implementation show the practical benefits gained and specific decision points where forward thinking on the part of GM (had they used the scale) may have minimized the disaster and contained costs. They suggest that the model becomes a part of the corporate strategic planning process and that the model becomes a scaffold for questioning outcomes for action or inaction. Their conclusions suggest:

1. The SNC model has disentangled companies from addressing disasters in hindsight.
2. The SNC model allows companies to minimize internal, external, and social costs to problems.
3. The SNC model is a useful tool by which a company can examine possible decisions in light of compounding factors that can cause disasters to spiral out of control.
4. The development of SNC model attributes by each corporation is informative. This knowledge creates both power and the ability to intervene in a deteriorating process.
5. The SNC model can be used both internally for mitigation and externally for assignation of punitive damages.
6. Strategically, the SNC model provides structure out of what sometimes appears to be the chaos of everyday business. A common and consistent vision in any corporation ensures improved outcomes.
7. The systemization of the SNC model through a cell phone and/or website application will ensure that all levels of the company have buy-in and access to the system.

## **LIMITATIONS AND DIRECTIONS FOR FURTHER RESEARCH**

The topic of disaster effects measurement is a fascinating and needed subject. However it is composed of many complex dimensions that must be explored piece by piece. The current effort has been intentionally limited to the development of a disaster severity assessment template. This fact leaves several limitations. First, this mechanism for evaluating the impact of disaster does not, in its present form, provide all the linkage desirable to preparedness or recovery measures. In that sense, this presentation is not comprehensive. However, it does attempt a broad and realistic review of the general considerations of the need to measure and assess damage in the wake, or face, of disaster.

Second, this effort is of necessity incomplete insofar as any particular industry or organization may be concerned. To be of direct applicability, it will have to be modified in the context of the peculiar needs and circumstances of that firm, organization, industry, or government (as in the GM application by Shepherd and Vardiman.) Since the evaluation device is not tailored specifically to one arena of marketing, it does not claim to be a precise fit for any particular application in terms of the relevance of factors employed, the appropriateness of the multiplicative components of each of those summative factors, the definitions of levels of impact, and the adequacy of individual measures.

These limitations call for further research. First, research could be conducted in specific arenas, such as consumer durables and non-durables, as well as in the service field. Another way to divide the work

would be to conduct the research across industry classes, such as: pharmaceuticals, manufactured goods, agriculture, education, healthcare, banking, etc.

Next, work is needed forward in the chain of disaster management to develop corresponding response and recovery levels and mechanisms associated with each category of disaster in terms of its impact. Then, in the interest of preparedness, attention should be given backward to inform preparation efforts (i.e., precure). Since the best recovery plan is to prevent the need for recovery, this area should be of intense interest to organizations of all types.

Third, there is a need to apply and field test this model in a practical rather than theoretical level. Only when the mechanisms of disaster impact assessment are fitted and fine-tuned to specific applications will they have realized their purpose. It is only through this process that the assumptions of the model can be confirmed or invalidated.

## CONCLUSION

Marketing disasters of some scale are becoming an almost everyday occurrence. Many of these pass almost unnoticed by the general populace, while others mushroom into international headline news. More and more, marketing organizations are recognizing the wisdom of preparedness, response, and recovery plans and exercises. With all the attention directed toward avoiding or rebounding from a marketing disaster, a missing component of the process is an assessment of the degree of havoc wreaked. To overlook this step invites inadequate response or over-response.

A critical ingredient of both the precure and remedial process is to have a mechanism for evaluating the condition, either in anticipation or once the immediate distress is past. The authors have supplied a framework for such a mechanism in a generalized severity index schema. Provision of this tool adjusts the understanding of disaster management to now take the form of:

1. Mitigation
2. Preparedness
- 3. Severity Assessment**
4. Response
5. Recovery

The composite severity index proposed herein captures multiple dimensions of a disaster and permits as much objectivity or subjectivity as is suitable for the organizational environment. Dimensions and gradients may be adjusted to allow a snug fit for the marketing organization. Reason suggests that a systematic attempt to type and classify the impact of a marketing disaster will enhance appreciation of the task facing the organization and facilitate a proportional response through recovery efforts.

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