

Improbabilities

HERE'S SOME ADVICE: Don't worry much about low-probability events because they hardly ever happen.

A practice, I'm sure, that the sometime philosopher Lawrence Peter Berra could abide by. And yet, with the terrorist attacks, monster hurricanes, tsunamis, devastating floods, mudslides, and wildfires of the past several years, the improbable seems to have become almost commonplace.

Or as Yogi might say, "That restaurant's so popular, nobody goes there any more."

As if the threats from earth, wind, and fire were not enough, Health and Human Services Secretary Michael Leavitt reminds us that the likelihood of an avian flu pandemic is "very high, some say even certain." It may not be long before the term "H5N1," the strain of bird flu sweeping through chicken populations in Southeast Asia, may become as ingrained in our minds as Y2K or 9/11.

Whether it's fact or perception, the world does seem riskier these days with both man-made and natural catastrophes dominating our headlines and governmental budget deliberations. Risk assessment has captured the public's attention as never before, and the tenets of sound risk management practice (avoidance, minimization, and transfer) are being discussed and debated daily.

In attempting to avoid risk, history and sentiment often clash with scientific and business logic. Where logic would tell us not to rebuild expensive properties in low-lying coastal areas, or continue to expand human populations directly atop major seismic fault lines, or erect towering steel and glass targets at "ground zero," emotion urges us to "fight back" against the vagaries of both nature and man.

This battle is currently playing out in New Orleans' Ninth Ward, where geologists warn against redeveloping land that has been seriously flooded three times in the past 40 years, but longtime residents believe that racial and socioeconomic bias are influencing those views.

When we can't avoid risk, we attempt to minimize its consequences. Some actions, such as tighter controls on construction methods in earthquake-prone areas, have already proven their value. Others, such as forcing grandmotherly types to remove their shoes, belts, and jewelry before passing through airport security, seem designed to bring us psychological comfort more than real security, es-



pecially when measured against the costs of enforcement.

As to risk transfer, Greg Serio, former superintendent of insurance in New York, believes that "in (many) catastrophic events... it is largely a matter of sheer luck whether someone is covered for losses (or) whether an insurer is responsible for loss payments." Whether property losses in New Orleans were due to wind or flood, the toll on human beings is the same. Mr. Serio has suggested the need for a comprehensive national strategy on disaster financing "in which the government, the insurance industry, and the private sector collaborate to provide a more secure, reliable, and affordable safety net for disaster victims." (See *National Underwriter*, 10/3/05.)

Dealing with these issues requires an understanding of probability and statistics beyond that born of simple laboratory experiments (with dice or balls in an urn) and refined through televised, celebrity poker games (where the revised odds of a winning hand flash on a screen with the turn of each card).

Conditional probabilities and secular trends (such as global warming, infrastructure decay, geopolitics, and plate tectonics) will play a vital role in risk assessment, and those skilled in the interpretation of statistical results will be needed to more clearly elucidate choices for preparing and dealing with future catastrophes and their consequences.

The Society of Actuaries and the Casualty Actuarial Society envision the creation of an Actuarial Risk Index (or set of indexes) to help with these assessments. These organizations have set up a task force to study the development of such an index, which might someday serve as a barometer for navigating through those times when good risk management principles clash with popular opinion and government politics.

For now, I won't venture a guess as to where and when the next low probability, catastrophic event will occur because, as Yogi said, "It's tough to make predictions, especially about the future."

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