

A Cognitive Earthquake: Who's Really In Need?

April 30, 2013

In January 2000, an earthquake shook China's mountainous Yunnan province. It was a moderate earthquake and killed only seven, but it leveled more than 40,000 homes and injured thousands of residents. According to the World Health Organization, as many as 1.8 million were affected by the disaster, and in need of shelter, medical attention or other aid.

A couple years later, an earthquake hit the Iranian city of Bam, a tourist center once famous as a Silk Road trading post. This disaster took the lives of almost 27,000 and affected another 270,000.

Every natural disaster, whatever the WHO tallies, is tragic for somebody, and the world's citizens always respond in humanitarian ways. But these responses don't always make sense. In the case of Bam, for example, private donors responded by giving more than \$10 million in aid to the victims. By contrast, donors contributed a mere \$94,000 to the Yunnan survivors—despite the fact that so many more were left in need.

Psychological scientist Ioannis Evangelidis calls this lukewarm response in Yunnan a “humanitarian disaster,” one that compounds the tragedy left behind by the Earth's natural fury. He and colleague Bram Van den Bergh of Erasmus University Rotterdam have been studying the disproportionate humanitarian responses to natural disasters, looking for an explanation in how we perceive and process disasters—and how we make decisions about charity.

The scientists have a theory, which is that we respond to deaths more decisively than we respond to other, undefined suffering—even though it is obviously not the dead who need help. They set out to test this idea, and also to see if there might be a way to increase sensitivity to those left behind.

To verify the basic idea, Evangelidis and Van den Bergh analyzed actual natural disaster relief data for a decade, beginning at the time of the Yunnan quake. They expected that the number of fatalities—rather than those more vaguely “affected”—would determine the likelihood that people would give money. And that's what they found. Indeed, donors came up with an additional \$9000 for each additional person killed—compared to nothing for each additional living victim. There was no correlation between the number of fatalities and the number of people in need, meaning that donors give more aid as the number of dead climbs—yet remain insensitive to the real need of survivors.

These data are what scientists call “correlational.” That is, they suggest but cannot prove a link between donors' perceptions and thoughts and their actual giving. To better illuminate the actual decision making dynamics, the scientists ran a series of small studies to examine donors' sensitivity to varying combinations of high and low fatalities and affected survivors. For example, volunteers might hear about a flood in which 4000 (or 8000) were killed and 4000 (or 8000) were affected. The volunteers were then asked to imagine these events and make the appropriate donations.

They ran this basic study in different ways. Sometime it was a flood, other times an earthquake. Sometimes the “affected” were referred to as “survivors,” which was made more concrete by defining them as people “in need of assistance such as food, shelter, sanitation and/or medicine.” The imaginary disasters were placed in Asia, Africa and South America, to control for any biases having to do with locale.

The results were clear. As described in a forthcoming article in the journal *Psychological Science*, across all scenarios volunteers felt that they should give much more generously when a disaster had a high death toll. That is, donors were highly sensitive to fatalities, and unfazed by the actual numbers of needy.

Why would this be? Evangelidis and Van den Bergh believe it has to do with the nature of cognitive cues—the rules that automatically shape our inferences about the world. The death toll is a reliable cue—that is, it’s fairly easy to validate this cue just by counting dead bodies. But that does not make it a valid cue, if what we are trying to infer is true human need. To make a judgment of need, we need to use a different cue—the number of affected—but this cue is vague and less trustworthy. It’s hard to judge need objectively, because sanitation and health threats are harder to measure. We tend to trust the death toll because it is simple and easy to process, even though it’s an irrational gauge of real need.

At least that’s the theory, which if true could offer a solution to future humanitarian crises. The scientists ran another study, very similar to the others, but with this difference. Prior to making a donation, only some of the volunteers were asked to imagine that two earthquakes had taken place simultaneously. One killed 4,500 and affected 7,500, while the other killed 7,500 and affected 4,500. The volunteers ranked the two disasters based on total humanitarian aid that should be given.

When people are faced with such a choice problem, they have to slow down and think. They are less likely to respond automatically to easy heuristic cues, and more apt to examine the validity of different cues—leading to sounder judgments. And that’s what happened in this study. The volunteers who were not primed with the choice problem acted just as before—responding unthinkingly to the death toll. But those who were forced to deliberate—these volunteers became very sensitive to the number of living survivors. They felt that they should give more money when there was a high number of affected victims—a rational response. Their humanitarian decisions were unaffected by the death toll.

In real life, of course, we are not going to solve choice problems as a priming exercise. So in a final study, the scientists actually succeeded in making people more sensitive to the needs of survivors by offering a cue that was more reliable. Instead of using the WHO’s vague number of “affected,” they replaced it with number of “homeless.” The homeless, like the dead, are fairly easy to count, and as predicted, using this easy-to-trust cue made donors more sensitive to true human need.

The bottom line appears to be that any strategy that can divert attention from the death toll, as tragic as it is, should rationalize charitable giving, and diminish the chances of humanitarian disasters.

Excerpts from Wray Herbert’s blogs—“We’re Only Human” and “Full Frontal Psychology”—appear regularly in *The Huffington Post* and elsewhere.