EM9513: The Globe and Mail Editorial, April 17, 1995, page A10

A heady analysis of everyday risks

TODAY we would like to give you a sense of the inner workings of the collective mind of *The Globe and Mail* editorial board. Now, before any jokesters start cracking wise about how nature abhors a vacuum, let us say that the issue we have been wrestling with is risk analysis.

How, we wondered, do humans mentally process risk when it comes packaged in terms of there being a one-in-X chance of something dreadful happening? Our musings about cognition arose from a wonderfully instructive letter appearing in the paper last week by Jane Fulton, a professor of health policy and ethics at the University of Ottawa.

She pointed out that the hue-and-cry over the reduction of firemen at Canadian airports was statistically dumb. Planes rarely crash and even when they do, the inconsiderate machines generally can't be relied on to smash themselves up on airport runways. So why not put our tax money into something that is more cost-effective at saving lives, she wondered.

Why not be, you know, rational, as opposed to: Oh-my-god-did-you-see-those-gory-bloody-pictures-of-50-plane-passengers-burned-to-cinder-and-ash-in-Pakistan; FOR GOD'S SAKES, CANADA MUST HIRE MORE FIREMEN.

There was amongst our collective mind a general sense that the airport firemen were almost entirely symbolic. God may or may not be dead, but humans' fates are in the 20th century continually cast in terms of chance and risk. Hardly a day goes without a news story throwing up statistics such as a one-in-seven chance of death being connected with cigarette smoking, one-in-100 from motor vehicle accidents, one-in-20,000 from an airplane crash, one-in-100,000 from a poisonous bite or sting, a one-in-3-million chance of dying from food poisoning.

Nonetheless, it was not clear to us how individual tragedy was translated into personal decision by the wet and soft computer we call the brain. Some of us – well, Andrew Coyne – maintained that we can decide these things rationally. In the same way that we budget our finances, so we can and do arrive at some kind of rough measures of risk. Moreover, if there are differences amongst individuals about the weight of a given risk, collectively a kind of consensus is arrived at by the whole. As a society we put a price on danger.

Others – well, Marcus Gee – related the real-world difficulties of arriving at a risk common market. He described a situation he was intimately familiar with wherein a mother was demonized by the thought of her child being electrocuted and a father tried to argue that inconvenience of putting safety plugs probably out-weighed the risk. Consensus had not yet been arrived at.

AND finally, still another anonymous board member – well, Stephen Strauss – argued that when he thought about dangers there was never any mathematics involved. One-in-four, one-in-100, one-in-1,000 were for all intents and purposes the same. One-in-a-million was not an emotionally effective way of saying: Don't worry. The language of risk was located deep in the stomach. If things felt scary we believed they were dangerous because numbers don't speak the visceral language of fear.

Given that the collective editorial mind had conflicted and opposing notions of reality – again, we warn you, we will not listen to your snide asides about how typical the day must have been – we decided to see what is known about communicating risks to people. Part of the result of that inquiry was the news story that appeared in the paper on Thursday wherein Health Canada polls of risk analysis by Canadians were reported.

(Again, to the wisenheimers, yes, Globe editorial writers actually do research what they opine about and in so doing sometimes do unearth the unknown).

There were several striking things about the surveys. It is comforting that after millions of news stories, and thousands of studies and dozens of advertising campaigns, that the public at large understands how dangerous cigarette smoking is to their health. It was ranked as the No. l risk. But that was almost the sole constant. Men/women, young/old, Quebeckers/the rest of Canada, the general public and experts all exhibited strikingly differing judgments when it came to determining just how risky something was.

SYSTEMATIC disagreement was not an aberration of the Canadian survey. Numerous studies in the arcane academic sub-discipline known as "risk communication" reveal that – wonder of wonders – the disputations of the Globe editorial board in fact do indeed mirror the world. That is to say people everywhere take risk numbers and frame them in boxes formed by their life world views.

If you are an optimist, you play down the scary things in life. If you are an economic rationalist, you play up rational risk assessment. If you feel oppressed and powerless, all the world's a very scary place. What you do, as well as who you are, affects your world view. In the Health Canada study, toxicologists who worked for industry were much more skeptical of animal studies showing chemicals were dangerous than were scientists who worked in government or academe.

And people who work in dangerous occupations persuade themselves that it is the other fellow who is at risk.

If the collective mind of *The Globe and Mail* had trouble arriving at a common agreement about how it understood risks, it is because there is no common understanding. The experts say the one-in-X numbers are an objective face plastered over what is intrinsically a subjective and political area of human endeavour. The anonymous author of this editorial – okay, the aforementioned Stephen Strauss – wanted to use this contradiction as a platform to pronounce on the impossibility of rationality in public and private life.

The reasonable thing is to rank risks and to act accordingly. Big, preventable dangers should receive the most public money and attention. They should also be the ones that individuals did their utmost to avoid. However, people apparently don't think about risks rationally, and in a democracy, freedom often translates into a mutual respect for the irrationality of others. Another editorial board member – see the name by the words "Editor- in-chief" – said that this sounded to him like the newspaper was not describing unreason, but embracing it. Was there not a middle path?

Therefore, the muddled mind of *The Globe and Mail* has adopted a paradox as its editorial stance. We firmly believe every Cadadian should be more sensible when it comes to measuring the likelihood of dangers in his or her life, but we just as firmly believe they won't be.

The article EM9513 reprinted above is used in Figure 7.15 of the STAT 220 Course Materials.