



The human contribution: unsafe acts, accidents and heroic recoveries

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interference? Several alternative ways forward are outlined in terms of the answers that can be given to these questions. In the final chapter, managers responsible for running complex systems are offered a staged approach to building just culture in their organization and beyond.

The proposal of immunity for certain types of unsafe act may raise a concern in some that just culture is about exonerating practitioners who fail. Much of the book is an argument against that position, but the most important observation in this connection is that a just culture leads to fewer failures. The perceived perspective of victims can also lead to reservations about just culture. This important issue could have been addressed with greater focus in the book. However, Dekker notes that just culture supports two priorities of victims: getting the story out following a failure and facilitating meaningful (organizational) change to prevent future accidents.

Just Culture addresses a key dilemma in risk management in an authoritative and highly readable way. Central in Dekker's approach is a move away from notions of objectivity and value-free truth in responding to the failures of practitioners to the recognition that decisions made in the aftermath of accidents are judgements reached through social processes. Also of great importance is the improvement-orientated perspective on accountability. These and other departures from current mainstream thinking about just culture do not lead to easy answers but avoid some of the weaknesses and criticisms associated with existing approaches. From this perspective, Dekker is able to lay out the beginnings of a credible path towards justice for practitioners and improved safety for everyone.

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The human contribution: unsafe acts, accidents and heroic recoveries, by James Reason, Farnham, Ashgate, 2008, xi + 295 pp., £19.95 (paperback), ISBN 978-0-7546-7402-3

The great majority of safety literature concerning process plant operators, pilots, nurses, and others on the front line of complex hazardous systems focuses on their role in accidents, thereby taking the human as hazard perspective. *The Human Contribution* by James Reason offers an alternative view in which humans are seen as a source of adaptations and compensations, capable of bringing back systems from the brink of disaster. **As such, it highlights the human as hero perspective.** Reason aims to characterize heroic recovery and identify ways in which such behaviours can be supported, though the emphasis is on ways of thinking about managing complex hazardous systems – it is not a ‘how-to-do’ book. *The Human Contribution* presents valuable and thought-provoking material not only for people working in hazardous systems (the primary audience) but also for academics and students. Just a month after its publication, the world was amazed by a stunning recovery when a US Airways Airbus A320 ditched in the Hudson River in New York and all passengers and crew were rescued. The pilot was hailed as a hero.

The Human Contribution is divided into five parts that deal with the mind, unsafe acts, accidents, heroic recoveries, and the achievement of resilience. The first three

parts, which deal mainly with the human as hazard perspective, draw on Reason's earlier books, *Human Error* and *Managing the Risks of Organizational Accidents*. Part IV describes a range of remarkable recoveries, including military retreats, the rescue of the *Titanic* survivors, the saving of *Apollo 13*, and other singular recoveries from the aviation and medical domains. These are classified according to the most important influencing factors (such as training, leadership, and professionalism). A general discussion of the ingredients of heroic recovery is then provided. The final part of the book focuses on individual and collective mindfulness as sources of resilience and closes with a discussion of the nature of safety and resilience.

An important output of the book is a set of recommendations to support recovery. These are discussed in relation to expected hazards and unlikely but possible hazards. Generic qualities that contribute to recovery in any emergency are also described. For example, generic qualities include (1) maintaining a belief that a positive outcome will result, and (2) striking the right balance between use of pre-existing knowledge and development of novel solutions during the recovery.

坚信会有积极的结果

在恢复过程中，在使用已有知识和开发新解决方案之间取得适当的平衡

A recurring theme of the book is the tension between the person model and the system model as ways of understanding why unsafe acts occur. Reason takes the position that extremes of both views have their limitations and a balance between the two needs to be found.

人模型和系统模型之间的紧张关系是理解不安全行为发生的方式

The book makes effective use of narrative to convey the complex nature of recoveries and the factors that influence their success. Part IV, which describes several heroic recoveries, runs to almost 100 pages (a personal favourite is the dramatic and moving account of the rescue of the *Titanic* survivors by Captain Rostron and the crew of the *Carpathia*).

Reason enhances the communication of his message by making use of several vivid and memorable models, including the famous Swiss Cheese Model of accidents as well as the Three Bucket Model for assessing high-risk situations and the Knotted Rubber Band Model, which serves as an illustration of the dynamic nature of reliability.

When discussing singular and remarkable recoveries, is use of the term 'heroic' necessary and helpful? On the one hand, the human as hero perspective acts as a corrective to the dominant perception of operators as a source of failure, encouraging a more balanced view of the human contribution, and may provide inspiration to those at the sharp end of complex hazardous systems. On the other, credit and blame are two sides of the same coin. Promoting a view of operators as heroes where they succeed can encourage a view of operators as blameworthy where they fail, even if hero status is restricted to those who succeed in the face of exceptional difficulties. Blame is known to be a major barrier to the organizational learning necessary for high standards of safety.

While others have sought to highlight the positive role of operators in complex systems, the publication of a book dedicated in large part to the recognition of the adaptive nature of humans and their capability to correct problems and achieve impressive recoveries is a welcome addition to the literature, particularly when it is written with the level of insight and depth of experience brought to bear in *The Human Contribution*. James Reason's book will influence both perceptions and future research.

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