

# Fear of FLYING

Why is the public's perception of the risks of air travel out of step with the facts?

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**P**ILOTS LOVE FLYING. SOME OF their passengers don't. Why is it that when pilots think of flying, they think of humming safely from one point to another, while the traveling public are more likely to think of the risks of an accident?

The risk of having an accident as a result of air travel is perceived as higher by the public than by experts in the aviation industry. Some experts would say the public's beliefs about risks and benefits are irrational because of a lack of understanding of the facts.

Empirical research, however, suggests that differing beliefs about risks and benefits may not in fact reflect differences in rationality or education.

Individuals may have the same technical understanding of risk and knowledge of risk assessment procedures but still differ in their risk perceptions.

**Benefit and risk:** The question of how people judge risks and benefits has been the major focus of my research with Professor Paul Slovic and other colleagues at Decision Research in Oregon.

The nature of the benefits achieved from pursuing a hazardous activity or technology is different from the nature of the risks.

From a technical perspective, risk and benefit are distinct concepts. For instance, the benefit gained from air travel (that it gets you to a destination quickly) is different from the risk (that you may be injured by unexpected turbulence).

Though distinct, risk and benefit in fact tend to be *positively* correlated in the environment. Whereas activities that bring great benefits may be high or low in risk, activities that are low in benefit are unlikely to be high in risk (if they were, they would be outlawed).

However, the public tends to believe that there is a *negative* relationship



between the risks and benefits of many hazards: the greater the perceived benefit, the lower the perceived risk, and vice versa. For example, cigarettes and food additives tend to be seen as high in risk and relatively low in benefit, while antibiotics and x-rays tend to be seen as very high in benefit and relatively low in risk.

Recent studies at Decision Research have looked at the possibility that risk and benefit are negatively related in people's minds because they are judging both risk and benefit from one source:

their feelings about specific hazards.

One of our investigations found that ratings made when people judged the risk and benefit of hazards very quickly (that is, before a stopwatch ran out of time and flashed up a bright yellow warning sign) were more strongly negatively correlated than the ratings made by people not under time pressure. Presumably, when people can't deliberate at length, they rely more on their feelings about hazards to judge risk and benefit.

**Influence:** In a second study we found that we could influence ratings of risk by giving information about benefit, and vice versa. For instance, giving people information that nuclear power is high in benefit led to decreased risk ratings, while low benefit information led to increased risk ratings.

If people perceived risk and benefit as distinct concepts, this wouldn't happen.

What we think is happening is that in people's minds various activities are "tagged" with feelings, and they refer to this pool of strong and weak, positive and negative tags when they want to make quick evaluations.

So people's judgments of both the risk and benefit of aviation, for example, are based on the one pool of feelings they have about flying.

In this way people can make very fast, on-the-spot judgments.

In some contexts this process may be inappropriate such as when efficiency is not as important as following a rigorous technical risk assessment.

But by understanding that judgments can come about in different ways, we can understand why public and expert beliefs about risk sometimes seem to bear little resemblance to each other.

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