

Preface

The manuscript consists of five chapters. First, an introduction sets the landscape and motivations. The second chapter is a series of 25 detailed case studies (plus 20 other cases more superficially covered), where the concealment of risk played an important and obvious role in the causation of the reported catastrophes. In the third chapter, the relevant aspects, which contributed to the risk concealment, are systematically gathered and analyzed. In the fourth chapter, possible signs for imminent risks in current technologies—such as fracking, cyber risks, and genetic engineering—are investigated. In the fifth chapter, a few positive examples are collected that show how with an open, transparent culture of communication corresponding risks could be reduced.

Our main goal is to show by the force of characteristic examples how prevalent the problem of concealment of information is in its many incarnations. The reader, layman or risk management, should come out of the reading of our examples with an aha moment, realizing how ubiquitous and important this dimension of human behavior is with respect to critical objects. This paints quite a different picture of the risk of critical objects that we have to deal with than is often understood. We show that essentially any kind of organization (industry, finance, military, social, associated with natural disasters, and retail) is vulnerable to risk information failures, both decades ago and in the present, and very likely in the future, both in top-down centralized institutions and at the other extreme in firms espousing the free market ideology. We think that this is the main strength of the book to demonstrate the ubiquity and permanent nature of the problem of risk information concealment. Therefore, there is a strong need to expose the relevant agents to the cases that we have documented, showing them that any organization including theirs is vulnerable and that a proactive attention to the dangers is needed. Chapter 3 offers a checklist that the risk manager or director of an institution should turn to again and again to check whether his or her organization may be drifting astray to exhibit some of the listed vulnerabilities or favorable factors promoting or facilitating risk information concealment. By offering many examples, we provide the decision maker and responsible individual with many scenarios to compare with that can help put in perspective their own situation.

This book is different from the myriad of books at the popular science level that present all kinds of conspiracy theories on mismanagement as being responsible for every catastrophe. In contrast, we make serious efforts to verify such assumptions by well-researched case studies. However, it seems unavoidable that some experts will criticize our endeavor, pointing out that we already have assumed upfront that the seemingly obvious or at least most likely reason for such catastrophes was fraudulent risk concealment or mismanagement. Indeed, in hindsight, it seems always plausible to attribute mistakes to either fraudulent behavior or carelessness. Any *a posteriori* rendering of a catastrophe will invariably and inevitably contain its share of revealed concealment and mismanagement—even in an idealized reality one could not imagine a catastrophe without such factors. But this does not establish the causal links to the catastrophe itself (rather than, e.g., random or stochastic ones). In many cases where so far no catastrophe has happened, one cannot rule out that no concealment or mismanagement has happened at some stage. One could criticize that our interpretations are one-sided, with too much focus on the risks of information concealment, at the expense of potentially even more important other factors. We have tried to the best of our abilities to avoid these traps by presenting carefully balanced descriptions of the involved processes. But we cannot claim that we have been entirely successful, given the issue of false positives and false negatives discussed at the end of Chap. 3. In the end, only advanced forecasts can be free of data snooping and other statistical biases of *ex post* analyses. This book can thus be viewed as an inspiration for a full-fledged program to identify, classify, and make operational the symptoms that emerge from the case studies (or any data collection) as having a particularly strong incidence on the increase in the risk in leading up to catastrophes. This book provides the background for any manager, decision maker, and responsible person to develop an acute awareness of the nature and risks of risk information concealment in its various forms.

Our approach is more pragmatic than academic, in the sense that we are not engaging a specific model or theory and we are not positioning our study in the context of any specific academic debate or school of thought, in particular regarding any psychological or sociological modeling of human fallibility. Our approach starts with empirical facts to gather as much as possible evidence of both the universal patterns and the idiosyncratic structures, documented by the 25 studied cases (too many, some critics would say). This allows us to free ourselves from *a priori* (mis-)conceptions. By the evidence and sheer clarity of the cases, we delineate the general ubiquitous presence of risk concealment as well as the factors catalyzing it. This does not prevent us from referring to relevant concepts and theories when useful, providing a second layer of interpretation. We have always in mind the practical person and the risk manager as well as decision maker, focusing on the kind of information that could be useful to him or her and on how to present it, searching for the gaps that could be identified as dangerous. In short, in this work, we focus on evidence-based practical and useful factors and hope this will serve as useful inputs for future academic and scholarly investigations on the roots of the problem.

Other critics will point out that our coverage of cases is imperfect and incomplete. Indeed, we would have liked to add more cases but had to stop somewhere.

As Herbert A. Simon (the Nobel Memorial Prize winner in economics) would say, we stopped when we reached a level of “satisficing,” feeling that we had sufficiently many cases to cover the broad universe of human activities linked with critical objects. Some of the events such as the Ufa train disaster have been chosen because we believe we had unique access to sources of information that would bring novel insights compared to what has been previously written on these cases. Indeed, in a number of cases especially occurring in the previous Soviet Union and then in Russia, we had the possibility to interview some of the main actors of the industry that were active before and during the disasters, providing novel understanding. Thus, in contrast to the criticisms sometimes directed to books such as those of Sagan¹ and Schlosser², which are 100 % US-centered and thus incomplete for a generalization to other countries and cultures, we have tried to offer a more balanced viewpoint, aiming at broader and general insights. While the USA is a central character in many of our reported cases, we also cover several important other cases in Russia, Japan, Europe, and elsewhere. We believe this makes the book and our arguments stronger.

It is likely that many of our conclusions might be considered controversial, but we have consciously refrained from any political agenda and biased preconception and have tried to dig into the facts and present them as fairly as possible. Consider the Toyota recall case as a vivid illustration of our process of trying to go to the core of the facts and present a balanced view, often different from the clear-cut case that many pundits and the media converge to, in our opinion, too hastily. In the Chernobyl case, we were careful not to blindly accept the main claim of Gorbachev himself in his memoirs that the Chernobyl disaster contributed significantly to the demise of the Soviet Union.³ We explain in more detail in the text the politically motivated nature of such claim by Gorbachev and try to disentangle the complex nature of information and disinformation spread by the Politburo at the time.

How should one use this book? In addition to the intrinsic historical interest and often eye-opening insights revealed by our reconstructions, we believe that there is a lot of value in comparative history: While it is often claimed that history never repeats and that generals are always preparing for the last war, our own research and our compilation and detailed analyses of 25 case studies suggest broad universal factors that recur again and again. This is perhaps not surprising since managing a human organization involves people with their characteristic psychology and predictable behavioral traits. As Ariely emphasized in his book with its explicit self-explanatory title,⁴ all of us are endowed with quick and dirty

¹Scott D. Sagan (1995) *The Limits of Safety*, Princeton University Press, Philadelphia.

²Eric Schlosser, *Command and Control* (2014) Nuclear Weapons, the Damascus Accident, and the Illusion of Safety, Penguin Books.

³Mikhail Gorbachev (2006) *Turning Point at Chernobyl*, Project Syndicate, <http://www.project-syndicate.org/commentary/turning-point-at-chernobyl>.

⁴Dan Ariely (2010) *Predictably Irrational: The Hidden Forces That Shape Our Decisions*. Harper Perennial, New York.

moduli of calculations, the emotional parts of our brain, which systematically make us react in certain predictable ways that are not necessarily fully rational. By having constantly in mind these examples that provide as many scenarios for possible risk information concealment to occur, one can keep aware of these biases and potential mishaps, avoiding habituation and the illusion of control. In particular, the synthesis provided by the figure at the beginning of Chap. 3 is especially useful for anyone to check his or her own organization with respect to what could go wrong. Continuously checking how the processes unfolding in one's organization live up against this list is a particularly healthy, and simple, way of keeping alert and honest.

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