

RISK = HAZARD + OUTRAGE

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By Rolf Schmid

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Risk Engineering Global Workshop

“Risk professionals see ‘risk’ as ‘probability x magnitude’, whereas for most people risk means ‘outrage’.”

If you are the operator of an industrial enterprise and you have upset the local community or the public at large – for whatever reason – there is no point in trying to ‘educate’ them, or worse, attempt to convince them that they are wrong and you are right. By defending your position, all you do is inflame their anger. As Peter Sandman explained in his keynote address, companies that take this approach are talking at cross purposes with their irate accusers.

A question of definition

The two sides don’t understand each other because they don’t share the same concept of risk, as is illustrated by statistical analysis: If we rank environmental health risks according to the number of people they kill and then rank them again according to how much they upset people, the correlation is a mere 0.2. Dr. Sandman also found that the same is true for any other risk, e.g. morbidity, ecological damage, socio-economic damage, etc.

The reason for this dichotomy, says Peter Sandman, is that risk professionals see ‘risk’ as ‘probability x magnitude’, whereas for most people ‘risk’ means ‘outrage’. By redefining ‘probability x magnitude’ to mean ‘hazard’ (instead of risk), we can couple risk with the more comprehensive concept of ‘hazard’ plus ‘outrage’. “Experts”, Peter Sandman told his audience, “focus on risk (hazard) and ignore outrage, therefore they systematically overestimate risk when the hazard is high and outrage is low, and they systematically underestimate risk when the hazard is low and outrage is high.”

Outrage and hazard perception

The public does just the opposite; they overestimate risk when outrage is high

and the hazard is low. Thus, when outrage is high, i.e., when people are angry and frustrated, they tend to perceive the hazard to be high – whether it is or not. Alternatively, when outrage is low, people perceive the hazard to be low too. This strong causal link between outrage and the perception of hazard creates a dual task for risk managers: On the one hand they have to manage hazards but they also have to manage outrage: “If you want people to take you seriously [when the hazard is high and outrage is low] you must increase their outrage.”

As Peter Sandman suggested, outrage and hazard perception takes on different forms; and it’s not always the misguided public who gets it wrong. The very people (senior managers) who are likely to view the public’s attitude to risk as misinformed or even subversive, may, as it were, find themselves on the other side of the fence. “Imagine you are having a quarrel with your partner over where to have dinner: will it be Chinese or Italian. After some time each thinks the other is acting like a jerk. Do you think a good way to deal with the situation is to present your partner with data on the relative (nutritional) merits of eating Chinese food – and thus prove to her that she is a fool; will you be having a pleasant evening?” Telling people they are wrong doesn’t work, no matter who they are or what the situation is.

Persistent nagging, or “excessive outrage”, doesn’t work either. To illustrate, Peter Sandman recalled the childhood experience of constantly being told by (over)cautious parents: “don’t do this, don’t do that”; in effect bombarding the offspring with unwelcome safety warnings. Such memories could easily be rekindled by an overzealous “Zurich



person who sounds just like mom”, telling a plant manager what to do.

Outrage also happens to company executives when making strategic decisions and when dealing with their own staff. For example: “Why”, Dr Sandman asked bluntly, “are CEOs not noticing the economic benefit of not killing their employees?” Because many senior managers harbor “a lot of hostility towards their workforce. Indeed, outrage seems to get right into some people’s sub-consciousness; so much so that some CEOs will suppress the need to take action on, for example, safety, because they see discussions on safety issues with lower management as a threat to their own self esteem; or they don’t want to feel bad about not having done anything the year before! “. It is psychologically more comfortable to consider past accidents as unavoidable.

Making risks smaller

In the public/industrial arena, one way of reducing outrage, suggests Dr. Sandman, is to make risks more voluntary. Securing people’s permission might

lower their outrage. And by appeasing the public you are also more likely to keep legislators at bay. Because “when people are outraged, regulators over-regulate hazards. They are not allowed to regulate outrage, and they are not allowed to make you apologize, so they make you put in expensive equipment instead, which costs more than apologizing, but it’s within their mandate.”

A little bit of humility, it seems, will go a long way: “Making risks more voluntary won’t reduce the hazard but it will make it a smaller outrage and therefore a smaller risk and [thus] lead to fewer lawsuits, fewer insurance claims, lower levels of controversy – and lower levels of regulation.”

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