

The Underperforming Impacts of Scientific/Technical Information

Why Practice Risk Communication?

After years of preparatory studies, earning and maintaining credentials, and professional experience you've worked hard to become an expert. If you don't *feel* you are an "expert" – perhaps you haven't published, or you're not high on seniority, or you just have higher regard for certain other of your peers [*they're the REAL experts, you might say, not me*] - you should at least recognize that the very position you occupy is viewed as source of expertise – someone capable and interested in highly complex understandings, and knowledgeable in a scientific focus or technical practice. You might work in a specific area of health promotion/prevention, occupational or public safety, or environmental science/policy, so your (or your organization's) advise is sought and considered a piece of the ongoing solution.

But is it a big enough piece? Why don't policy decisions seem to be scientific "enough"? People clamor for a well-understood basis and purpose for action (the scientific method is a great candidate), but then ask for other considerations to impact a potential solution or result, especially in public policy development. Why is it so difficult (or uncomfortable) to talk comfortably or effectively to lay/public audiences?

Insights into these difficult dynamics can be found in the study of risk communication – to get to the empirical evidence of how risks are understood, how decisions are made, and on what known basis – and then have that information guide how we can communicate what we know (and what we don't know) more effectively. Risk Communication is an interdisciplinary study, which includes inroads from the academic disciplines of social science, ethics studies, public policy decision research, cognitive science, epidemiology, and, not insignificantly, risk analysis and statistical assessment.

Consider that people make risk decisions for themselves – how risky is a substance? Can I allow exposure to my children? Is a given risk worth the fun or benefit? And people in government and industry certainly make risk decisions for others – as stakeholders or authorities in terms of public policy, organizational guidelines, local communities, and business practices. Research shows that while "lay" individuals DO understand how the experts regard risk (for mortality, health and environmental exposures), the correlation between risk decisions across the expert/lay divide is a meager 0.2. That means that people rarely agree with the expert scientific/technical analysis on how risky a given substance or behavior is to them – *even when they understand what the experts believe themselves*. Understanding the well-defined risk communication factors which govern beyond the mathematical prowess is therefore essential. Clearly, the overarching impacts of our studies and work have been less than ideal with misunderstandings, misrepresentations and some misgivings; and we work on a landscape burdened with conflict and contention.

So what can we do? Often, the "expert" community will regard the lack of specific education (of lay audiences) as the root cause of the ineffectiveness of the risk message or frustration in their attempts to explain what they know and think. In this regard, professionals are half-correct – education is clearly part of the solution – but I believe it is the further education of "experts" in risk communication skills and practice which would have the greatest immediate effect (and is certainly easier to accomplish), rather

than the comprehensive raising of scientific understandings in the public domain. The latter is admirable, but untenable, and my point is that experts are in the “driver’s seat”, should they choose to understand it, to accomplish a more collective, more comprehensive and effective risk understanding.

Risk communication is defined as the “study and practice of collectively and effectively understanding risks.” As a professional who is most able and apt to know the technical realm, you are the best candidate to make it understood as correctly and effectively as possible. Too many experts and their organizations are not equipped in risk communication practices – either personally, or systematically (e.g. all communications handled through a Public Affairs office) and pay the consequences in terms of lack of trust and credibility. Decisions continue to be made – with or without the vital information that experts can (and should) bring to bear. Too many decisions and outcomes in the past 50 years – whether public or private, corporate or personal – have suffered from too little scientific basis, even when it exists, or worse, an inaccurate understanding of the basis. This has resulted in incalculable losses in business, environmental quality, and delays (or cancellations) of work. In short, we have not yet begun to harness the impact of the great amount of risk information available since risk assessment became part of the public policy landscape many years ago. And yet we continue to add information – pushing the envelope of what is detectable, computer and other predictive modeling of what impacts human or environmental health, or other information-gathering without improving our individual or collective abilities to apply the information best.

Risk communication can help engender agreement, resolve conflict, reduce stress/mistrust/fear, and among other things, allow business and projects to proceed more effectively. Risk communication is not a panacea, nor should it be considered applicable to all communications goals. It is a practice to engage in (on personal and organizational levels), and a skill to develop. My belief is that risk communication is a valuable professional development proficiency which will enhance the effectiveness of technical and scientific work worldwide. It is time to apply risk information and knowledge into a wider wisdom.

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