
BOOK REVIEW

Dekker, S. (2002). *The Field Guide to Human Error Investigations*. Burlington, VT: Ashgate. Pp. VI + 156. ISBN 0-7546-1924-9. \$29.95 US, Paperback.

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In this era of ever-increasing technological complexity we have come to understand that there is a corresponding potential for new and varied sources of human error. *The Field Guide to Human Error Investigations* builds on the established and growing body of literature on human error and adds a unique perspective. This guide provides a framework for human error by dividing it into the *old view* and the *new view*. The two views have basic differences in their assumptions about human error. The old view sees human error as the underlying cause of accidents. The new view sees human error as symptomatic of larger problems within a system rather than as causal as is seen in the old view. The new view provides its proponents with a perspective that allows for increased learning potential from failures rather than one merely pinpointing blame. Dekker's book is targeted at all those who find themselves responsible for investigating human error in complex system failures of any kind.

The book is divided into two parts, the old view and the new view respectively. Chapters one through six deal with the old view of human error. Chapter one gives details on Dekker's old view perspective that he

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says could be entitled the *bad apple theory*. A main assumption here is that any complex system is basically reliable; it is just the actions of a few bad apples that are the causes of the failures. According to Dekker this view is firmly entrenched into the mindset of many involved with complex systems. This is often the case because of, what Dekker calls, the *illusion of omnipotence* in that its proponents see individuals as being free and autonomous to choose or not to choose to commit errors. This view is likely to compound the solution by adding more procedures to the same complex system that has produced the failure.

Chapter two is entitled *Reaction to Failure* and describes how organizations often blame those who committed the error and seek to get rid of those individuals as a means of preventing the same occurrence in the future. This chapter points out that investigators have the advantage of hindsight when conducting an investigation and all too often gravitate towards stating what could have been done to prevent the occurrence. These are known as *counterfactual* statements and seek to get at the symptom rather than diagnosing why the decision/s was/were made. In addition, Dekker states that the investigator must strive to overcome outcome bias when conducting the investigations since the investigator knows at the outset that the decisions made in this particular instance led to a bad outcome.

Chapters three, four, and five describe how the search for a root cause of an occurrence and the application of popular terms of attempting to describe human error often lead human error investigators down the path of, again, chasing symptoms and therefore offering little to the understanding of the reasons why the occurrence took place. Here Dekker stresses the importance of attempting to reconstruct the circumstances surrounding an occurrence and trying to understand the human interactions that were taking place during that time.

In chapter six Dekker contrasts how the event participant's view of the situation prior to the occurrence and the view of the investigator in retrospect often differ dramatically. The pressures, time constraints, and information available are all quite different in these two instances.

The second part of the book, chapters seven through thirteen, is a guide on how human error investigations should be accomplished. A main assumption here is that human error is not the problem; it is merely a symptom of greater trouble within the organization. These chapters of

the book help the human error investigator map out the human decisions made in an accident or incident and understand just how these decisions made sense at that time and why they were made within the context of the situation.

In chapter seven Dekker explains in detail the new view of human error as he sees it. He explains some of the assumptions behind this new view and again emphasizes that human error should not be seen as causal, but rather as symptomatic. Chapter eight deals with training human error investigator to deal with the various sources of human factors data with the main goal to be finding conclusions about human error well grounded in the situation and justified logically.

In this reader's opinion some of the most important and useful material of the book is contained in chapter nine and through the remainder of the book. Chapter nine is entitled *Reconstruct the Unfolding Mindset* and contains a discussion of Dekker's five steps to reconstructing the mindset of those involved in an occurrence. Dekker describes how the investigator should move from a fact-driven, context-specific account of the events to a concept-dependent account of the reasons behind the event.

Chapters ten through twelve, continue to be very practical oriented. Chapter ten discusses the importance of recognizing failure patterns and being able to apply that knowledge in order to help prevent future occurrences. Chapters eleven and twelve discuss how to write and implement human factors-type recommendations so that they will be most useful in accident prevention. He mentions that effective recommendation implementation will not be an easy task oftentimes requiring the organization to fundamentally rethink commonly held foundational beliefs.

The book concludes in chapter thirteen with a summary of some of the more practical points of conducting a sound human error investigation. Dekker concludes the book by stating that this book helps explain human error but that excusing human error is not a function of this book. He states that "[any] system cannot learn from failures and punish supposedly reasonable individuals or groups at the same time" (p. 155).

In closing, this book offers a very insightful and practical look at the human side of error investigations in any system. Dekker presents a

good balance between theory and practical application. Throughout the book Dekker provides real world examples, enlightening illustrations, and bold text highlight boxes separate from the text which emphasize important main points. This reviewer feels that anyone with an interest in aviation safety should make this book a part of their collection.