Preface to the 7th Edition – revised.

Risk (essentially uncertainty about the future) has joy and suffering in store for mortals. Upside risk (the desirable part) and downside risk (the unwanted piece) are both considered in this text although it's fair to say that downside risk is more extensively considered.

The reason is simple. Lost opportunity does not generally cause immediate harm. It reveals itself as not-quite-so-profitable enterprise and reduced collective cheerfulness. Manifest threats create immediate injury with direct costs, penalties and depression. So whilst this text considers all risk, most is concerned with downside risk, the domain of insurers and the judiciary.

The downside risk business continues to rapidly change. Technically, the most controversial developments concern the demise of objective risk targets and the rise of common law safety cases. The latter is despite the general corporate disaffection with the regulated safety case process. Criticality is now used to establish the significance of unwanted issues and risk is primarily used to determine the most appropriate course of action to optimise them.

One result is the new focus on risk completeness checks, in part the domain of cognitive psychology. That is, what makes an organisation confident that all credible, critical risk issues have been identified and appropriately managed to satisfy the public, shareholders, directors, senior management and potentially the courts? After all, it is the large, unpleasant, rare events that really interest the press and the courts and which directors and senior decision makers detest.

Such risk management processes are invariably top-down driven although risk management resolution invariably involves bottom-up techniques. Such a view is quite a distinctive reversal of the way most technical risk management has been addressed over the last 20 years. This change has really occurred due to a lack of confidence in bottom up processes like HazOp, FMECA and QRA generally and a strategic inability to connect these to high level top-down processes like SWOT and vulnerability assessments.

The intellectual confusion at board level between downside technological or safety risk and upside market risk has also been quite extraordinary. No doubt this has partially been because of the apparent divergence of risk management paradigms in recent years although some of the more obvious contradictions appear to have been avoided. For example, R2A has never observed a monte carlo simulation for safety risk. In this context, the arrival of solution (good or sound practice) based risk management rather than hazard based risk management has proved most refreshing. The view that risk management is all about facilitating rather than inhibiting action ensures that the risk process becomes a liberating rather than debilitating process.

The text is written from an Australian perspective. It really only considers foreign ideas in so far as they have influenced or, in the view of the authors, should have influenced Australian risk thinking.

The 7th Edition has a whole new Part 4 – Applications with four new chapters describing how some of the above is achieved. These chapters are: *Safety Case Arguments, Enterprise Risk Profiling, Project Risk Profiling and SIL Allocation.* Readers will notice repetition in some chapters, especially in the new Part 4 – Applications. This has deliberately done so that each chapter stands alone, both in teaching terms (about a one hour sessions) and application.

In 10 years, this text has had 7 editions and 5 major revisions. It is presently a required text in several Australian Universities. It is under continuous review. The R2A practice is grateful to past contributors and for the feedback from many sources, especially students and overseas readers. Errata if identified will be posted on the R2A website: www.r2a.com.au although this latest reprint has dealt with the known ones.

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