

~~Probability x Consequence?~~

Navigating the notion of risk when
communicating about nuclear to the public

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📍 Stolen Ho-Chunk land (Madison) 🌐 nuclearkatie.com
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Life Sciences Communication
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Risk does not mean the same thing in engineering as it does to the “public”

- Risk is inherently subjective
- Even PRA is based on a set of subjective expert judgements and informed approximations
- Some consequences are not yet quantifiable, but that doesn't mean they're not real
- Individual interest and tolerance of risks varies greatly
 - Environmental, social, and even biological factors contribute



Risk =
probability
x consequence



Risk =
consequence
vs benefit

Technical experts

Annual fatalities

Lay public

Catastrophic potential, controllability, threat to future generations, familiarity, equity, being voluntary, novelty, delayed effects, observability, level of scientific understanding

Risks of a nuclear accident: TMI

- Small radiation exposure to public
- Stricter/costly regulation
- Greater public opposition
- More reliance on fossil fuels
- Increased construction and operation cost
- Decreased interest in building new reactors
- Psychological impacts of evacuation

One thing the literature is crystal clear on: trust is key

- We rely on heuristics (mental shortcuts) to make up our minds all the time (yes, you!)
- We make up our minds based on people we trust
 - Know your public
- Public engagement alone does not guarantee support or trust
 - You can't ask for trust, you must earn it
 - Start by building shared identity/passion before asking for support



Four Rivers Nuclear Partnership

Trumbo, C. W. (2002). Information Processing and Risk Perception: An Adaptation of the Heuristic-Systematic Model. *Journal of Communication*, 52(2), 367–382.

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Sandman, P. M. (1993). Responding to community outrage: Strategies for effective risk communication. American Industrial Hygiene Association.

Mah, D. N., Hills, P., & Tao, J. (2014). Risk perception, trust and public engagement in nuclear decision-making in Hono Kona. *Enerav Policy*, 73, 368–390. <https://doi.org/10.1016/j.enpol.2014.05.019>

People generally perceive risks to be too high

- An informed and consenting population is a good thing!
- Do not argue that other industries “get away with” more accidents, death, environmental contamination so nuclear should too

Coal ash releases more radioactivity than nuclear, producing solar panels uses toxic chemicals so you should stop worrying about nuclear



I'm glad you care about industrial safety, I do too! Nuclear energy is held to a very high standard, and that's good!



Want to read more?

nuclearkatie.com/risk-reading-list

