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New Orleans and the Probability Blues

By CARLIN ROMANO

In the first days of post-Katrina coverage, journalists speedily attached famous faces to the tragedy of New Orleans, perhaps to balance those endless shots of the noncelebrity poor.

We saw and heard Big Easy stars such as Wynton Marsalis and Harry Connick Jr., and worried along with fretting anchors about missing great Fats Domino. We watched as writers and broadcasters with a New Orleans pedigree, like Cokie Roberts or *Liar's Poker* author Michael Lewis, became stories in themselves. We cringed as fey Hollywood exercise guru Richard Simmons, in trademark tank top, broke down on Entertainment Tonight.

Now, as cleanup and rebuilding begin, a request: Please shift coverage to historic probability thinkers like Pierre-Simon Laplace and John Maynard Keynes, and to the contemporary "possibility" scholar Lee Clarke. Because probability and possibility -- two concepts with limper background music than Bourbon Street, and no visuals to match toxic waterways or gun-toting movie stars -- matter a great deal.

Who is Lee Clarke? A Rutgers University sociologist and expert on disasters. His new book, *Worst Cases: Terror and Catastrophe in the Popular Imagination* (University of Chicago Press), bears a November pub date, though one suspects that will change.

Clarke divides people into probabilists and possibilists. Much modern scientific and governmental policy about disasters, he claims, emerges from probabilistic thinking -- "What's the likelihood that the nuclear plant will melt down?" -- while possibilistic, or worst-case, thinking asks "What happens if the nuclear plant has a really bad day?"

Clarke asserts that we engage in worst-case thinking as individuals every day -- we buy insurance, decline to take up sky diving, and so on. But when risk assessment broadens from individual decision making to societal setting of policy by "elites and institutions," probabilists rule, and too often stigmatize possibilists as irrational.

Clarke cites *Risk and Culture* by Mary Douglas and Aaron Wildavsky

(University of California, 1982) as one classic modern expression of the notion that ordinary people's "fears and risk perceptions," too often "molded by sensationalistic media," simply "don't match the probabilities of actual harm." The typical target here is the person who knows driving is more dangerous than flying, but who still fears flying more.

When such fears involve man-made threats such as nuclear plants in one's neighborhood, Clarke complains, such fears "are dismissed by elites as an irrational, not-in-my-backyard attitude, or NIMBYism." Unfortunately, in his view, "it is common for those who disagree with people who think in terms of the worst to say that they are being unreasonable or even a little crazy. After all, isn't almost anything possible?"

It's here that Clarke identifies "class" issues that the mainstream media, despite their laudable post-Katrina discovery of distinct rich and poor New Orleans populations, still haven't scratched. Because probabilistic thinking "tends to favor those who benefit from dangerous systems" -- i.e., corporations and governments bent on risky things -- "probabilism tends to protect the powerful. More important, it often results in the nonpowerful being placed in danger."

Business leaders worry that laymen's possibilistic irrationalities "get translated into overregulation of industry." Professional possibilistic types in the corner of the nonpowerful are largely restricted to environmentalists and antinuclear activists.

The important truth, Clarke insists, is that chance "is often against us." As a colleague he quotes says, "things that have never happened before happen all the time." Society needs to be protected from the possible, not just the probable. Too often, Clarke argues, "probabilism" protects the powerful to such an extent that "reasonable" simply "means probability."

"I am not an alarmist," Clarke confides, "but I am alarmed."

Clarke is not, truth be told, wholly fair to probability theorists. The best recognize that there's no valid inference from probability judgments to judgments of acceptable risk, that the latter imply moral and evaluative judgments. As the Australian scholar of statistics Peter Sprent put it in his *Taking Risks: The Science of Uncertainty* (Penguin, 1988), "personal assessment of danger often bears little resemblance to a logical ordering of risks." He adds that it shouldn't, since our actions and decisions are sometimes "influenced more by social factors like individual freedom or

self-interest."

Yet Clarke is happily in line with philosophical thinkers about risk such as Kristin Shrader-Frechette, who has written in Rawlsian mode that "it is important to shape risk definitions through participatory democracy as well as by scientific fiat." What we should take from Clarke's prescient pre-Katrina meditation is that it's crucial, in opposition to elite governmental and scientific cultures, to think in worst-case scenarios -- to consider the awfulness of what could happen again.

That means risk assessments and choices discussed and made not only by experts and officials, but by ordinary voters, potential victims of high-risk choices such as rebuilding New Orleans more or less where and as it was. Elites and the news media should inform citizens about risks being imposed on them. Officials should exercise better imaginations. Yet how many of us, whether Joe Sixpack or part of the educated elite, know much about the cargo cars that pass through our communities filled with toxic chemicals, or have had a chance to express an opinion about them? How many New Orleans citizens knew of the 61,290 deaths predicted by the computer model of a "Hurricane Pam" that might inundate their city?

The outlook for sophisticated, candid discussion underwhelms. When House Speaker J. Dennis Hastert suggested that it might not make sense to rebuild New Orleans -- a comment considerably softened after a firestorm of criticism -- his possibilistic fear of another Katrina hit many New Orleans and Louisiana leaders as sacrilege. Already newspaper stories reflect the boosterish tone of owners who want to go back to business as usual. Only when one of the powerless New Orleanians scattered around the country says he or she is not going back is respect paid to the thought that New Orleans might still possess a worst-case future. Anyone notice the poor calling for New Orleans to be rebuilt as it was? Tellingly, 54 percent of ordinary Americans in an AP poll "favor relocating vast sections of the city."

Worst Cases analyzes many notorious disasters, among them the Black Death of medieval Europe, the sinking of the Lusitania, the destruction of Galveston by hurricane in 1900, the Challenger shuttle disaster, the Mississippi River flood of 1993. Clarke details scenarios waiting to happen, such as terrorist-sponsored outbreaks of Marburg or Ebola virus, or the effect of a Category 5 storm on the two nuclear plants 25 miles south of Miami. In all his hypotheticals, purely probabilistic thinking augurs hard times

ahead.

But his passages on New Orleans, written before Katrina, predict things precisely. Referring to New Orleans poor traditionally living on lower ground, he observes: "Being poor is worse than being rich in most places. In New Orleans, it can be fatal." Clarke suggests that the model for a devastated New Orleans ought to be Seattle, which, ironically, raised its streets by a full story after a cataclysmic 1889 fire. He writes: "It could also be called the best fire in Seattle's history. It is said that a million rats were destroyed or run off by the inferno. And when the city was rebuilt, new city ordinances required that buildings be of brick and stone, making them considerably more resistant to fire than the wooden buildings that had gone up like matchsticks."

Probability theory and risk analysis may not be the jazziest topics to wrestle with in Katrina's wake, but more should try. And not just in regard to the Gulf Coast. Maybe it is too soon to worry about Asteroid 1950 DA, which Clarke advises has a "credible chance" of striking the earth on March 16, 2880. But what about the 180,000 pounds of sulfur dioxide stored near Kearney N.J.? And the potential earthquake under Manhattan? (Yes, there's a scientific group that studies it.)

Should locals rebuild New Orleans as it was? Probably it's not a bad idea. Possibly it's a catastrophic one.

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