

---

## *Telling Public Stories About Risk*

*Sharon Dunwoody  
Evjue-Bascom Professor of  
Journalism and Mass  
Communication;  
Head, Center for Environ-  
mental Communications  
and Education Studies,  
University of Wisconsin,  
Madison  
(pictured on right)*



Communicating risk to the public looms as a confusing, perhaps even wildly unpredictable, process to many scientists and policymakers. People confronted with risky situations often seem to respond irrationally. Their reactions sometimes suggest that they are evaluating information in superficial and hasty ways. It is hard to see patterns in the judgments they make about whose information is credible and whose is not. Incredibly enough, they even seem to believe what they read in newspaper stories.

Others (see Hoban and Kendall, page 73) focused on how we, as individuals, perceive risks “out there.” This presentation will focus on some work by communication scholars that explores how we all use information to make judgments about risk. More specifically, I want to talk about how, given a risky situation, individuals choose information channels in order to learn about the risk, as well as to decide how worried to be about that risk.

Why care about information channels? Let me respond in two ways. One is that the old-fashioned view of the risk communication process—a simple stimulus-response scenario in which the expert spouts information

and the recipient ingests and then acts in ways consonant with that information—rarely seems to work, and ignoring channel preferences may be one of the many reasons why. A second reason for caring about channels is that the findings of communication research suggests their role is counter-intuitive. Put another way, we all seem to routinely misjudge the effects of channel use on people's risk judgments. If part of the goal of this report is to engage the agricultural biotechnology community in fruitful public discussion of risk, then reconfiguring our understanding of channel use is important.

*...reconfiguring  
our understanding  
of channel use is  
important.*

#### FIRST, AN EXAMPLE...

Before discussing some of the things we have been learning about how folks use information channels to inform their risk judgments, let me begin with an example. A very personal one, I might add.

Some years ago, Steve, my partner, and I sat down to watch a *NOVA* program about asbestos. Midway through, Steve wondered aloud if the stuff wrapped around the steam pipes in the basement of our old refurbished farmhouse might not be moldering asbestos. It was. We now had to decide what to do about it.

We began an intensive search for information. We called state agencies, the Environmental Protection Agency (EPA) and various information offices at our university. We rummaged through libraries. We ended up with a large pile of information about asbestos but, we felt, no information specific enough for our needs. So we next embarked on a search for individuals who could investigate our problem in person. Two engineers ultimately found their way into our basement. One resurfaced with the soothing message that we would be quite safe if we left the asbestos as is; the other hastened back up the basement stairs and warned us to stay out of the basement until the asbestos had been removed.

In desperation, we finally asked ourselves: Would we ever return to the basement if we left the asbestos in place? The answer was no. A few weeks later we hired the best professional we could find to remove the stuff.

Although I did not realize it at the time, this saga nicely illustrates some of the more important channel factors that scholars have discovered in recent years. Three will be discussed here: 1. the notion of channel utility; 2. the argument that individuals use different channels to inform different dimensions of risk judgment; and 3. the argument that individuals evaluate information in some channels as more relevant to themselves than information in other channels. Be aware that I make a distinction between "channel" and "source." A channel is a mode of transmission—*The New York Times*, *60 Minutes*, an interpersonal interaction. Sources, on the other hand, are informa-

tion providers embedded in channels. A single channel can offer many sources, or just one.

#### CHANNEL UTILITY

Our world is awash in information channels. The mass media are obvious ones, and they often get fingered as the sole, or at least the primary, channels used by the public to learn about risks. But recall how you came to terms with a recent salient risk and you will realize that, in an information-rich society such as this one, we have many channels at our disposal. In the asbestos example above, Steve and I utilized television, newspapers, various printed brochures and pamphlets, and human beings.

But we typically do not access these channels in equal dollops. Stanford researcher Steve Chaffee (1986) argues that our use of any particular channel depends on two things: the cost of getting to that channel and a judgment of the likely relevance of information that we may find there. The joint outcome of those two factors determines something called “channel utility.”

Some channels are too costly to use, even when we judge the information they contain to be of high quality. For example, many people will cite a physician as their preferred channel for information about health risks such as AIDS (Freimuth et al., 1987), but few individuals will actually discuss those risks with physicians. The physician ranks high in terms of likely information relevance, but she is also costly to access; most individuals in our culture either cannot afford to visit a doctor just to talk about health issues or are reluctant to ask time of such a high-status person.

Conversely, other channels may be easy to access but may be judged inappropriate for certain types of information. For example, some of the most accessible publications in the country are sitting in supermarket checkout lanes. Yet, many individuals would regard *The National Enquirer* as a poor source of information about biotechnology risks.

*For most of us, juggling cost and relevance leads to channel tradeoffs.*

For most of us, juggling cost and relevance leads to channel tradeoffs. In fact, more often than not, we may settle for a particular channel not because we prefer it, but because it is available. Many of our preferred channels may be too costly to access and we, thus, “make do” with a variety of channels—such as the mass media—whose information we may regard as reasonable but not necessarily on-point. For example, although we may prefer to learn about AIDS from our physicians, we do not. Instead, we rely heavily on the mass media for such health information. That reliance stems not from a judgment that newspapers are better sources of health information than physicians—to the contrary, when asked, individuals are quick to note otherwise (Reagan and

Collins, 1987)—but from the fact that newspapers are far easier to access and are regarded as being generally informative.

#### RISK JUDGMENT AND CHANNEL CHOICES

The days when scientists went looking for a tight fit between level of risk and behavioral response are long gone. Risk perception researchers have made it abundantly clear over the years that we all use multiple factors to evaluate a risk and that estimates of likelihood of coming to harm—while taken into account when available—are only part of the picture and must compete with other factors, such as our familiarity with the risk, our sense of control over it, and its catastrophic potential (Slovic, 1987).

If one acknowledges that decisions about risky situations are grounded in multiple dimensions rather than just one, then it is a short conceptual hop to the idea that individuals may prefer different channels to inform different dimensions of risk judgment.

And that is just what risk communication researchers are finding. Recent work suggests that individuals differentiate between channels that are appropriate for *learning about* a risk and those best used to decide *how worried to be* about the risk. Specifically, individuals seem willing to rely on the mass media and other “impersonal” channels in order to gather information about a particular risk. But they seem unwilling to rely on those same channels

to reach decisions about how worried to be. Instead, they prefer interpersonal channels to inform this “worry dimension.”

*...individuals differentiate between channels that are appropriate for learning about a risk and those best used to decide how worried to be about the risk.*

For example, in a study of young adults’ perceptions of the risk of contracting the HIV virus, Dunwoody and Neuwirth (1991) found that use of the mass media predicted to participants’ understanding of level of risk (a cognitive, knowledge variable) but not to their level of worry about contracting the virus (an affective variable). Rather, the best

channel predictor of level of worry was interpersonal.

While this flies in the face of a pervasive cultural assumption that the mass media can scare us to death by “sensationalizing” information, it is quite consistent with a growing body of mass communication research that finds media messages far more closely linked to cognitions than to affect. That is, the media seem to operate principally as sources of information in our world, not as persuasive forces.

That distinction played itself out in the little asbestos saga above. Steve and I gathered lots of mass-produced information and learned a great deal about asbestos. But we were reluctant to use that information to construct a

sense of how worried we should be about the stuff in our basement. Instead, we wanted to talk to human beings. We sought out interpersonal channels to help us with that dimension of risk judgment.

#### REFERENTIAL LEVEL AND CHANNEL CHOICES

Risk perception researchers have demonstrated that, when confronted with a hazard, we systematically differentiate between the level of risk it poses to others and to ourselves. Specifically, we underestimate our personal level of risk compared to that of others (Weinstein, 1989).

Again, it is a short conceptual hop to the idea that, if individuals distinguish between self and others when judging level of risk, they may utilize different information channels to inform those two different judgments.

And again, mass communication research bears this. Specifically, individuals seem to interpret mass media information as telling them about the risks to people "out there" but resist seeing those same messages as telling them anything about their personal level of risk. Instead, once again interpersonal channels are the preferred source of personal risk information.

Two studies offer good illustrations of this phenomenon. Tyler and Cook (1984), in a series of experiments examining the ways in which information influenced individuals' judgments of the risk of being victimized, found that:

1. personal- and societal-level judgments were quite independent of one another; and 2. mass media crime stories influenced those societal-level judgments but not the personal ones. In other words, reading newspaper stories about crime leads you to think that folks around you (i.e., in your community, your state, your country) have a greater likelihood of being victimized, but the stories will not influence your assessment of your own personal level of risk. The world around you may look scarier, but you see your neighborhood as immune to that trend.

*...interpersonal channels are the preferred source of personal risk information.*

Similarly, Culbertson and Stempel (1985), in a survey of Ohio residents, found the self-other distinction: Seventy-five percent of the respondents criticized the availability of health care in the United States while only 5 percent viewed their own health care environment negatively. Further, evaluations of media coverage of health were correlated more with respondents' assessments of the quality of health care available to Americans than with their assessments of their personal care.

In sum, mass-mediated information influences our social-level perceptions but not our individual-level ones. This differential impact has come to be known as the "impersonal impact hypothesis," as it suggests that, in the words of Tyler and Cook (1984), "the modality of indirect experience, which

is most effectively controlled by society and which reaches the largest audiences—the mass media—is the least effective in influencing personal concerns” (p. 694).

This referential distinction emerged starkly during the asbestos saga. While Steve and I gathered reams of written information about asbestos, we resisted seeing the information as telling us something about our personal level of risk. We clung to the assumption that our situation was somehow unique. The more general written documents could not be sensitive, we felt, to the amount, age and condition of the asbestos in our basement. We finally resorted to bringing in human beings to stare at our asbestos and offer recommendations for dealing with it.

Again, the argument that mass media channels are ineffective at the personal level flies in the face of many individuals’ assumptions about our use of information channels. We all believe we have witnessed the impact of the media on personal perceptions, be it the specter of thousands of residents who fled their homes in 1979 in reaction to the news that the damaged Three Mile Island reactor might harbor a potentially catastrophic hydrogen bubble or the hundreds of phone calls to cancer

or AIDS hotlines after the inevitable public disclosure of a well-known personality with the disease.

Indeed, a good bit of empirical evidence suggests that the mass media do serve an alerting function, that individuals use newspapers, radio and TV as social antennae to alert them to situations or issues “out there” that may need attention. But once the issue has become salient to an individual, that “agenda-setting” function is only the beginning of an elaborate process of information-gathering, one in which the mass media are only part of a panoply of channels, each being used for very specific but very different purposes.

By way of example, I turn again to the asbestos saga. It was television—specifically a *NOVA* program—that alerted Steve and I to the problem of asbestos. But when we began looking in earnest for detailed information about the risk, we gave little thought to seeking information in media channels. Media stories are time-based, intermittent, ephemeral. They lack detail. Their presence coincides with news “out there,” not with the personal situations of their readers. So for us, the mass media served its classic alerting function and then vanished as a relevant channel during the rest of our search.

#### THE LIMITS OF MASS MEDIA CHANNELS

This inability of media channels to inform individuals’ personal levels of risk is disconcerting to some policymakers for another reason: They engage in

multimillion-dollar information campaigns to convince us to change a number of life-threatening habits, from smoking to having unprotected sex, and those campaigns traditionally rely heavily on the mass media to carry their messages. Our resistance to seeing mediated messages as relevant to ourselves is costly to campaign designers—so costly that it has sparked a good deal of discussion about why the public makes this channel distinction and what can be done about it. Researchers have proffered a few educated guesses.

One argument is that our insistence on interpreting mediated channels as informing only our understanding of society is a learned response applied to all media messages. That is, we have all grown up amidst the mass media and, over time, have learned that media stories are always about folks “out there,” never about us. We have learned, in other words, to interpret media messages as telling us about others, about society.

If this argument is correct, then one may be able to counteract that pattern either by recasting media messages in ways that signal to the reader that “this story is about you” or by training audience members to interpret existing messages differently. In the former camp, strategies might include beginning stories with story narratives featuring individuals like the typical reader, or using the second-person “you” throughout the story. A focus on the latter strategy must begin with a better understanding of how people interpret mediated messages and then would require a kind of resocialization process. Efforts to change audience perceptions through restructuring media accounts have not been fruitful to date (see Dunwoody et al., 1992). Although scholars have not yet explored the notion of “retraining” media message users, researchers have demonstrated the value of educational efforts in such areas as promoting better individual use of mathematical and statistical concepts (see Nisbett et al., 1983).

*...recasting media messages  
in ways that signal to the  
reader that “this story is  
about you”...*

Another argument is that individuals do indeed use media channels to inform personal risk levels but that, since most of the risks reflected in media accounts are those whose likelihood of occurrence is low, no change in personal risk levels is necessary. Tyler and Cook (1984) maintain that, under such conditions, “the rational and discerning response of most members of the public probably should be to refrain from changing their estimation of their own risk while acknowledging that the problem may be greater to society in general than they had thought” (p. 206). This hypothesis has not been tested, but the self-other distinction seems to hold across a range of risks and likelihood levels.

Finally, yet a third group argues that we are so resistant to seeing ourselves as being at risk that nothing can dissuade us from interpreting our

level of risk as lower than that of the folks around us. If true, no amount of fiddling with media stories about hazards will convince audiences that those stories have something to say about their personal likelihood of coming to harm. Partial support for this position comes from Gunther and Mundy (1993), who found in one study that media stories recounting disadvantageous consequences generated the self-other referential distinction while stories that posed potential benefits did not. Respondents immediately interpreted the positive stories as relevant to themselves, in other words, but resisted seeing the negative stories in the same way. This suggests that at least part of the problem lies with our reactions to the message rather than to the channel.

## DISCUSSION

Learning how people use information to inform their risk judgments is difficult. A literal blizzard of factors about the individuals themselves can influence those judgments, everything from a person's available store of knowledge about the risk to personality factors that make some people more likely to take risks than others. Attributes of the messages them-

*But only a very few,  
socially advantaged  
souls have such  
extensive channel  
access.*

selves introduce another welter of factors, from the clarity of the words and phrases to the vividness of the text.

In this brief presentation I have tried to illuminate one element within that panoply of message factors: the influence of channel. The bottom line here is that channel makes a difference. Given channel choice, individuals will use different channels

to help them make decisions about different dimensions of a risk. For example, a magazine article about radon may contribute to their understanding of the damage that radon can do to the human body. But when it comes to deciding whether or not to install a radon detector—that is, whether individuals should be worried enough about the risk to engage in some level of expense to determine the level of hazard to themselves—they will opt for a channel that they feel can take their personal situation into account. Almost without exception, that channel is interpersonal.

What does this mean for risk communicators? First, I think it requires us to be clear about our communications goals and to select channels that fit with those goals. You may employ very different channels to *explain* a risk—actual or potential—than you will use to try to *persuade* audiences that the risk should or should not worry them.

Second, it forces us to ponder the inequitable nature of channel access. In an ideal world, individuals could select among a myriad of channels to



meet their informational and decision needs. They could locate both popular and technical documents in publications or in electronic databases; they could talk to experts.

But only a very few, socially advantaged souls have such extensive channel access. Many Americans live their lives in something of an informational straightjacket; economics and the social context within which they live have severely restricted their channel choices. They do not subscribe to a newspaper. They may buy only the occasional magazine off the newsstand. They have little experience with libraries, even less with searching for information by computer. They have no idea how to get to human experts. They have never made a phone call to a governmental agency in search of an answer to a question.

For these individuals, the cost of using even generally available channels to inform their risk judgments may be high indeed, so high that it serves as an effective barrier to informed decision-making.

Finally, research on channel use raises the specter of an active audience. Turn-of-the-century communication researchers viewed the audience as a passive mass that absorbed and reacted to messages in predictable ways. Studies since World War II have turned that image around, suggesting instead that information users play an important role in selecting and processing messages. That filtering process can make or break a communication attempt, and it means that risk communication managers must be sensitive to the information recipient as a major player in the communication process.

#### REFERENCES

- Chaffee, S.H. 1986. Mass media and interpersonal channels: competitive, convergent, or complementary? In *InterMedia* (3rd ed.). G. Gumpert and R. Cathcart, eds. Oxford University Press, New York, NY. p.62-80.
- Culbertson, H.M. and G.H. Stempel III. 1985. "Media malaise": Explaining personal optimism and societal pessimism about health care. *Journal of Comm.* 35:180-190.
- Dunwoody, S. and K. Neuwirth. 1991. Coming to terms with the impact of communication on scientific and technological risk judgments. In *Risky Business*. L. Wilkins and P. Patterson, eds. Greenwood Press, Westport, CT. p. 11-30.
- Dunwoody, S., K. Neuwirth, R.J. Griffin and M. Long. 1992. The impact of risk message content and construction on comments about risks embedded in "letters to friends." *Journal Lang, and Soc. Psych.* 11:9-33.
- Freimuth, V.S., T. Edgar and S.L. Hammond. 1987. College students' awareness and interpretation of the AIDS risk. *Sci. Tech. & Hum. Values.* 12:37-40.

- Gunther A.C. and P. Mundy. 1993. Biased optimism and the third-person effect. *Journalism Quarterly*. 70:2-11.
- Nisbett, R.E., D.H. Krantz, C. Jepson and Z. Kunda. 1983. The use of statistical heuristics in everyday inductive reasoning. *Psych. Rev.* 90:339-363.
- Reagan, J. and J. Collins. 1987. Sources for health care information in two small communities. *Journalism Quarterly*. 64:560-563,676.
- Slovic, P. 1987. Perception of risk. *Science*. 36:280-285.
- Tyler, T.R. and F.L. Cook. 1984. The mass media and judgments of risk: Distinguishing impact on personal and societal level judgments. *Journal Personality and Soc. Psych.* 47:693-708.
- Weinstein, N. 1989. Optimistic biases about personal risks. *Science*. 246:1232-1233.