
A short example, buried on page 263 of these 12 chapters about organizational error graphically illustrates what animates the authors who contributed to this edited volume. In the year 2006, six infants at a Midwest hospital were given a 1000-fold overdose of blood thinner and three of them died, because “the system was too reliable.” That sentence makes no sense! And yet the deaths happened. The overdoses were administered by five different nurses. And the hospital had set up a safety program to reduce medical errors. A close reading of these chapters, authored by 21 experts, renders that calamity more sensible by redirecting our attention away from error prevention toward error management. Rare as that overdose event is, the cumulative analysis in these chapters, spanning individual and collective moments, begins to account for its genesis and for the genesis of deviations that are much more common.

The prevailing definition of error throughout the book is the one provided in chapter 1 by the editors, Hofmann and Frese: “we have chosen to define actions as erroneous when they unintentionally fail to achieve their goal if this failure was potentially avoidable (i.e., did not arise from some unforeseeable chance agency)” (p. 3). Because error is defined in terms of actions rather than consequences, this definition signals a shift from error prevention to error management that disconnects errors from their adverse consequences. The phrase “potentially avoidable failures” sweeps in variation in knowledge, skills, and attention as crucial error dynamics. Reference to goal-driven behavior, however, sweeps away the possibility that goals may be inferred from the action itself and adjusted to dissolve error. Ramanujam and Goodman much later define latent errors, those that are more explicitly organizational, as “unintended deviations from prespecified expectations that can potentially lead to adverse outcomes of organizational significance” (p. 247). Latent errors are seeded in expectations of how work must or must not be carried out. For example, latent errors are present in a culture that allows certain errors to go unnoticed or uncorrected or in a culture that accepts flawed error explanations such as blaming others (“I want to know who is responsible for all of these system errors?”). Given this tacit framing, error management occurs when errors are disconnected from errors’ consequences as, for example, when the “undo” function on a computer disconnects an error from a consequence.

Beginning with a marvelous introductory chapter by the editors, Hofmann and Frese, there is a steady progression as chapters move from individual through team to organizational and cultural levels of analysis. In chapter 2, Keith gathers evidence showing that training methods that incorporate error are more effective than methods that minimize error. Next, Hammond and Farr
show how errors can be a pathway to creativity and innovation. Mousavi and Gigerenzer bluntly criticize the lack of ecological validity in “toy problems” used in laboratory studies of judgment and call for greater attention to real problems found outside the lab. Bell and Kozlowski, in a superb review of collective team failures, introduce the idea that errors can stimulate team learning by inducing mindfulness and conscious thinking. Weaver, Bedwell, and Salas remain at the team level to focus on training that enhances reliability and frame this training within the value dimensions associated with high-reliability theory. MacPhail and Edmondson combine learning, collective action, and context into a discussion of four domains that have a differential effect on learning and error management (high/low process uncertainty crossed with high/low action interdependence). Shimuzu and Hitt tackle error management in top management teams and, by anchoring their analysis in uncertainty and interpretation, provide a perspective that fits all levels of the hierarchy. Hollnagel, despite a puzzling chapter title (“When Things Go Wrong: Failures as the Flip Side of Successes”), makes a convincing argument that what we call errors are in fact approximate adjustments to a changed situation that was not expected to change. Ramanujam and Goodman tackle latent errors directly and compactly by suggesting that those errors either do or don’t produce adverse consequences depending on the balance of correcting and amplifying feedback loops that engage those errors. Gelfand, Frese, and Salmon complete the progression upward from individual errors with a strong, well-argued discussion of cultural influences on error. The collection ends with a postscript from the editors.

Given the variety of themes and levels of analysis, readers may want to begin their reading by first constructing an overview of the topic of organizational errors. Three chapters do this. Hofmann and Frese (chap. 1) provide a durable orienting framework, Bell and Kozlowski (chap. 5) provide a solid bridge between individual and collective levels of analysis, and Gelfand et al. (chap. 11) adopt a macro perspective using categories that are meaningful at all levels of analysis. With these three anchors in place, the remaining nine chapters gain importance because of their nuanced differentiation and detailing of conditions that can contain, disconnect, and weaken the pathways that connect errors to adverse consequences and also conditions that can lead to substantial or minimal learning.

Contextual nuances, differentiated interdependencies, and shifts in standpoint among these chapters combine to deepen our understanding and our questions. Here are two quick examples. With respect to the word “error” itself, the readings make it clear that error is not a discrete entity. The discussions are as much about erring, deviating, and actions becoming an error as they are about detectable, static, distinct moves away from goals. Part of the nuance here is concealed by the title for this volume, “Errors in Organizations.” While certainly an accurate and helpful title, it nevertheless contains two static labels, “error” and “organization.” Consider other, more dynamic, albeit clunky titles. “Errors through Organization” suggests errors inherent in attempted organization, as does “Errors because Organization” (e.g., we create mutual dependencies that fail). “Errors if Organization” suggests deviations due to increased complexity to monitor and manage. With each substitution of a different relational word for the word “in” we are sensitized to process, organizing, variation, and variability. Error and organizing go hand in hand.
A second example is the way that a closer examination of dynamics reshapes the meaning and disposition of error. This is implicit throughout the book and is made explicit in chapter 9, in which Hollnagel hones his influential work on efficiency-thoroughness tradeoffs. He reminds us that organizations are complex systems, not complex machines. And like most systems, organizations make adjustments. But when things go wrong, that is usually because the adjustments were “approximate rather than perfect” (p. 226). If people simplify their environment by ignoring much of its uncertainty, then what appear to be errors are more like inappropriate responses driven by the presumption of stability. That does not excuse the errors. But it does recast them as dynamic tradeoffs that lag behind a change in context. Because contextual change is less common than stability, the process is one of an inappropriate response rather than an error. In the case of nurses administering overdoses of Heparin to infants, a plausible line of sensemaking would be, “I can allow myself to be efficient by not checking the dosage in this vial because others such as the pharmacists have been thorough as a result of our enhanced safety measures.”

Much can be learned from these chapters. One of the most important conclusions is that investigators who conceptualize error based on rare events that are gathered by sampling on the dependent variable miss a great deal when they are thereby tempted into hindsight bias. Insight lurks in errors that are more common and more sprawling. Exploration of common errors suggests that improvements rather than constraints are more crucial in managing bad consequences, that error-filled training seems to work better than error-free training, that there is a surprising amount of similar language and imagery that captures errors across levels of analysis, that errors are embedded in social dependencies and interactions, that a premium on success under varying conditions highlights resilience as central to error management, and, finally that errors are universal and it’s the response to them that counts.

Goethe (Edwards, 1901: 589) provides a provocative coda for this book: “It is easier to perceive error than to find truth, for the former lies on the surface and is easily seen, while the latter lies in the depth, where few are willing to search for it.” In many ways these chapters suggest that the opposite is true. Truth is there on the surface in the moment as imposed stability, whereas errors, being approximations based on that truth, have deeper, earlier, more contextual roots.

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