What Should You Worry About?

by Steven D. Levitt and Stephen J. Dubner

HUMANS ARE GOOD AT MANY things—typing, inventing stuff—but we're quite bad at assessing risk. Day after day, we get bent out of shape over things we shouldn't worry about so much, like airplane crashes and lightning strikes, instead of things we should, like heart disease and the flu.

So how can we find out what's truly dangerous? Economics. Upon hearing the word, most people think of incomprehensible charts and jargon and promptly change the subject. However, we can use the field's powerful ideas and tools, along with huge piles of data, to understand topics that aren't typically associated with economics. Topics like shark attacks.

Think back to the summer of 2001, or what the U.S. media dubbed the "Summer of the Shark." The prime example was the story of Jessie Arbogast, an 8-year-old who was playing in the warm, shallow Pensacola, Fla., waves when a bull shark ripped off his right arm and a big chunk of his thigh.

The media was full of such chilling tales. Here's the lead paragraph from one article published that summer:

"Sharks come silently, without warning. There are three ways they strike: the hit-and-run, the bump-and-bite, and the sneak attack. The hit-and-run is the most common. The shark may see the sole of a swimmer's foot, think it's a fish, and take a bite before realizing this isn't its usual prey."

A reasonable person might never go near the ocean again. But how many shark attacks do you think actually happened that year?

Take a guess—and then cut that figure in half, and now cut it in half a few more times. During all of 2001, there were 68 shark attacks worldwide, of which just four were fatal.

Not only were the numbers lower than the media hysteria implied, but they were not much higher than those of previous years or of the years that followed. Between 1995 and 2005, there were on average 60.3 shark attacks worldwide each year, with a high of 79 and a low of 46. There were on average 5.9 fatalities per year, with a high of 11 and a low of three. In other words, the headlines during the summer of 2001 might just as easily have read "Shark Attacks About Average This Year."

Elephants, meanwhile, kill at least 200 people a year. Why aren't we petrified of them? Probably because their victims tend to live far from the world's media centers. It may also have to do with our perceptions gleaned from the movies. Friendly elephants are a staple of children's films like *Babar* and *Dumbo*; sharks are typecast as villains.

There are any number of topics about which our fears run far out of proportion to reality. For instance, whom are you more afraid of: strangers or people you know?

While "strangers" is the obvious answer, it's probably wrong. Three out of four murder victims knew their assailants; about seven of 10 rape victims knew theirs. While the public is justifiably horrified when a stranger snatches a child off the street, the data show that such kidnappings are extremely rare.

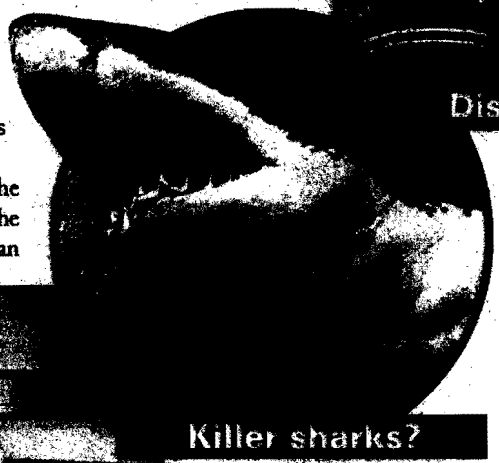
As for the crime of identity theft, most of us fear nameless, faceless perpetrators—say, a far-off ring of teenage hackers. We try to thwart them by endlessly changing our PINs (and forgetting them). But it turns out that nearly half of identity-theft victims are ripped off by someone they know. And fully 90% of thefts happen offline, not on the Internet.

We're bad at assessing risk—we panic about the wrong things

Fear sometimes distorts our thinking to the point where we become convinced that certain threats are so enormous as to be unstoppable. Every generation has at least one such problem—the plague, polio. Today, it's global warming.

The average global ground temperature over the past 100 years has risen 1.3 degrees Fahrenheit, or .74 degrees Celsius. But even the most brilliant climate scientists are unable to predict exactly what will happen to the Earth as a result of those atmospheric changes and when anything will happen.


Disease?


Killer sharks?


Identity theft?

PHOTOS BY MEDIA BAKERY (WOMAN AT ATM AND FAMILY) AND ALTRENDO NATURE/GETTY (SHARK)

We humans tend to respond to uncertainty with more emotion—fear, blame, paralysis—than advisable. Uncertainty also has a nasty way of making us conjure the very worst possibilities. With global warming, these are downright biblical: hellish temperatures, rising oceans, a planet in chaos.

But instead of panicking and

Uncertainty can make us conjure the very worst possibilities

collectively wringing our hands, it might help us to look at other "unsolvable" problems humanity has had to deal with.

Like, well, horse manure. As urban populations exploded in the 19th century, horses were put to work in countless ways, from pulling streetcars and coaches to powering manufacturing equipment. Our cities became filled with horses—for example, in 1900, New York City was home to some 200,000 of them, or one for every 17 people.

Unfortunately, they produced a slew of what economists refer to as "negative externalities." These included noise, gridlock, high insurance costs, and far too many human traffic fatalities.

The worst problem was the manure. The average horse produces about 24 pounds of it a day. In New York, that added up to nearly 5 million pounds. A day. It lined the streets like banks of snow and was piled as high as 60 feet in vacant lots. It stank to the heavens. And it was

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a fertile breeding ground for flies that spread deadly disease.

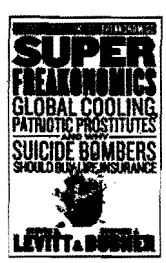
City planners everywhere were confounded. It seemed as if cities could not survive without the horse—but they couldn't survive with it, either.

And then the problem vanished. The horse was kicked to the curb by the electric streetcar and the automobile.

Human ingenuity can fix problems that seem unsolvable

Virtually every unsolvable problem we've faced in the past has turned out to be quite solvable, and the script has nearly always been the same: A band of clever, motivated people—scientists usually—find an answer. With polio, it was the creation of a vaccine. If the best minds in the world focus their attention on global warming, hopefully we can handle that, too.

Yes, it is an incredibly large and challenging problem. But, as history has shown us again and again, human ingenuity is bound to be even larger.



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