

Review for THES by John Adams

*Risk Decision and Policy* (published three times a year since 1996)

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The articles published in *Risk Decision and Policy* fairly reflect the inchoate nature of current debates about risk. The journal's mission statement proclaims that it is "dedicated to publishing articles that apply decision and game theory ... to policy problems." It particularly welcomes contributions that advance "theories of rational choice." And yet it also publishes articles that question the possibility of rational choice – or at least the singular, *calculable*, version of rationality favoured by economists and other enthusiasts for quantitative risk assessment. And despite its title, the journal is sufficiently broad-minded to publish an article which questions the utility of the very word *risk*.

Dowie, in "Against Risk" (vol. 4, no. 1, 1999) argues that the word's "multiple and ambiguous usages persistently jeopardise the separation of the tasks of identifying and evaluating relevant evidence on the one hand, and eliciting and processing necessary value judgements on the other." Somewhat disappointingly, after Dowie strips away all the ambiguity and multiplicity that he finds so irritating, his article turns out not to be as radical as it first appears. He comes down firmly on the side of quantified decision making – once a decision problem is reduced to unambiguous numbers the *best* decision will emerge; the best decision is the one whose probability multiplied by its utility yields a larger number than any other decision.

Dowie's article can serve, in a short review of a sample of 5 issues, to illustrate some of the confusions that bedevil the risk literature, including that published by *Risk Decision and Policy*. Advocates of quantitative risk assessment usually favour Dowie's approach, defining risk as the product of the probability of an event and the magnitude of its (dis)utility. However Dowie shuns the use of the word *risk* for this utility-maximizing approach because, he argues, judgements about value (utility) "contaminate" judgements about probability. So they do, but so they should.

Dowie builds his argument around an amusing dialogue between Humpty Dumpty and his rational decision-making advisor. The advisor (Dowie) advises Humpty to estimate *independently* the utility of sitting on a wall, the probability of falling off, and the consequences of falling off. But if the consequences are dire, and the chances of being put back together again are negligible, then Humpty will be more careful – thereby reducing the probability of his falling - so for all manner of directly perceptible risks. I do not do a formal probabilistic risk assessment before crossing the road, but if there is a lot of fast traffic I will be very careful. This *risk-compensation* phenomenon frustrates *rational* regulators who seek a firm quantitative basis for their regulations. It explains why measures such as seat belt laws, which reduce the consequences of an accident, often fail to reduce the numbers killed.

Attempts to use utility-maximizing methods as a guide not just to individual risk decisions, but to decisions about collective welfare as well, encounter further intractable problems. After decades of striving economists have yet to agree on a method for valuing life and limb; nor have they found solutions to the discount-rate problem, or the inter-personal-comparison-of-utility problem. Such protracted failure suggests to some, including this author, that they may be attempting the impossible.

The journal carries numerous articles that continue to fret away at these and related problems – usually concluding inconclusively: “further experiments need to be carried out” (Atherton and French, vo.4, no. 1, 1999), policy makers “may want to commission advisory assessments” (Patt, *ibid*), “in this study, vagueness was presented as a clearly bounded numerical range ... in the real world, of course, uncertainty about a risk estimate may not be quantified” (Kuhn et al, *ibid*) ... etc.

There is no single alternative to be found in the risk literature to the single-metric rationality of the utility maximizers. But a consensus is emerging, amongst those disillusioned with quantitative risk assessment, that risk is a reflexive phenomenon – we respond to perceived probabilities and magnitudes, thereby altering them – and that risk perceptions are *socially constructed and contested* – scientific uncertainty liberates and legitimises contending rationalities. A preoccupation of this alternative literature is the devising of decision-making procedures that promote constructive dialogues amongst the contenders (Kemp and Wilkinson, vol. 2. No.2 1997).

The dialogue within the risk literature itself is commonly amongst the deaf. The literature is vast, sprawling and ill-disciplined. The quantifiers and social-constructionists tend to be mutually dismissive and frequently deal with each other’s arguments by ignoring them. Risks, the social-constructionists argue, are perceived through filters composed of all previous experience. In academic debates these filters are sometimes called paradigms, and they are notoriously resistant to change. Universal agreement on how best to manage risk appears to lie some way off. Meanwhile, *Risk Decision and Policy*, can be recommended for anyone wanting a ringside seat in a forum for paradigm conflict.

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- Hypermobility (*Prospect*, March 2000)
- Cars, Cholera, and Cows: the management of risk and uncertainty, (Cato Inst., March 4 1999, <http://www.cato.org/pubs/pas/pa-335es.html>)