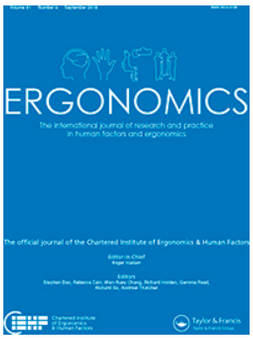

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The Human Contribution: Unsafe acts, accidents and heroic recoveries

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BOOK REVIEW

The Human Contribution: Unsafe acts, accidents and heroic recoveries, by J. Reason, Farnham, Ashgate, 2009, pp. 295+xiii, £19.95 (paperback) ISBN 978-0-7546-7402-3

Expectations are a funny thing. I read this book on a flight to a conference, with a US carrier of whom I had very low expectations, being aware of their customer service record. Actually, they turned out to be not bad and so I was pleasantly surprised. Meanwhile, I was really looking forward to reading this book, given Reason's publishing history and the big influence his works have had on my research interests. In the end, I have to admit I was ever so slightly disappointed.

Now, I want to say right from the start that I do not think it is a bad book and I would still recommend it – it is just that I had high expectations. I had heard that Reason was starting to think that systems models of error had shifted the focus too far away from the sharp end of accidents and incidents. In addition, there are many incidents where the human contribution on the front line had saved the day, thanks to the unique skills of flexibility and adaptivity that only humans can bring. Clearly, this book is an effort to redress the balance on both of these counts and, to a large extent, it succeeds.

只有人类才能带来的独特的灵活性和适应性

Reason divides the book into five parts. Part 1 is an introduction for readers perhaps new to this area – chapter 2 being the substantive contribution, which is essentially a primer in the cognitive psychology relevant to human error. Part 2 covers taxonomies of human error, violations and the all-important systems model of human error. Such material will also be largely familiar for anyone who has read anything before by the likes of Reason, Perrow or Dekker (although references to Dekker's books (e.g. Dekker 2006) are conspicuous by their absence). It is in the last chapter of this section (chapter 5), though, that Reason starts to sow the seeds of redressing the balance between the person and the systems view of error. Part 3 takes all this background a step further to look at accidents and their causation and again will provide little in the way of new knowledge for readers with some experience in the field. Having said that, there are some nice little histories in these sections on the development of the Swiss cheese model (chapter 5) and the evolution of accident investigation (chapter 7). Indeed, coverage of the Swiss cheese model is refreshingly tongue-in-cheek.

Part 4 turns the tables and opens us up to the heroic recoveries – categorised by chapter into 'training, discipline and leadership', 'sheer unadulterated professionalism', 'skill and luck' and 'inspired improvisations'. In here we read in detail about such famous case studies as Apollo 13, Titanic, United Airlines Flight 232 and the BAC 1-11 windscreen incident, as well as some less well-worn examples examined from this perspective. Many of these are influenced by Reason's recent work in healthcare as well as his personal interests in military history. The final chapter of part 4 (chapter 12) attempts to bring it all together by seeing if ingredients of heroic recovery can be identified and exploited.

Chapter 12 leads nicely into the closing section of the book, part 5, which it could be said presents the 'new' arguments Reason really wanted to air – the rest of the book setting us up for this finale. In here, Reason promotes the safety space model as a reflection of organisational culture, the knotted rubber band model of safety vs. productivity, and a cyclical perspective on person vs. system models of safety.

It is made clear from the outset that this book represents Reason's own personal views and is not a scientific book as such. So maybe one should not be so picky, but I did take issue with some of the fundamental arguments he was putting across – there seemed to be a number of contradictions in what he was saying. In the early descriptions of human error, Reason discusses how people default to familiar responses as an adaptive strategy when there is uncertainty in the situation. But this does not seem to sit with the improvisation, innovative skills and unique solutions of heroes. Then, such improvisation is couched in terms of 'mental preparedness', but this is more about expecting the unexpected, rather than what I thought should be depth of system knowledge and mental models (although later Reason does frame such coping in terms of situation awareness). Finally, towards the end, the knotted rubber band model is used to illustrate how system disturbances need to be anticipated and the suggestion is that people who experience such disturbances more frequently will be more able to anticipate and deal with future events. Essentially, then, unsafe systems produce heroes – and I am not sure I am comfortable with that.

经常经历这种干扰的人将更有能力预测和处理未来的事件

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But, in turn, these are my own personal views and perhaps I should stick to a critique of the book rather than the arguments. Reason's writing style, as many will attest to, is a model of accessible prose. Nevertheless, the quality control seems to slip at times in this book – most notably with a number of conspicuous typos, including getting the dates wrong for the 9/11 terrorist attacks, as well as for his own landmark paper on the Chernobyl errors. These are, of course, mere slips – but I also thought a couple of times that he dived into a case study without enough setting of the context. These only stand out because the rest of the book is set up so well, but, for instance, the description of the United 232 incident and the military examples in chapter 8 are both lacking the introductory briefing found in the other examples. There is also noticeable repetition at times, with case studies or points being re-stated almost word for word on a couple of occasions. My final gripe on the writing is that sometimes the detail on the case studies distracts from the point Reason is trying to make. I get as engrossed in these details as anyone, but in reading about the Canadian nuclear power plant situation (chapter 5) and in some of the military histories, it did get to the point where I forgot where we were going with it.

On the whole, though, it is an enjoyable read. Moreover, the essential messages at the heart of the book are good ones and I have no doubt the book will be a big seller, so it is no bad thing to get those messages out there. Reason's target audience is wider than specialists in ergonomics anyway – so it matters less that there is some re-covered material in here. But it is just that final disappointment for me, in that the book sets out to identify what makes a hero, yet in the end just concludes that some people are special – and you would do well to have such people in your organisation.

Reference

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