

Why Do Americans Believe Danger Lurks Everywhere?

How a Fixation on Risk, Fed by Labs, Law And Media, Haunts World's Safest Nation

By Jane Spencer and Cynthia Crossen

Scott Jordan is not averse to risk. He has flown a small plane, tried bungee jumping and skied on glaciers. He once drove his sports car on a public highway at 152 miles an hour, and he is lax about fastening his seat belt on short trips. He only sometimes wears his helmet when cycling.

But terrorism and severe acute respiratory syndrome have him worried. Mr. Jordan, chief executive of a small Chicago apparel company, is likely to cancel his business trip to South Korea next month. "If I go ... and some crazy person decides to bomb the Hyatt, I'm dead," he says.

Mr. Jordan may not be reading his risk rationally. Even in 2001, when more than 3,000 people died in a terrorist attack on the U.S., he was 12 times as likely to lose his life on a highway as at the hands of a hostile fanatic. But who can blame him?

Today, thanks to research labs, tort law and media hype, danger seems to lurk in every corner of life, from children's toys to McDonald's coffee, anthrax to secondhand smoke, West Nile virus to SARS. Faced with a barrage of warnings -- including the color-coded caveats of the new Homeland Security department -- it's not surprising that in contemporary America, the safest society in recorded history, many people feel as though they have never been more at risk.

"Everyone's nerves are on edge," says Andrew Karam, radiation-safety officer at the University of Rochester, where he ensures that the use of radiation in medicine and research complies with federal regulations. "No matter where we turn, we're reading about something killing us prematurely."

Armed with scientific and technological breakthroughs, Americans have dramatically reduced their risk in virtually every area of life, resulting in life spans 60% longer in 2000 than in 1900. Many deadly infectious diseases were tamed, food and water were purified, drugs and surgery helped forestall heart attacks, and thousands of safety devices -- window guards, smoke detectors, circuit breakers, air bags -- protected against everyday mishaps. Even the risk of financial disaster was reduced by insurance, pensions and Social Security.

The very safety of modern life in the U.S. may amplify our sense of loss. To die prematurely today may mean losing 40 years of life instead of 10. And while humans have learned to control much of their environment, there are periodically new, unpredictable and catastrophic threats against which they feel helpless, at least initially, such as AIDS, SARS and anthrax.

The past century also saw the flow of information about risk grow from a trickle to a tidal wave. Government officials, scientists, marketers and the media learned to use risk as a way to get people's attention. "It's much easier to scare than unscare," says Paul Slovic, professor of psychology at the University of Oregon. "We trust people who tell us we're in danger more than people who tell us we're not in danger."

Many corporations now do formal risk assessments of their vulnerability both to financial disturbances and to physical attacks on their offices or employees. Risks are also presented in a variety of ways -- lifetime risk, annual risk, potential years of life lost, risk per 100,000 people, risk per million people -- which makes it difficult to compare them. And scientists, Mr. Karam

says, "aren't very good at talking to people about risk. They won't say something is safe, they'll say it's low-risk."

Since it began its color alerts in March 2002, the Homeland Security department has never designated the U.S. to be at less than a "significant" risk for terrorist attacks -- level yellow. (The two lower levels, green and blue, haven't been used, and even the safest level -- green -- warns that the risk is "low," not zero.)

A half-million soldiers have been ordered to get a vaccine for smallpox, a disease that hasn't been seen in nearly 25 years. At airports, security guards direct tens of thousands of people to remove their shoes to reduce the almost-zero risk of shoe bombs. Scientists say it's risky for older women to use hormone-replacement therapy -- but it used to be risky not to. Every month, the Consumer Product Safety Commission issues recalls of commonplace items such as travel mugs, baby rattles, sweatshirts, garden chairs and Halloween "vampire capes and witch brooms."

Marketers and the media have capitalized on people's desire for risk-free living by appealing to their vulnerability. "If you're alive, you're at risk," proclaim the ads of Destiny Group, a Newport Beach, Calif., company that insures against lawsuits. Women are "at risk for breast cancer just because they're women," declare the developers of a cancer-risk-assessment model. The Scottsdale, Ariz., company TriVita Way International Inc. sells its calcium supplements by cautioning in ads, "Chances are, you're at risk."

As more warnings have been dispatched by more Cassandras, however, some people have started to lose their faith in the traditional authorities -- political leaders, scientists and journalists. "As consumers, we have to respond in some way to an unstable and complex stream of scientific claims and counterclaims," wrote Anthony Giddens, director of the London School of Economics, in his book "The Consequences of Modernity." "We live on the edge of a technological frontier which no one completely understands and that generates a diversity of possible futures."

That sense of confusion persuaded Martha Reeves, a 38-year-old nurse at the Vanderbilt University Medical Center in Nashville, Tenn., not to get the smallpox vaccination she was offered last fall. "I don't want to be part of a group that they find out it doesn't work on," Ms. Reeves says. Program organizers "didn't have a lot of answers for things," she adds. "As with anything, you don't know how your body is going to react. And if you have an adverse reaction, then you're out of work."

The very process of scientific discovery, with conflicting studies recommending different paths, can leave laymen in a muddle. Leslie Rasmussen, a 53-year-old Pasadena, Calif., attorney, had been confidently taking hormone replacements until last summer, when a federal study showed that estrogen and progestin can raise the risk for breast cancer, heart attacks, strokes and blood clots.

The fact was, here was something I thought was OK, and suddenly there's a risk to it," says Ms. Rasmussen. "Either the medical community doesn't have a clear handle on these issues when they release these studies, or the media don't present it clearly. Between the two, you aren't sure what you're being told and why."

Fear is an evolutionary survival technique -- early humans who worried about other carnivores were more likely to be on guard against them. "We are hard-wired in our brains to

fear first, think second," says David Ropeik, director of risk communication at the Harvard Center for Risk Analysis.

And some people even find taking risks addictive, which is why there are people who will climb vertical rock faces, jump off bridges with only a rubber cord between them and the water or try to jump a motorcycle over Idaho's Snake River Canyon.

But most people try to reduce the fear in their lives. Unfortunately, once a person has learned to fear something, he or she may always associate the experience with fear. That means that over a lifetime, fears tend to accumulate rather than supplant one another. Furthermore, humans can fear events they have only read or heard about, which is why people worry about calamities they have never endured.

"In our current environment, our fear system is almost too powerful because it's trying to protect against threats that don't really exist," says Karim Nader, professor of neuroscience in the psychology department at McGill University in Montreal. "We're not running into predators at every corner."

Tell that to Matthew Felling, media director of the Statistical Assessment Group, a Washington-based nonprofit organization that studies the way the media use numbers. "I worry all the time," he says. "When I get on the subway, I know I'm at risk. I've gotten out of a subway car because I didn't like the way someone looked." Based on historical data, riding the subway is much safer than driving to work. But "fear has become a commodity that's packaged to us," Mr. Felling says. "You know, 'What you don't know about your envelope-licking can kill you.'"

Before humans became so good at controlling their environment, they were more resigned to the exigencies of fate -- only prayer could protect them against natural disaster or plague. But as people became more adept at securing food and shelter, they became more interested in the future and how to extend it. When they learned to calculate, they could compute, based on historical data, what events might threaten their lives.

H.G. Wells once wrote, "Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write." Even Mr. Wells couldn't have predicted how many statistics people face in their everyday lives now -- and how poorly trained they are to interpret them. "I teach a short course on radiation safety in Las Vegas," says Mr. Karam at the University of Rochester, "and I wonder how I can talk about probability to people who come there confident they're going to win."

In early April, Farid Tahbaz, marketing manager for a rubber and vinyl manufacturer in Buena Park, Calif., canceled a business trip to China because of SARS. "At first I wasn't really that scared," he says. "I didn't think I was going to catch it, and I figured if I did, I'd just get sick for 10 days." As the trip approached, however, and many people urged him not to go, Mr. Tahbaz began trying to find information on SARS in newspapers and on the Internet. While there are still no dependable statistics on the disease, "I took into account everything I'd read, and decided there was about a 5% chance that I would contract it," Mr. Tahbaz says. "And then there was a 5% chance that if I got it, I might die from it. When I thought about the numbers, it wasn't worth it."

Perhaps the most terrifying aspect of risk now is that humans are actually manufacturing it -- with nuclear power plants, the ozone hole, toxic waste, global warming, nuclear weapons, even terrorism. Most of these systems are so huge, complex and relatively new, that the possible

consequences of them are wholly unknown. "We don't know how big or small our risk is," says Baruch Fischhoff, a professor at Carnegie Mellon University specializing in the study of how decisions are made. "It's possible that the world is in transition, and there are poorly understood factors that raise questions about the validity of historical statistics."

The Wall Street Journal

April 24, 2003