

Looking into the—sometimes bad—reality of life offers rich challenges for interaction design. In this Connections column, John Thackara looks into the aspects of fear and discusses its relevance for human-computer interaction.

—Manfred Tscheligi

Designers and the Age of Fear

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OUTSIDE BAGHDAD, and almost everywhere one might travel in the world, the risk of being killed in a road accident greatly exceeds the risk of being killed by a terrorist. John Adams, a leading academic expert on risk, points out that the death toll from the London bombings represents six days of death on Britain's roads. Yet the public fear of terrorism—and reaction to it—is on a completely different scale than that of death on the road. Around 70 percent of British people are “concerned” or

“very concerned” about national security—even though driving a car is a far bigger danger.

And cars are havens of safety compared to staying at home: Over 3,000 deaths a year

in the UK are the result of home accidents—more than on the roads. Half of these in-the-home deaths (1,500) are people falling over—and of these, between five and ten each year take place when people are trying to put on socks. (In 2003, 11,788 Brits were taken to the hospital following accidents while putting on socks, tights or stockings.) Eating lunch is more dangerous still: 67,000 people are injured each year in the UK trying to peel the

cellophane off a packet of sandwiches or open a ring-pull can.

I mention these numbers because the research economy is becoming massively distorted by our inability to judge risk in a rational way. In the aftermath of 9/11, enormous research resources began to flow toward homeland security (HS) and its European equivalents. Estimates are that total HS outlays—by federal, state, local, and private entities in the United States—grew from \$5 billion in 2000 to \$85 billion in 2004, with a forecast that they will grow to \$130 billion—and possibly as high as \$210 billion—by 2010. Measured in a different way, Googling “usability” and “homeland security” yields a score, as I write, of 50,400; Googling “putting on socks” and “usability” yields... 21.

I don't blame researchers for these absurdly skewed priorities. Indeed, a survey earlier this year of frontline researchers in 25 EU countries revealed surprising deviations from their employers' and policy makers' priorities. The so-called Fistera Delphi (a system for averaging the results of an opinion survey) asked experts, including this writer, to prioritize research priorities for 2010 and beyond. Security and defense scored badly relative to education and learning as a preferred application area for IST. So much so that the report's editors commented, rather plaintively I thought, that “this result is rather surprising given the huge markets that exist around these areas.”

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But we are not innocents in the security mania. This year's Computer Human Interaction (CHI) conference chose as its theme "Technology, Safety, Community" and posed the "challenge for technology to make people feel safe again." That challenge is doomed to failure. Tech-enabled security is a chimera. People don't feel unsafe because of insufficient technology, but because of insufficient understanding of risk. Three thousand people died on 9/11, for example—but since then, nearly 3,000 people have died every single day as a result of road traffic injuries, and 8,000 people a day as a result of air pollution. Why were sustainable mobility, or sick air, not selected as themes for CHI? What about drug delivery regimes? Thirty-thousand people a day die from curable diseases—most of them people who cannot afford the prices charged by drug companies for remedies that might save them. Is that not an issue for CHI?

The events and situations that kill people in the modern world raise complex and highly political issues. I do not seriously think it is the responsibility of organizations like CHI to tackle them head on. But, I do believe we have a responsibility to reflect critically on the work we are asked—and paid—to do. The Age of Fear has become a big business. Do we want to be part of it?

A huge alternative market already exists. It's called daily life. Real-world, real-life issues and situations contain infinite opportunities to develop new services and infrastructures. In recent Doors of Perception encounters and workshops, in both Europe and South Asia, street-level workshops in which participants engage with real-world issues in real-world locations have been fun and rewarding. We have asked people to design a service to connect visitors to the best street-food vendors in an Asian city, mock-up a time-banking service in Eastern Europe, design the infrastructure for a community-based agriculture scheme, or explore location-based services. None of these was security-related; each of them opened

up a vast array of possibilities. The challenge is to innovate by learning *from* the world, not by smothering it with technology. We need to become hunter-gatherers of models, processes, and ways of living-discovering, accessing, mobilizing and leveraging knowledge about daily life from many locations—while always respecting the people and places where these resources are found.

Learning from the world as it is lived now has taught our community one lesson above all: People provide better services than technology. The defining feature of services in the so-called self-service economy being pushed by the business schools is that they take place with little or no human contact. The customer does work once carried out by an employee, but is not paid for doing so. The math, from the service provider's point of view, is simple: Netonomy, a firm that provides self-service software to telecom operators, reckons online self-service can cut the costs of a transaction to as little as ten cents, compared with around \$7 to handle the same transaction at a call center. Banks have decided that a human being behind a desk costs ten times more again—which is why it is so hard to find a human being in a bank nowadays (if it ever were easy). A self-service kiosk in a supermarket can handle the work of two-and-a-half employees at a fraction of the cost. When Amtrak introduced an Interactive Voice Recognition (IVR) system called Julie in 2001, the service soon handled a third of the rail system's bookings, and *The Economist* reported at the time that 80 percent of callers surveyed were happy with the service [1, 2]. That doesn't sound so bad until you remember that Amtrak carries an average of 22 million passengers a year—which means that nearly 4.5 million passengers had a *bad* experience buying their ticket online. Multiply that 4.4 million by (say) 1,000 to account for the other major service organizations that have dehumanized their services, and you get 4.5 billion people—or two-thirds of the world's population—experiencing bad service every day.

What has the “self-service economy” got to do with the Age of Fear? Well, I believe people are more susceptible to irrational fear and anxiety when they are socially isolated from each other. When human beings are removed from everyday services—from the ticket booth, corner shop, or doctor's waiting room—the users of that service lose out on another moment of human-to-human contact. ♦

URLS *Homeland Security Market Trends* www.volpe.dot.gov/ourwork/dimensions/050604/trends.doc *Accident Statistics* www.dti.gov.uk/homesafetynetwork/gh_intro.htm *Fistera Delphi* http://les.man.ac.uk/PREST/fistera/delphi_results.htm

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