Jonas Dahl

THE DYNAMICS OF FAILURE SHARING

INVESTIGATING NORMS, VALUES, AND SOCIAL EMOTIONS

STOCKHOLM SCHOOL OF ECONOMICS

THE DYNAMICS OF FAILURE SHARING

Over the past few decades, increasing attention has been devoted to understanding how errors and failures influence various aspects of organizations. Effectively managing and learning from failures has proven critical for improving performance, enhancing safety, and driving innovation. Despite this, many organizations face challenges addressing failures, as employees often hesitate to discuss them due to negative emotional reactions. This reluctance creates a substantial barrier to learning and continuous improvement.

While existing research primarily explains employees' decisions to communicate errors and failures through a cognitive lens, the emotional dimensions remain underexplored. This thesis investigates individuals´ failure-sharing in complex business services, emphasizing the interplay between emotional dynamics, cognitive processes, and organizational influences. Specifically, the thesis explores how psychological factors such as cost-benefit evaluations, shame and guilt, individual mindsets, and self-compassion, alongside organizational norms and values, are involved in employees´ decisions to share failures. By addressing these dimensions, the research provides a nuanced understanding of the individual and organizational-level antecedents influencing failure-sharing behaviors.

This research contributes to the error management literature by complementing its traditionally cognitive focus with emotional dynamics. Through an exploratory qualitative study and two quantitative hypothesis-testing studies, the thesis uncovers how shame negatively and guilt positively influence perceptions and behaviors in failure-sharing decisions. Furthermore, it highlights how these emotional dynamics are influenced by organizational norms and mindsets, providing a comprehensive framework for understanding error and failure communication within organizational contexts. Practical implications are also presented.

JONAS DAHL conducted his PhD at the Department of Management and Organization at the Stockholm School of Economics. Alongside his academic achievements, he is an experienced leader and senior consultant, guiding leaders and organizations to wayfind through today's complexities and facilitating their transformation into more advanced systems.

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The Dynamics of Failure Sharing

Investigating Norms, Values, and Social Emotions

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To all sentient beings
—may you all be happy, peaceful, and liberated

Foreword

This volume is the result of a research project carried out at the Department of Management and Organization at the Stockholm School of Economics (SSE).

The volume is submitted as a doctoral thesis at SSE. In keeping with the policies of SSE, the author has been entirely free to conduct and present his research in the manner of his choosing as an expression of his own ideas.

SSE is grateful for the financial support provided by Gaia Leadership, which has made it possible to carry out the project.

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Embarking on the bumpy yet transformative journey of writing this PhD thesis has been an experience filled with both joy and pain. As a senior consultant and experienced leader, I was "forced" to adopt a beginner's mind, stepping into the learning zone and embracing the challenges of sustained intellectual exploration. This journey required me to confront the vulnerability of starting anew, while finding resilience and growth in moments of self-doubt. Reflecting on this process, I am profoundly grateful for the support and encouragement I received along the way.

First and foremost, I would like to express my deepest gratitude to my main supervisor, Andreas Werr. Your confident and humble guidance has been instrumental in navigating this complex process. Your insightful feedback and steadfast support provided a solid foundation, enabling me to grow as a researcher. Thank you for believing in my vision and for challenging me to push the boundaries of my thinking.

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To my colleagues at the Department of Management and Organization at the Stockholm School of Economics (SSE), thank you for creating a supportive and inspiring research environment. Your valuable tips, encouragement, and camaraderie made this journey far less daunting. I am especially grateful to Kajsa, Lasse, Emma, Jesper, Stefan, Cecilia, Alexandra, and Jonathan—my office and next-door companions—for your friendship, which

made the day-to-day experience so much brighter. A special thanks to the SSE librarians Ute, Björn, and Helena for their extraordinary support.

I also extend my gratitude to the organizations and stakeholders who cooperated with me and participated in this research. Your willingness to let me dig deeply into such a sensitive topic with openness and curiosity was significant. Thank you for embracing the insights we uncovered together and for recognizing their potential to drive positive change within yourself and your organizations.

To my family—my wife Anna, and my two sons, Leo and Adam—thank you for your patience, curiosity, and unconditional love. Anna, your unwavering support, understanding, and encouragement have been my anchor throughout this journey. You stood by me with strength and grace, even during the moments when the demands of this work were difficult to comprehend. Your love and belief in me made the journey possible. This achievement is as much yours as it is mine. To Leo and Adam, I hope this work serves as an inspiration for your own personal and professional growth, highlighting the importance of compassion and embracing a learning-oriented mindset throughout life.

Finally, I would like to thank myself. This journey was far from easy, and there were moments when I felt like a failure. But it was precisely those moments that pushed me to cultivate a growth mindset and practice self-compassion. These tools became essential for navigating the challenges, helping me to regain energy and focus when it felt like both were slipping away. Over time, the process of personal growth became a goal in itself, as I gradually learned to "fail more successfully."

This thesis is not only a culmination of academic inquiry but also a testament to the resilience and determination that this journey required. To everyone who contributed to this process, whether through guidance, collaboration, or encouragement, I extend my deepest thanks. This work would not have been possible without your support, and I am forever grateful.

Stockholm, December 20, 2024

Jonas Dahl

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Chapter 1

Introduction

By seeking and blundering we learn.

—Johann Wolfgang von Goethe

1.1. Research phenomenon

Failures—experiences of negative deviations from expected outcomes—are an inevitable part of work life. These deviations are essential for improvement and learning as they prompt us to update our worldview, yet they are rarely discussed openly, often leading to their neglect. Research indicates that people are more inclined to share successes than failures (Eskreis-Winkler & Fishbach, 2020). This tendency is often attributed to the negative social emotions failures evoke, such as guilt and shame, which discourage individuals from reflecting on and discussing them openly. Instead, people frequently hide their failures or shift the blame to others (Edmondson, 1996; Tucker & Edmondson, 2003; Uribe, Schweikhart, Pathak, Marsh, & Fraley, 2002): "Sometimes, we're reluctant to admit that we failed in the first place. We're embarrassed by our failures and quick to spot those in others. We deny, gloss over, and quickly move on from—or blame circumstances and other people for—things that go wrong." (Edmondson, 2023: 5). Failures represent a

double-edged sword: While they pose significant threats to individuals and organizations, they also serve as vital sources of learning and improvement.

In recent years, there has been a growing trend in broader society to spotlight work-related mistakes and failures. Increasingly, people are participating in events and initiatives that encourage the open sharing of professional failures. For example, on Friday, October 13, 2010, the first-ever World Day for Failure was celebrated. The event aimed to share "stupidity, error estimation, awkward moments, and other fails with the world" and to "celebrate our shortcomings and failures, share our experiences, and promote the understanding of failure as a learning experience" (Dayforfailure, 2017). Similarly, Fuckup Nights seeks to be a global movement offering spaces where business professionals can share their "fuckups"—personal experiences of professional failures (Ingardi, Meyer, & Verdin, 2021; Villatoro, 2024).

Initiatives such as the Museum of Failure (West, 2017) and the Institute for Brilliant Failures at Maastricht University School of Business and Economics (Iske, 2018) also provide forums for collecting and sharing stories of corporate failures. These platforms aim to make learning experiences accessible, embrace failures as critical moments for growth, and address the dominance of success narratives in business storytelling.

These examples underscore a broader trend toward normalizing and making professional failures more accessible. They aim to support professionals in openly sharing and discussing adverse work-related outcomes while managing potential emotional reactions, ultimately creating better organizational and personal learning conditions. However, success stories still dominate in contemporary society. For instance, twice as many "success" videos are uploaded on YouTube as "failure" videos. A Google search conducted in June 2024 yielded 5.37 billion results for the word "success" compared to 3 billion for the word "failure."

This imbalance is pervasive on the internet and social media. Discussions about failures often occur retrospectively, typically framed around successful individuals reflecting on how overcoming challenges contributed to their achievements. Such narratives overlook the reality that failures are a regular part of daily life and workplace dynamics.

1.2. Research motivation

Over the past few decades, there has been growing interest in understanding how errors and failures affect various aspects of organizations (Carroll et al., 2021; Frese & Keith, 2015; Lei, Naveh, & Novikov, 2016). Previous studies have explored how to manage mistakes effectively to improve performance and safety (Hofmann & Frese, 2011; van Dyck, Baer, Frese, & Sonnentag, 2005) and drive innovation (Khanna, Guler, & Nerkar, 2016; Schoemaker, 2011). They have also examined how organizations can learn from errors and failures by analyzing their causes, implementing changes to prevent future occurrences, and minimizing negative consequences (Dahlin, Chuang, & Roulet, 2018; Edmondson, 1999; Edmondson, 1996; Reason, 1990).

Despite the recognized importance of learning from errors, many organizations continue to struggle in this area (Argyris, 1993; Edmondson, 2011; Sitkin, 1992). Edmondson (2011: 49) states, "The wisdom of learning from failure is incontrovertible, yet organizations that do it well are extraordinarily rare.". Employees' reluctance to communicate about errors is a crucial factor contributing to this challenge (Edmondson, 2018; Tucker & Edmondson, 2003; Uribe et al., 2002). This reluctance is often driven by the adverse emotional reactions associated with mistakes and failures. This reluctance creates a substantial barrier to individual and collective engagement with errors, limiting opportunities for learning and improvement.

Although prior conceptual work has acknowledged the emotional dimensions of sharing errors (e.g., Frese & Keith, 2015; Zhao & Olivera, 2006), empirical investigations in this area remain scarce. Furthermore, much of the existing error management and failure learning research has treated negative emotions as uniformly detrimental, overlooking their distinct effects on how individuals respond to and engage with failures.

Existing error management research provides valuable insights into how error orientations affect error communication (Frese & Keith, 2015; Keith & Frese, 2008; Rybowiak, Garst, Frese, & Batinic, 1999). For example, error prevention views errors as threats to be avoided, and error management embraces a positive attitude toward mistakes and employs functional coping strategies. However, much of this research remains heavily focused on cognitive dimensions.

Theoretical frameworks such as action regulation theory (Frese & Zapf, 1994), decision-making theories (Dahlin et al., 2018), and behavioral reasoning models like the theory of planned behavior (Ajzen, 1991, 2011) predominantly emphasize analytical and cognitive processes in explaining individuals' attitudes toward errors and their error communication behaviors. This dominant cognitive lens often overlooks the emotional dynamics of experiencing mistakes and failures.

Many responses and behaviors related to errors and failures arise not from cognitive processes but from emotional reactions, such as fear, shame, guilt, and sadness (e.g., Rybowiak et al., 1999). These emotions can directly and indirectly influence how individuals perceive and respond to negative experiences (Anderson, 2003; Forgas, 1995; Loewenstein, Weber, Hsee, & Welch, 2001). Neglecting the role of emotions makes it challenging to fully grasp the barriers that inhibit individuals from communicating their errors, particularly within teams or organizations.

Drawing on findings from existing literature on errors and failures in organizations, I have identified several areas within the micro-dynamics of failure sharing in organizational contexts that warrant further empirical research and offer opportunities for theoretical development. In this section, I will provide an overview of these key areas.

First, existing research on the emotional dimension highlights that fear, shame, and guilt are common responses to errors and failures (Rybowiak et al., 1999; Zhao, 2011). These negative emotional reactions are believed to influence individuals' cognitive assessments of the costs (e.g., image threat) and benefits (e.g., learning) of sharing failures in different ways, particularly in situations perceived as personally relevant or risky (Elfenbein, 2007; Loewenstein et al., 2001; Zhao & Olivera, 2006). Previous studies suggest that individuals are less likely to communicate an error when the perceived costs of sharing outweigh the perceived benefits (e.g., Morrison & Phelps, 1999). Zhao and Olivera (2006) theorize that negative emotions influence individuals' decision-making processes regarding error communication both directly and indirectly. However, to my knowledge, this has yet to be empirically investigated.

Second, while research on error management and communication, emphasizing the cultural dimension of organizations—specifically norms,

values, and practices related to these areas—has offered valuable insights into the *practice* dimension (e.g., Frese & Keith, 2015; van Dyck et al., 2005)—less attention has been given to the role of broader organizational norms and values that are not explicitly focused on error management and communication. In particular, the influence of these broader norms and values on the emotional dynamics that shape decision-making processes around error communication remains poorly understood. Consequently, opportunities to adapt organizational behavior and procedures to prevent recurrences are often missed, limiting organizational and individual learning (Dahlin et al., 2018). This underscores the need for further exploration of the micro-dynamics underpinning error management and communication practices, as well as how broader organizational norms and values influence these dynamics.

Finally, most organizational research on error and failure communication has focused on high-risk industries, such as healthcare, aviation, railways, and nuclear power plants (Lei et al., 2016). In these sectors, error management and communication procedures are rigorously standardized to prevent adverse outcomes, including severe accidents and, in the worst cases, fatalities. These studies typically emphasize safety performance as the primary outcome, aiming to enhance organizational efficiency by managing errors to prevent recurrence. However, not all organizations operate with highly standardized error management practices and procedures. This underscores the need to broaden the scope of error and failure communication research to include a wider range of organizational contexts. For instance, knowledge-intensive business services (KIBS) present unique challenges. In contrast to high-risk industries, KIBS often face ambiguity in defining failures, as the "expected state" against which failures are defined can be vague and subjective. Additionally, the stakes in managing client relationships are high. KIBS refers to firms and organizations primarily providing services centered on specialized knowledge, expertise, and intellectual capital (Landry, Amara, & Doloreux, 2012). These firms rely heavily on expertise and innovation, making effective communication about failures crucial for continuous learning and improvement. Understanding how such firms navigate and communicate failures offers valuable insights for enhancing learning and development at both individual and organizational levels.

In the following sections, I outline the research purpose and questions, and I provide an overview of the thesis structure.

1.3. Research purpose and research questions

This thesis aims to deepen our understanding of the micro-dynamics of failure sharing. Focusing on the role of emotions, it provides novel insights that complement the cognitive dimensions explored in existing research. It also examines how broader organizational norms and values influence these dynamics, extending the analysis to organizational contexts beyond high-risk industries.

This aligns with my research interest: understanding individuals' failure-sharing decisions in knowledge-intensive business services, which is the primary purpose of this thesis. The study moves beyond the traditional focus on error communication and formal error reporting directed toward managers or supervisors (Zhao & Olivera, 2006). Instead, it defines "failure sharing" as the deliberate and voluntary act of individuals communicating their work-related failures to others. While this includes formal error reporting, failure sharing also encompasses broader peer communication throughout the organization.

To fulfill this purpose, the thesis addresses the following research questions:

1. How do individuals make decisions about failure sharing in knowledge-intensive business services?

    a. How are psychological factors, such as cognition, emotion, and individual dispositions, involved in this decision-making process?

    The study examines *psychological factors*, including the cognitive cost-benefit analysis of failure sharing and emotional responses of shame and guilt. It also considers individual dispositions, such as mindsets and self-compassion.

b. How are organizational-level antecedents, such as norms and values, involved in this decision-making process?

The study explores *organizational-level antecedents*, including norms and values related to trait-based versus experience-based positivity, organizational mindsets, and psychological safety.

1.4. Thesis outline

The thesis is structured as follows:

Chapter 2 reviews the literature on error management, error reporting, and learning from failures and errors, highlighting their background, assumptions, and historical perspectives. It identifies key constructs, findings, and limitations, with a focus on failure sharing. The review addresses two levels of analysis: individual-level and organizational-level antecedents. The chapter also defines failure and failure sharing, differentiating them from error and error reporting. It concludes by summarizing research limitations and presenting an integrated framework of failure sharing.

Chapter 3 outlines the empirical context of knowledge-intensive business services and introduces a two-phased research process. Phase 1 employs an abductive approach to explore failure sharing in organizational settings through a qualitative case study, aiming to develop a conceptual model. Phase 2 deductively tests this model through two cross-sectional survey studies. Methodological details are provided for each study, including case studies of two Swedish consulting firms and quantitative surveys involving professionals from the United States, the United Kingdom, and Sweden. Finally, the chapter discusses the methodological considerations and their potential advantages and disadvantages.

Chapter 4 presents the findings from the first phase of the research, a qualitative case study examining individual and organizational factors that influence failure sharing. Two key insights emerged: first, how variations in positivity cultures and organizational mindsets shape the perceived costs and benefits of failure sharing, and second, how emotional dynamics play a critical role in shaping failure-sharing behaviors within these contexts. The insights highlight the need to develop a testable conceptual model.

In Chapter 5, I develop this model, drawing on theoretical and empirical arguments related to key failure-sharing antecedents identified in the literature review (Chapter 2) and the qualitative case study (Chapter 4). The chapter then discusses direct and indirect effects between various antecedents and failure sharing, developing testable hypotheses.

Chapter 6 presents the findings from the first of two cross-sectional surveys, the "online study," which tested the conceptual model. Chapter 7 then presents results from the subsequent "ecological study," which validates the initial findings.

Chapter 8 compares the findings from the online and ecological studies, discussing these results in relation to prior research. The chapter concludes by discussing the limitations and suggestions for future research.

Finally, Chapter 9 offers a brief conclusion of the thesis and provides theoretical and practical implications.

Chapter 2

Literature Review

To establish a foundation for the forthcoming studies, this chapter reviews the existing body of knowledge on errors and failures in organizations. The review spans various organizational settings—from high-risk industries to knowledge-intensive business services—and focuses on potential individual- and organizational-level antecedents of error communication and failure-sharing, as well as the limitations of existing research.

The chapter is structured as follows: First, I define failure and failure-sharing, distinguishing them from related concepts such as errors, error reporting, and error communication. Next, I review the literature on error management and learning from errors and failures, highlighting their background and underlying assumptions to provide a general understanding of the field's inception and historically dominant organizational perspectives.

This is followed by an in-depth analysis of key constructs and findings at two levels of analysis: individual and organizational antecedents. I begin with individual-level antecedents, including cognition, emotion, and individual dispositions, before exploring organizational-level antecedents, such as shared beliefs, norms, and values. Finally, I summarize the key findings and limitations of prior research.

2.1 Defining scope: error, failure and failure sharing

2.1.1 Error versus failure

To effectively understand failure sharing, it is essential to clarify the concept of failure and distinguish it from related terms such as errors, violations, and risk. While the concepts of failure and error are closely related and sometimes "overlap" (Carroll et al., 2021: 451), they are distinct. The error management literature typically defines errors in organizations as "unintended and potentially avoidable deviations from organizationally specified goals and standards that can yield adverse or positive organizational consequences " (Lei et al., 2016: 1316), or as "incorrectly executed tasks and routines" (Dahlin et al., 2018: 254). Errors are characterized by two key aspects: a) unintended deviations from plans or goals, and b) their potential avoidability (Reason, 1990; van Dyck et al., 2005; Zapf, Brodbeck, Frese, Peters, & Prümper, 1992; Zhao & Olivera, 2006). For instance, a nurse administering the incorrect dosage of medication to a patient constitutes an error, as it deviates from the organization's defined standards for medical treatment.

The error management literature, rooted in theories that view human behavior as inherently goal-oriented (Frese & Zapf, 1994), often conceptualizes errors as *action errors* (Frese & Keith, 2015). Action errors are defined as deviations that "can be detected and corrected immediately" (Frese & Keith, 2015: 663). Unlike failures, errors can be identified and addressed before they escalate into negative organizational outcomes. This perspective suggests that errors are objectively definable and signify both the nonattainment of goals and nonconformity to established plans. It is important to distinguish research on action errors from studies on judgment and decision-making errors, such as cognitive biases and heuristics (cf. Tversky & Kahneman, 1974; Weber & Johnson, 2009).

A body of literature on failure also exists, defining failures as "an adverse consequence" (Carroll et al., 2021: 451), "undesired performance outcomes" (Dahlin et al., 2018: 254), and "negative organizational outcomes" (Frese & Keith, 2015: 663). Theorists argue that failures are often, but not always, the result of an error (Hofmann & Frese, 2011). For example, a nurse

administering the wrong dosage of medication according to a specified standard (error) may lead to the patient suffering harm or the hospital losing resources such as time or reputation (failure).

The literature on error management and failure learning typically frames errors and failures as objectively identifiable events, enabling external stakeholders to assess more easily whether an error or failure has occurred (Zhao, 2011). This traditional perspective distinguishes between two types of deviations: errors, which are deviations from specified procedures, standards, or goals, and failures, which are negative deviations from desired or expected organizational outcomes. However, the overlap between these concepts in the existing literature—particularly regarding deviations from expected goals and outcomes—introduces a degree of ambiguity.

Drawing on this literature, and in line with Zhao and Olivera (2006: 1013), I define failures in this thesis as individuals' decisions and actions that (a) result in a negative deviation between an expected and a real outcome state, (b) may lead to actual or potential negative consequences for the individual or the organization, and c) could have been avoided by the individual. A key distinction in my definition, compared to the traditional views discussed, lies in how the match between the expected and actual outcome states is evaluated—whether based on a self-defined expectation (subjective) or an organizationally defined one (objective).

This thesis emphasizes failure as the individual's subjective perception of the deviation (e.g., "It didn't turn out the way I expected"), rather than deviations from organizationally specified goals or standards, as is commonly emphasized in the literature (Hofmann & Frese, 2011; Lei et al., 2016). Notably, these subjective and objective perspectives are not inherently conflicting. For instance, objectives such as "winning a client contract" or "having a successful meeting where all parties are satisfied" can align with both the organization's defined goals and the individual's expected outcome.

Additionally, my definition accounts for potential negative consequences for individuals, alongside their impact on the organization. This approach facilitates the inclusion of failures associated with adverse personal outcomes, such as unmet career development expectations or missed promotions. Furthermore, my definition distinguishes failures from violations—defined as conscious intentions to breach a rule or deviate from a standard—

and risks, which refer to the possibilities of harm or loss arising from uncertain events or environmental conditions that may lead to negative effects if they materialize (Carroll et al., 2021; Frese & Keith, 2015).

To illustrate a potential failure as conceptualized in this thesis, consider the following example, which served as the basis for the scenario-based survey studies conducted:

"You are responsible for a critical project at work and are preparing to present your findings to a group of managers. The presentation starts well, but during the discussion, you are asked a question you cannot answer. As follow-up questions become increasingly critical, undermining your conclusions, you realize you have overlooked key elements the managers had anticipated. Ultimately, the group deems your report insufficient for their decision-making process. As they leave, their disappointment and frustration are evident. You pack up your computer and papers and find yourself alone with your thoughts."

Notably, failure, as a subjective experience, is not an isolated event but is shaped by various social and organizational norms and factors. This perspective on failures is particularly relevant in the context of complex business services, where ambiguity often exists in defining what constitutes a failure. The "expected state" against which failures are measured can be vague, making the traditional objective view of failure less applicable. In such contexts, failures must instead be understood through the subjective perceptions of professionals.

In addition to individual failures, which I have discussed thus far, the literature also recognizes collective (or shared) failures resulting from the joint actions of two or more people within an organizational context, such as a group, unit, department, or entire organization (e.g., Goodman et al., 2011). Organizational failures may stem from individual or collective actions but can also arise from structural factors and "the convergence of multiple elements—such as groups, tasks, knowledge, and external conditions—in unforeseen ways" (MacPhail & Edmondson, 2011: 187-188). This thesis focuses on individual failures, excluding collective and organizational failures, as they do not meet the criterion of being avoidable by the individual.

2.1.2 Failure sharing

Sharing one's failures poses a threat to one's image, self-perception, and reputation and may be perceived as a risky endeavor. Conversely, it also presents opportunities for learning, quality improvement, and development at both organizational and individual levels. Previous research on errors and failures highlights error and failure communication as pivotal practices in error management (Frese & Keith, 2015; van Dyck et al., 2005) and organizational and team learning (Edmondson, 1999; Edmondson, 1996). This body of work has primarily referred to error communication as the formal reporting of errors to managers or supervisors (Naveh & Katz-Navon, 2014; Zhao & Olivera, 2006) and as having a "negative relationship to covering up" (Rybowiak et al., 1999: 536) one's errors and mistakes. While formal error communication is essential for managing and learning from errors, broader sharing of failures with peers can potentially mitigate the impacts of failures and enhance various learning processes within the organization (van Dyck et al., 2005). Therefore, "failure sharing" is conceptualized as a personal decision influenced by the organizational context. It refers to the deliberate and voluntary communication of work-related failures to others. In this context, individuals may either choose to withhold information about failures or, alternatively, take the risk of sharing them with peers, determining the scope and extent of this sharing within their professional sphere.

2.3 Brief history and underlying assumptions of error and failure research

Historically, error and failure communication has been explored through two parallel streams of literature: error management (EM) (e.g., Frese & Keith, 2015; van Dyck et al., 2005) and failure and error learning (FEL) (e.g., Cannon & Edmondson, 2005; Dahlin et al., 2018; Edmondson, 1996). These streams have dominated the research field on human errors and failures in organizations, albeit from different perspectives.

EM adopts a structural perspective, conceptualizing human errors in organizations as incorrectly performed routines or tasks that can be managed and avoided through greater transparency and compliance with

organizational rules and procedures. Conversely, FEL originates in the domains of human resource management and organizational behavior, emphasizing culture, learning, and interpersonal interaction as critical elements. FEL seeks to explain and foster organizational conditions that encourage employees to engage with errors and failures to enhance learning and performance, rather than solely focusing on managing and avoiding errors.

To gain a comprehensive understanding of how and why individuals communicate failures in organizations, it is beneficial to connect the two streams of EM and FEL research. Both streams aim to explore and explain various phenomena related to the antecedents, occurrences, and utilization of the latent potential of errors and failures in organizations, albeit from differing origins and perspectives. Despite these differences, recent years have seen a convergence between the streams (see Dahlin et al., 2018).

Two examples of this convergence are the predominant focus on high-risk organizations—such as aviation, healthcare, transportation, and nuclear power plants (Lei et al., 2016)—and the shared emphasis on leveraging opportunities for positive error-related outcomes, such as continuous learning and innovation (Naveh & Lei, 2019). Dahlin et al. (2018) integrate insights from both EM and FEL to explain the underlying mechanisms influencing failure and error learning. They state: "Although an array of factors that affect failure learning has been identified, there is a lack of systematic integration across levels of analysis and settings; hence, the collective wisdom about how to best learn from failure is limited and fragmented" (253). Similarly, EM researchers argue that organizations still lack effective methods to manage errors, learn from them, and prevent their recurrence (Frese & Keith, 2015; Lei et al., 2016; Naveh & Lei, 2019). In summary, the two streams are closely related, with overlapping constructs and findings. This alignment supports a review strategy that embraces a broader body of knowledge about human errors in organizations.

The theory of EM originates from the early 20th century and has evolved by branching out from several theoretical fields and practical applications. One significant historical root that has dominated EM research is total quality management (TQM) (Carroll, Hofmann, Hoyle, & Vogus, 2016), whose origins as a scientific field can be traced back to this period. TQM emerged from the principles of scientific management (Taylor, 1914) and statistical

quality control (Shewhart, 1931). These disciplines are grounded in a structural view of organizations, emphasizing accountability, formalized routines and procedures, and agreed-upon metrics for tasks and performance.

In addition to its structural perspective, EM is rooted in action regulation theory (Frese & Zapf, 1994), a meta-theory focused on the regulation of goal-directed behavior. This theory explains how individuals manage their actions through cognitive processes such as goal-setting, selection, internal and external orientation, planning, monitoring, and feedback processing. It also highlights the interplay between cognitive processes, behavior, the surrounding environment, and objective outcomes, providing a framework for understanding how individuals in organizations navigate tasks and respond to errors.

Other disciplines influencing the development of EM include engineering and ergonomics, both shaped by cognitive research on decision-making biases and errors (e.g., Reason, 1990). EM research experienced a renaissance in the 1990s, spurred by increased attention to errors in organizations, which dramatically heightened scholarly interest (Carroll et al., 2021).

Additionally, EM scholars broadly agree on the predominance of "what" and "why" questions in existing research, such as the types of errors, their consequences, and their antecedents (Dahlin et al., 2018). However, comparatively little research has addressed "how" questions—for example, how errors and failures are communicated (or not), with whom, and how norms and values in different organizational contexts shape the communication process.

In contrast to EM, FEL research originates from the fields of human resource management (HRM) and organizational behavior (OB). These perspectives on organizations began to flourish in the 1950s but did not gain widespread recognition until the early 1980s. Over the past few decades, FEL has diverged from the field of organizational learning, with consensus among scholars that failure and error learning leads to improvements, which, in turn, enhance organizational performance (Argote, 2005; Baum & Dahlin, 2007; Cannon & Edmondson, 2001; Carmeli & Gittell, 2009; Edmondson, 1996).

FEL research primarily relies on active decision theories that emphasize individual and team learning processes (Dahlin et al., 2018). Its focus in on understanding how people's experiences can be transformed into improved

performance through analytical, cognitive learning processes (e.g., Argyris & Schön, 1978; Fiol & Lyles, 1985), rather than through "learning by action" (e.g., Cyert & March, 1963; Levitt & March, 1988). According to this active decision perspective, effective learning processes require individuals and organizations to (a) correctly identify and analyze the antecedents of errors and failures and (b) search for and implement solutions to prevent similar errors and failures in the future (Dahlin et al., 2018). This approach positions FEL as rooted in cognitive, analytical processes, viewing employees as deliberate agents who manage error information with the intention of learning from their experiences.

Since failure sharing is a central component in both the EM and FEL literature streams, I consider these as part of a unified domain of study.

2.4 Reviewing failure-sharing antecedents

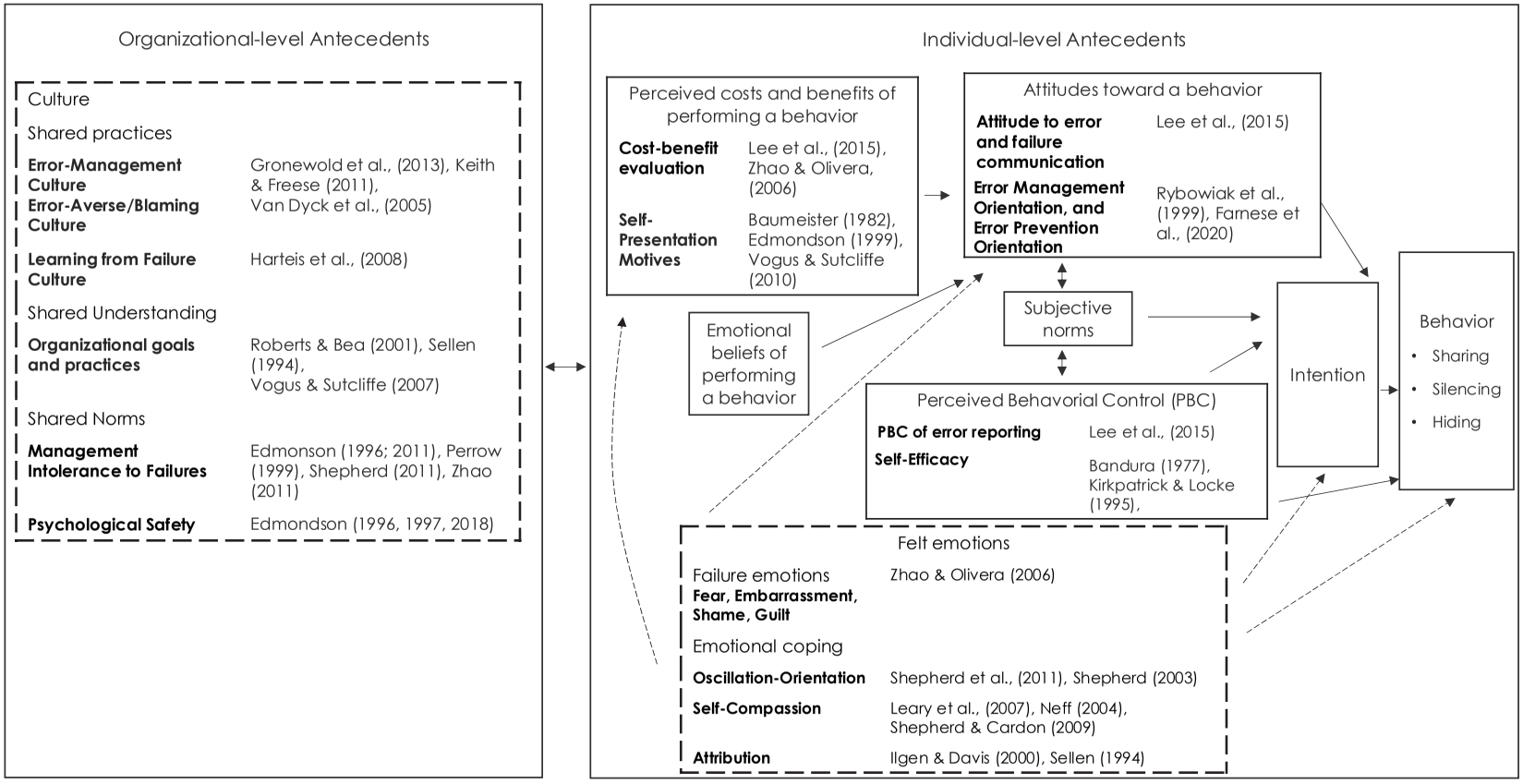
Error and failure communication has been viewed in previous research as a potentially risky behavior involving a calculated and deliberate decision-making process influenced by both individual- and contextual-level factors. Historically, this decision-making process has often been conceptualized using behavioral reasoning theory and, in particular, the theory of planned behavior (Ajzen, 1991, 2011), to predict people's attitudes toward errors and failures and their impact on communication behaviors (e.g., Lee, Yang, & Chen, 2015; Russo, Buonocore, & Ferrara, 2015).

The theory of planned behavior posits that individual action is shaped by personal attitudes, subjective norms, and perceived behavioral control. Subjective norms refer to beliefs about whether others approve or disapprove of the behavior, while perceived behavioral control reflects an individual's perception of the difficulty in performing the behavior. According to this theory, the more favorable an individual's attitude and subjective norms toward a behavior, and the greater the perceived behavioral control, the stronger the intention to perform the behavior (Ajzen, 1991).

The theoretical model (see Figure 2.1) suggests that individuals' attitudes are influenced by their evaluative beliefs—that is, their assessment of the costs and benefits of performing a behavior—as well as their emotional beliefs or the anticipation of potential positive or negative emotions resulting

from performing a behavior. In this context, attitude serves as a proxy for action, referring to the degree to which an individual evaluates the behavior of interest as favorable or unfavorable. Figure 2.1 illustrates key concepts identified and reviewed in the literature on EM and FEL at both individual and organizational levels. Each of these concepts will be discussed in the following sections.

Figure 2.1. Basic model of failure sharing as planned behavior. The model highlights potential individual- and organizational-level antecedents. Dashed boxes and arrows indicate additions that are not part of the original theory of planned behavior model.



In addition to these key concepts, organizational scholars have suggested that emotions not only influence attitudes through beliefs about them but also more directly, as negative felt emotions triggered by failures may affect cognition, attitudes, and behaviors. For example, Zhao and Olivera's (2006) error-reporting framework, grounded in theories emphasizing the role of negative emotions in judgment and decision-making (see Anderson, 2003; Elfenbein, 2007; Forgas, 1995; Loewenstein et al., 2001), supports this emotional mechanism. While this theoretical framing focuses on failure and error communication as outcomes of an individual decision-making process, it also implicitly situates these processes within an organizational context. Key antecedents—such as perceived costs and benefits, norms, and behavioral control—are inherently tied to how the organization addresses failures and errors, the norms surrounding these issues, and the existence of forums that may enhance perceived behavioral control. This organizational context, particularly the practices and norms regarding failures, has received considerable research attention as a critical antecedent to individuals' error- and failure-sharing behaviors (e.g., Edmondson, 1996; Gronewold, Gold, & Salterio, 2013; van Dyck et al., 2005). The current thesis builds on these key organizational- and individual-level antecedents of failure sharing identified in previous research, with a particular focus on the emotional dimension.

In the following section, I review research insights regarding the various antecedents shaping individuals' decision-making about failure sharing in organizations. First, I examine individual-level antecedents, including attitudes, perceived costs and benefits, perceived behavioral control, and emotions. Then, I turn to organizational-level antecedents, such as norms, values, and shared beliefs. To identify relevant studies, I searched key management journals (e.g., *Academy of Management Journal*, *Academy of Management Review*, *Administrative Science Quarterly*, *Organizational Science*) and organizational behavior journals (e.g., *Journal of Organizational Behavior*, *Journal of Applied Psychology*, and *Journal of Personality and Social Psychology*), focusing primarily, though not exclusively, on the period from 1990 to the present. Contextually, I targeted studies conducted in knowledge-intensive business firms, professional service firms or similar complex business services contexts, where errors and failures are typically less obvious and definable due to the absence of standardized

procedures and routines that would otherwise help in defining an error or failure.

2.5 Individual-level antecedents influencing failure sharing

2.5.1 Attitudes toward failures and failure sharing

A central challenge to the practice of failure sharing is employees' attitudes and reasoning about sharing failures with other members of the organization. Previous error-reporting studies have identified various psychological factors influencing individuals' attitudes toward reporting errors, which in turn affects the likelihood that they will actually report the error (Lee et al., 2015; Russo et al., 2015). Two studies conducted in Taiwanese (Lee et al., 2015) and Italian (Russo et al., 2015) hospitals using self-reported data to investigate nurses' attitudes toward error reporting revealed that cost-benefit evaluations significantly influenced nurses' decisions about whether to report an error. Nurses who perceived higher costs to error reporting had a significantly negative attitude toward reporting, while those who perceived higher benefits showed a significant positive attitude. While these studies provided valuable insights into nurses' attitudes toward error reporting in high-risk organizations, they did not explore the sharing of errors with a broader circle of stakeholders, that is, not exclusively involving managers. Additionally, the studies did not examine the emotional responses that could influence nurses' cost-benefit evaluations regarding failure sharing, and they were limited to high-risk organizations.

An individual's attitude and ways of coping with errors and failures at work have also been discussed in previous error management studies, referred to as error-management and error-prevention orientations, as central antecedents to error communication. An error-management orientation is associated with a positive attitude toward errors and functional coping strategies, while an error-prevention orientation expresses zero tolerance for errors and views them as threatening events that should be prevented (Farnese, Fida, & Picoco, 2020; Rybowiak et al., 1999). In studies of German full-time employees and Dutch students examining error orientation in relation to

personal work-related variables such as self-esteem, negative affectivity, and self-efficacy, it was found that individuals with an error-prevention orientation tended to appraise errors with strain and frustration, often silencing or hiding them when they occurred (Rybowiak et al., 1999). The study further indicates that an error-management orientation treats errors as naturally occurring organizational events, which, when managed correctly, can be turned into beneficial learning opportunities. In a study of Italian employees, the association between error orientation and the motivation to share errors openly was examined, revealing that employees who view errors positively—as an inevitable risk to achieving work results—are more willing to communicate them with teammates (Farnese et al., 2020). While both studies provide valuable insights into how an individual's error orientation may affect failure sharing, they do not consider the influence of organizational norms and values on individuals' perceptions of failures, nor were they conducted in real organizational settings. Additionally, these studies did not address the antecedents of individuals' attitudes toward failure sharing, such as the cost-benefit evaluation, particularly the influence of emotional reactions on evaluative beliefs and attitudes, which is an important mechanism for understanding failure sharing.

2.5.2 Evaluative beliefs of potential costs and benefits of failure sharing

I consider failure sharing a potentially risky behavior that is also beneficial to the individual, the group, and the organization. This aligns with propositions and findings in previous error communication research, primarily based on the theory of planned behavior discussed above, as well as Zhao and Olivera's (2006) theoretical considerations. They argue that error reporting involves employees' careful evaluation of the expected costs and benefits when making reporting decisions. In their conceptual error-reporting framework, the authors note that employees assess several key elements with respect to the self, the group, and the organization before making a decision. Costs of reporting include potential harm to the self (such as damage to personal image, material costs, or increased work effort) and to the organization (such as economic costs or a damaged reputation). Against these costs, there could be perceived benefits, such as enhanced self-image, personal learning, team

learning, and organizational learning. Previous research has shown that individuals tend not to report an error if the perceived costs outweigh the perceived benefits (Morrison & Phelps, 1999). However, studies have shown that error-reporting behavior is not always binary. For instance, Tucker and Edmondson (2003) found that in a medical context, nurses tended to manage errors themselves rather than report them. Even if individuals perceive significant benefits for their team or organization, they may hesitate to report the error due to excessive perceived personal costs (Cannon & Edmondson, 2001; Uribe et al., 2002). While Zhao and Olivera (2006) have contributed to a theoretical understanding of employees' cost and benefit evaluation of error reporting under the influence of emotional reactions, their theory still lacks empirical support. Additionally, in contrast to failure sharing, they focus on error communication as either verbal communication to management or through formal error-reporting systems, which limits the broader view of failure sharing as addressed in this thesis.

The perceived costs and benefits of failure sharing with respect to self should be considered a key antecedent of failure sharing. Self-presentation (i.e., how we appear to others) and self-concept protection are typically activated when one fails and thus affect people's attitudes toward sharing, especially in knowledge-intensive business services where impression management is more salient (Alvesson, 2004). The need for self-presentation is argued to be activated in situations when one perceives that others are evaluating one's behavior or performance (Baumeister, 1982; Giacalone & Rosenfeld, 2013). Baumeister (1982) introduces two types of self-presentation motives: (a) the motivation to sense and adapt to an "audience" in order to match one's self-presentation with the perceived expectations and preferences of the environment, and (b) the motivation to align one's own self-presentation with one's ideal self-image. This has been found in previous error and failure research, which shows that revealing a failure may harm an individual's perceptions of their competence, reputation, professionalism, or future career opportunities, thus causing a reluctance to communicate errors (e.g., Edmondson, 1999; Vogus, Sutcliffe, & Weick, 2010). Edmondson (1999) found in a field study of work teams in a U.S. manufacturing company that employees avoided sharing errors for fear of others' negative judgments of their competence and behavior. These motives are highly relevant to

understanding the potential costs and benefits employees perceive when faced with failure sharing. If a person feels that sharing threatens the maintenance of an ideal self-concept, it may be perceived as a potential cost and likely hinder sharing. In contrast, if the person perceives that sharing could strengthen their self-concept (e.g., by appearing honest or altruistic), it may be seen as beneficial and thus increase the person's intention to share the failure. Understanding how different organizational ideals shape employees' self-presentation and self-image, influencing their cost-benefit evaluation, is of significant importance in knowledge-intensive business services, where professionals must navigate both positive impressions and failure sharing when faced with ambiguous procedures and goals.

2.5.3 Perceived behavioral control of failure sharing

Perceived behavioral control (PBC) has been shown to affect error communication behavior. PBC involves a person's assessment of their ability to control the necessary resources when adopting a certain behavior—whether they perceive they have the required opportunities, skills, and resources to perform a specific behavior (Ajzen, 1991). PBC, in terms of protocols and arenas for sharing errors, has been identified as a key antecedent to error reporting in studies on nurses' error-reporting behavior (Lee et al., 2015; Russo et al., 2015). Both studies demonstrated that error reporting increased when nurses perceived the reporting process as controllable and not restricted by their physical environment or the availability of resources.

Furthermore, PBC may depend on individual dispositions. Previous research has shown that a person's degree of self-efficacy likely influences both the cost-benefit analysis and their sharing behavior. Self-efficacy refers to a person's belief in their ability to perform a certain task, including their self-perception of whether they can execute a specific behavior (Bandura, 1977). People with high self-efficacy tend to embrace difficult challenges and are less fearful of the negative consequences associated with failures. Kirkpatrick and Locke (1996) argued that leaders with high self-efficacy are more likely to reveal their mistakes and view them as opportunities for learning rather than cover them up.

Lee et al. (2015) found in their study of Taiwanese nurses' attitudes to error reporting that self-efficacy increased the perceived behavioral control

of reporting error incidents. They also found that higher self-efficacy indirectly influenced error reporting through its positive effect on nurses' perceived benefits of reporting. People with higher self-efficacy are thus more likely to share failures more broadly, as they perceive them as less threatening to their self-concept and view them as important opportunities for individual and organizational learning. This aligns with Zhao and Olivera's (2006) proposition that employees with high self-efficacy perceive lower costs to themselves and greater benefits to the organization, as reporting errors can help the organization learn and change the conditions that caused the error.

The effects of self-efficacy on individuals' latent cost-benefit evaluation and perceived behavior control should be considered when conducting failure-sharing studies, particularly in knowledge-intensive business services, where a damaged self-concept may be of higher concern than less impression-driven organizational contexts.

2.5.4 Emotional reactions influencing failure sharing

It is indisputable that failures induce discomfort and negative feelings. Rybowiak et al. (1999) and Edmondson (1999) both found that feelings of fear, shame, and guilt were triggered when employees experienced error and failure events in medical and other organizational contexts. Researchers have suggested that these strong negative emotions can affect cognition, particularly in the cost-benefit evaluation, especially when the judgment or decision is of high personal relevance or when the individual perceives a situation as unsatisfactory or even dangerous (e.g., Elfenbein, 2007; Forgas, 1995; Zhao & Olivera, 2006). Elfenbein's (2007) framework on integrated intrapersonal emotions in organizations proposes that strong negative emotions can influence behaviors in two ways: directly, by prompting immediate reactions, and indirectly, by shaping behaviors through their effects on cognition.

Similarly, Zhao and Olivera (2006), partly building on Forgas' (1995) affect infusion model, argue that negative emotions indirectly affect error reporting by influencing employees' cognitive assessments of the costs and benefits of reporting. Specifically, they propose that when employees experience strong negative emotions after an error, they are more likely to focus on the perceived costs rather than the perceived benefits of reporting it.

In their error-reporting framework, Zhao and Olivera (2006) conceptually identify four negative emotional reactions—fear, shame, embarrassment, and guilt—that directly influence employees' error-reporting behavior and simultaneously shape their perceived cost-benefit evaluations of reporting.

First, *fear* arises when people perceive a threat of a harmful or unpleasant outcome. Fear is argued to prompt avoidance behaviors, such as fleeing from a problem rather than addressing it (Zhao, 2011). It is also suggested that fear fosters a pessimistic outlook, emphasizing the perceived costs rather than the benefits of reporting an error.

Second, *shame* is described as a strong negative self-evaluation resulting from a discrepancy between a desired self-concept and a perceived self-concept. Studies show that individuals often respond to shame by attempting to hide or escape from the situation (Lazarus, 1991; Lewis, 2000) or by blaming others (Tangney, 1990; Tangney, Wagner, Fletcher, & Gramzow, 1992). Shame is expected to negatively affect failure sharing by heightening awareness of perceived personal costs, such as damage to one's image (Zhao & Olivera, 2006).

Third, *embarrassment* occurs when a failure is publicly exposed and can encourage socially desirable behaviors. Compared to shame, embarrassment is more transient, less intense, and less likely to involve negative self-evaluations (Zhao & Olivera, 2006). As a result, embarrassment may result in partial or no perceived benefits of reporting, particularly in environments where failure sharing is socially desirable.

Fourth, *guilt* differs from shame in that it arises when a failure is attributed to a specific action or behavior rather than a flawed self. Guilt is experienced as tension and regret, often motivating individuals to acknowledge, apologize for, or attempt to repair the harm caused (Tangney & Dearing, 2003). Consequently, guilt may enhance the perceived benefits of failure sharing, as it helps preserve one's self-concept.

Although this research provides critical perspective on effects of negative emotions on judgment and decision-making, no studies have yet empirically examined how emotions influence error-reporting or failure-sharing cognition and behavior in real organizational contexts. This gap is notable, given that previous research consistently demonstrates that people perceive errors

and failures negatively, often inducing emotions such as anxiety, anger, guilt, shame, and sadness.

2.5.5 Coping with emotional reactions

How individuals "deal" with failure-related emotions and how they "treat" themselves when failing are critical factors influencing their tendency to engage with failures and share them. In most cases, individuals employ various coping strategies to avoid or mitigate unpleasant feelings or discomfort associated with the event that caused these emotions.

A key challenge in engaging with one's own and others' failures is the individual's ability to cope with and recover from negative emotions. Without this ability, individuals are more likely to face difficulties regulating their emotions, conducting in-depth root-cause analyses, communicating effectively, and ultimately learning from failure (Shepherd, 2003).

Researchers have further highlighted failures as potent signals that can prompt deeper analysis of the situation and future preventative measures. However, this process is neither straightforward nor automatic and often requires considerable effort from those involved (Tulis, Steuer, & Dresel, 2016). One explanation is that failures represent external performance feedback, which can trigger negative achievement emotions (Pekrun & Perry, 2014). These emotions may be perceived as internal or internalized negative feedback by the individual.

Two key assumptions underlie this process: First, the person must perceive a negative discrepancy between a desired state (e.g., goal or result) and the actual state. Second, the individual must feel negative achievement emotions when experiencing a failure. Otherwise, the individual may dismiss the experience, reject it, and consequently not share it.

In summary, previous research underscores the importance of understanding how individuals functionally cope with negative achievement emotions to better explain their willingness to share failures. However, there remains a significant lack of empirical research conducted in real organizational contexts, particularly in knowledge-intensive business services.

Self-regulation techniques

Oscillation-orientation

Building self-regulation capacity and coping with negative emotions are critical for how employees mindfully manage and share failures. However, developing this capacity is resource-intensive, diverts attention from work tasks, and demands significant time and effort from team members. Gross (1998) suggests that emotional regulation involves individuals' attempts to influence which emotions they experience, when they experience them, and how these emotions are expressed.

Research on emotional coping with failures has explored why some individuals have a greater ability to "recover" from and "grow" after experiencing significant setbacks (Shepherd, 2003; Shepherd, Patzelt, & Wolfe, 2011; Stroebe & Schut, 2010). For instance, Shepherd et al. (2011) studied scientists working in project teams at various German research institutes and found that team members' negative emotional reactions to project failures diminished over time. Notably, this reduction in negative emotions occurred more quickly in those with greater *oscillation-orientation* abilities. This term refers to a person's capacity to shift perspectives between *loss-orientation* and *restoration-orientation* (Shepherd, 2003).

Loss-orientation involves deeply processing the loss, especially by addressing the associated emotions, with the aim of accepting, healing, and moving forward (Stroebe & Schut, 2010). This process requires significant awareness of the events leading to the failure and the ability to acknowledge and navigate the negative emotions tied to it. In contrast, restoration orientation focuses on suppressing or mitigating negative emotions while proactively managing secondary stressors.

Shepherd et al. (2011) conclude that oscillation-orientation not only accelerated the reduction of negative emotions but also enhanced team members' ability to learn from failures. Applying oscillation orientation could, therefore, strengthen employees' capacity to cope with failure-related emotions, enabling them to make sense of failures more quickly and share them more effectively.

Self-compassion

People often fear failure, consciously or subconsciously, due to how they relate to themselves when faced with negative outcomes stemming from their actions or decisions. Most individuals treat themselves harshly, criticizing themselves and showing less support after failing than they would offer to a colleague in the same situation (Leary, Tate, Adams, Allen, & Hancock, 2007; Shepherd & Cardon, 2009). Management scholars argue that self-compassion involves being aware of and "touched" by one's own pain and suffering, coupled with a desire to alleviate it (Shepherd & Cardon, 2009: 933). This requires intentionally staying connected with the unpleasant emotions triggered by failure, aiming to restore oneself rather than disconnecting from the discomfort.

Conceptually, self-compassion has been posited to influence the intensity of negative emotional reactions to failures and potentially moderate the relationship between these emotions and learning from failures (Shepherd & Cardon, 2009). The ability of professionals to feel self-compassion during project failures explains both the variability in the intensity of negative emotions experienced and why some individuals recover more quickly than others. The authors further suggest that organizations should foster self-compassion behaviors and "provide developmental opportunities where employees can learn such skills" (942). They argue that building the capacity to be supportive and mindful and to view personal shortcomings as part of the human experience can reduce employees' fear of failure. This, in turn, enables them to remain connected to negative emotions, facilitating the dissemination of failures and fostering learning from them.

To date, however, self-compassion has not been empirically explored in organizational contexts such as knowledge-intensive business services. Investigating its effects on emotional reactions, cognition, and failure sharing in these settings could provide valuable insights.

Attribution

A common strategy to protect oneself from unpleasant emotional reactions caused by negative events is to attribute one's actions to external conditions. This strategy may impede failure sharing as the negative event is explained away. Attribution research highlights people's tendency to cope with negative experiences by attributing their behavior to surrounding and uncontrollable

circumstances (for example, Ilgen & Davis, 2000; Nisbett & Ross, 1980). This approach risks defining away the behaviors that caused the outcome, potentially losing opportunities for learning (Sellen, 1994).

For example, if a person—due to external attribution—fails to understand how their own actions contributed to an undesirable gap between an expected and actual outcome, they may not recognize it as a failure, and failure sharing will not occur. On the other hand, external attribution might reduce the perceived risk of punishment when sharing a failure, as the individual can demonstrate how their actions were influenced by limiting contextual factors. In such cases, the person may be more inclined to share failures, thereby supporting the organization's ability to learn and adapt.

Building on Zhao and Olivera's (2006) error-reporting framework, I anticipate that external attribution may hinder failure sharing in complex business services. In these contexts, standardized procedures and responsibilities are often diffuse, making it challenging for professionals to pinpoint the origin of a negative outcome. This ambiguity may unconsciously drive individuals to attribute their actions to external conditions or even to blame external stakeholders, such as clients or regulators, as a way to cope with negative emotions.

To conclude, Table 2.1 summarizes the individual-level antecedents reviewed, highlighting their potential influence on failure sharing.

Table 2.1. Summary of individual-level antecedents of failure sharing

Central constructs	*Description*	*Key elements*	*References*
Cognition			
Attitude toward error and failure communication	Refers to the degree to which a person assesses the behavior of interest as unfavorable or favorable	• Formed by evaluative beliefs of the costs and benefits of performing a behavior, emotional beliefs, and subjective norms • Affects the probability that the individual shares the failure	Lee et al. (2015)
Error management orientation (EMO)	Positive attitude towards errors	• Errors are inevitable • Errors are potentially negative • Can be turned into something positive	Rybowiak et al. (1999), Farnese et al. (2020)
Error prevention orientation (EPO)	Negative attitude towards errors	• Errors seen as threats • Appraise errors with strain and frustration • Tend to deny or hide errors when they occur	Rybowiak et al. (1999), Farnese et al. (2020)
Cost-benefit evaluation	People's perception of potential costs and benefits of failure sharing. Influences people's attitude toward failure sharing	• Perceived costs of sharing to self and organization • Perceived benefits of sharing to self and organization	Lee et al., (2015), Zhao & Olivera (2006)
Self-presentation motives	To convey certain information about oneself to maintain a favorable image to others	• Motivation to align one's self-presentation with the perceived expectations and preferences of the environment, as well as with one's ideal self-image.	Baumeister (1982), Edmondson (1999), Vogus & Sutcliffe (2010)
Perceived behavioral control of sharing	Individuals' perception of sharing as controllable or unrestricted by either their physical environment or the availability of resources	• Protocols and arenas for sharing as antecedents to failure sharing	Lee et al., (2015)

Self-efficacy	One's belief in one's ability to perform a specific task. Referred to as an individual disposition	• Increases perceived behavioral control • Increases perceived benefits of reporting Self-efficacious people are more prone to reveal mistakes	Bandura (1977), Kirkpatrick & Locke (1995), Lee et al (2015)
Emotions and coping			
Failure emotions	Negative emotions induced by errors and failures.	• Fear • Embarrassment • Shame • Guilt May influence people's cost-benefit evaluation	Zhao & Olivera (2006)
Self-regulation: oscillation-orientation	Changing perspectives between loss- and restoration-orientation when regulating negative emotions to better analyze root causes of failure events.	• Loss-orientation: deeply process the aroused emotions to accept, heal, and move on • Restoration-orientation: avoid negative emotions by shifting focus away from them to avoid over-identification • Increases capacity to recover and grow from failures	Shepherd et al. (2011), Shepherd (2003)
Self-regulation: self-compassion	Being sympathetic and caring toward oneself in the face of failure. Remaining connected to negative emotions to restore oneself.	Consists of three dimensions: • Self-kindness • Common humanity • Mindfulness	Leary et al. (2007), Neff (2004, 2023), Shepherd & Cardon (2009)
Attribution	Coping with failure emotions by attributing one's own actions to internal or external circumstances	Negative events are caused by: • Internal—personal controllable factors • External—surrounding/uncontrollable factors	Ilgen & Davis (2000), Sellen (1994)

2.6 Organizational-level antecedents influencing failure sharing

In addition to the individual-level antecedents reviewed, the theory of planned behavior (Ajzen, 1991, 2011) suggests that attitudes can also be shaped by perceived social norms. In some cases, social norms may exert a stronger influence on an individual's attitude toward performing a behavior than individual-level antecedents. A person's subjective norm reflects their belief about whether important others approve or disapprove of performing the behavior (Ajzen, 2011; Fishbein & Ajzen, 1975).

Research on errors and failures consistently demonstrates that perceived social expectations play a crucial role in error and failure communication. For instance, perceived expectations to communicate errors are fundamental components of high error management cultures (e.g., Gronewold et al., 2013; Homsma, van Dyck, De Gilder, Koopman, & Elfring, 2007; van Dyck et al., 2005). Similarly, Lee et al. (2015) identified a positive and significant relationship between nurses' beliefs that error reporting was supported by significant others and their actual error reporting behavior (see also Liang, Farh, & Farh, 2012). Next, I will review organizational-level antecedents identified in previous literature on error management, as well as failure and error learning.

2.6.1 Organizational culture—norms, values, and practices

The organizational context is a key enabler of failure sharing, influencing how individuals understand and react to failures. Beyond the psychological factors discussed earlier, the social environment strongly influences whether employees perceive failures as opportunities or threats and determines whether it feels safe to share them openly. To better understand the impact of the social environment on error and failure communication, previous research has applied the concepts of climate or culture (e.g., Keith & Frese, 2011; van Dyck et al., 2005; Vogus et al., 2010).

Broadly, culture encompasses values, norms, and practices (House, Hanges, Javidan, Dorfman, & Gupta, 2004). Error management culture has been identified as a critical construct in shaping perceptions of errors as

either harmful or useful (van Dyck et al., 2005). It is defined as "organizational practices related to communicating about errors, sharing error knowledge, helping in error situations, and quickly detecting and handling errors" (1229). Similarly, a learning-from-failure culture refers to a social context that encourages employees to seek support, acknowledge failures, and identify learning opportunities rather than hide failures or assign blame (Harteis, Bauer, & Gruber, 2008). Research on both error management and learning-from-failure cultures has primarily focused on the "practice" dimension of error communication.

Research demonstrates that organizations may traverse a spectrum ranging from high error management cultures (EMCs) to error-averse cultures. A "high" EMC is characterized by employees' perceptions of errors and failures as natural occurrences in daily work life and as central opportunities for improvement and development, provided they result in learning and are not repeated (Gronewold et al., 2013; van Dyck et al., 2005). For example, a study examining the effects of an EMC on employees' beliefs about colleagues' willingness to report errors in a German audit setting found that a "high" EMC led to greater enthusiasm among auditors to report self-discovered errors (Gold, Gronewold, & Salterio, 2013). Similarly, research in professional service firms has demonstrated the positive effects of "high" EMCs on consultants' willingness to discuss errors more openly (e.g., Grohnert, Meuwissen, & Gijselaers, 2017; Gronewold & Donle, 2011) and on employees' emotional reactions to errors (Keith & Frese, 2011).

In contrast, an "error-averse" or "blaming" culture (e.g., Gronewold et al., 2013; van Dyck, 2009; van Dyck et al., 2005) is marked by an unsafe environment in which employees avoid communicating errors. Such cultures are characterized by a lack of trust, a tendency to silence or hide errors, externalizing blame, or punishing and excluding those who admit to or cause errors. In a study of Dutch and German companies across manufacturing, transportation, and financial services, van Dyck et al. (2005) found that organizations lacking an explicit strategy for managing errors often cultivated a blaming culture. In such environments, fear of being caught making a mistake or appearing less competent when disclosing a failure drives individuals to conceal both their own and others' failures.

To date, most research has focused on the practical dimension of error management cultures to understand the benefits of more open error communication. However, the broader norms and values that underpin these practices remain underexplored. This opens up the need for further study into how organizational norms and values shape professionals' failure-sharing behaviors in diverse ways.

Managers' intolerance of failures

Within various organizational settings, managers' intolerance to failures strongly influences subordinates' willingness to engage with and potentially share failures. In a blaming culture, this intolerance causes employees to feel threatened, rejected, or reprimanded if they are associated with failures. Studies on managers' intolerance to failures show that employees' lack of trust in superiors and their perception of being punished—even when failures arise from organizational limitations—reduce their motivation to communicate failures (e.g., Edmondson, 2011; Perrow, 1999).

Perrow (1999) found that 70 to 80 percent of accidents in industrial contexts were initially blamed on individuals. However, root cause analyses revealed that only 30 to 40 percent of these accidents could actually be traced back to individual actions. Similarly, Edmondson (2011) studied managers' intolerance to failures across organizations as diverse as hospitals and investment banks, finding that 70 to 90 percent of subordinate failures were categorized by managers as "blameworthy," warranting punishment or correction. Yet, when these managers scrutinized the antecedents of the failures, they discovered that only 2 to 5 percent were truly blameworthy (e.g., deliberate failures), while the rest were praiseworthy (e.g., failures that fostered profound learning).

In a study of eight team units in two U.S. hospitals, Edmondson (1996) examined the relationship between team properties (e.g., nurse managers' leadership behavior, team composition, relationship quality, and performance outcomes) and error rates. The study found that teams operating in a highly authoritarian, error-suppressing climate reported fewer detected errors. However, Edmondson concluded that this suppression resulted in the underreporting of valuable failures and the loss of significant learning opportunities, negatively impacting team performance. Managers' intolerance of

failures, combined with their tendency to classify most failures as blameworthy, acts as an unconscious filter, censoring valuable failures within organizations and impeding their sharing. This highlights leadership as a critical organizational factor influencing failure sharing.

Perceived managerial intolerance to failures also correlates with stronger negative emotionality, significantly increasing the risk of muting failure sharing. Studies on employees' perceptions of managerial intolerance to failures show a significant positive relationship between such intolerance and negative emotionality about failures (e.g., Edmondson, 1996; Shepherd et al., 2011; Zhao, 2011).

Shepherd et al. (2011), when investigating project team failures at various German research institutes, observed that team members who perceived failure as highly normalized within their organization displayed lower negative emotions regarding project failures than those who perceived failure as less normalized. Normalizing failure was exemplified when managers made statements such as, "We have a clear acceptance for failure" and, "In research, you need to accept that things sometimes go wrong."

In an experimental study examining undergraduate students' perceived managerial intolerance and the negative emotionality associated with self-made failures, Zhao (2011) found that perceived managerial intolerance was significantly and positively related to feelings of guilt and sadness.

This finding aligns with observations from a qualitative study in hospitals, where nurses reported experiencing stronger negative emotions about errors when their superiors were perceived as intolerant of mistakes and errors (Edmondson, 1996). Despite the clear relationship between employees' failure-related emotions and their perception of the organization's normalization of failures, further research is needed to investigate the nuances of the interplay between a culture of normalization and the emotional dimension of failure sharing.

It would be particularly valuable to examine how different types of organizational cultures—such as success, elite, and high-performance cultures, which typically exhibit a low level of failure normalization—elicit varying emotional reactions in professionals who perceive themselves as having failed. Exploring this could provide deeper insights into how these emotions

influence professionals' failure-sharing behaviors within these cultural contexts.

Shared understanding of organizational goals and practices

A shared understanding of organizational goals and practices is another essential organizational-level antecedent influencing failure sharing. If people cannot determine how their actions relate to their own and others' goals, it limits their ability to discern the difference between expected and actual outcomes. This means that many actual and potential failures will "disappear," regardless of whether factual definitions of errors and failures exist (Sellen, 1994). Goals are said to provide important frames of reference, offering employees guidance on where to focus their actions.

Roberts and Bea (2001) argue that high-risk organizations that consistently and broadly communicate their overarching vision and standardized practices create better conditions for employees to identify actions leading to negative outcomes. As a result, employees are more likely to recognize errors and failures and have greater opportunities to communicate them with peers. For example, a cross-sectional study of medication errors in U.S. hospitals showed that nurses' shared understanding of safety organizing—collecting, analyzing, and disseminating information from errors—enhanced their reporting of medication errors, particularly when paired with high levels of trustful leadership (Vogus & Sutcliffe, 2007).

While these studies have provided valuable insights into the importance of a shared understanding of organizational goals and practices for error communication, they did not address key aspects relevant to failure sharing. Specifically, how shared understanding shapes individuals' expectations about the outcomes of their actions, its influence on their perceptions of negative discrepancies between expected and actual results, and how these discrepancies relate to their own actions.

These are critical questions for further research, particularly in organizations where a shared understanding of formal practices, goals, and ways of working is unclear or entirely absent. Without such a frame of reference, individuals lack a basis for interpreting their experiences.

Psychological safety

A central factor influencing individuals' willingness to share failures is the level of interpersonal threat they perceive in their workplace. The greater the perceived threat in a team or organization, the less motivation individuals have to share negative experiences, and vice versa. This phenomenon, known as psychological safety, reflects the degree of interpersonal threat individuals feel in their work environment. Psychological safety encompasses beliefs about others' responses "when one puts oneself on the line, such as by seeking feedback, sharing information, asking for help, talking about failures, and experimenting" (Edmondson, 1999: 351).

Although psychological safety and trust share similarities, they are distinct concepts. Psychological safety is experienced collectively at the group level. Trust, by contrast, pertains to interactions between individuals or parties existing within the mind of an individual and relating to a specific target. Moreover, psychological safety emphasizes immediate interpersonal consequences, focusing on the present. Trust, however, involves expectations about future reliability—whether another person or organization can be relied upon to fulfill promises (Edmondson, 2018).

Organizational scholars assert that higher levels of psychological safety enable organizational members to (a) cope better with negative emotional reactions to failure, (b) analyze failures effectively, (c) communicate failures more openly, and (d) experience less fear of negative consequences, such as damage to personal image, status, or career development (Dahlin et al., 2018; Edmondson & Lei, 2014). Contemporary psychological safety research consistently shows positive associations between psychological safety and employees' motivation to communicate failures and other negative events (Edmondson & Lei, 2014).

For example, a study exploring the relational underpinnings of learning from failures in the software, electronics, and finance industries in Israel found that psychological safety reduced employees' fear of speaking out and facilitated the sharing of failure events (Carmeli & Gittell, 2009). Similar findings emerged in studies of cardiac surgery and nursing teams, where group-level psychological safety made it easier to address failures across status and role boundaries (Edmondson, Kramer, & Cook, 2004). In summary, work environments characterized by higher levels of interpersonal safety

encourage individuals to disclose shortcomings and failures with reduced fear of rejection, punishment, or humiliation.

To conclude, Table 2.2 provides a summary of the organizational-level antecedents reviewed, highlighting their potential influence on failure sharing.

Table 2.2. Summary of organizational-level antecedents of failure sharing

Central constructs	*Description*	*Key elements*	*References*
Shared practices			
Error management culture	Common practices supporting communication and reporting of errors and failures.	• Errors are seen as unavoidable & acceptable • Influences emotional reactions positively • Reduces negative consequences	Gronewold et al. (2013), Keith & Freese (2011), van Dyck et al. (2005)
Learning from failure culture	Failures are admitted, shared, reflected upon, and viewed as opportunities for learning.	• Competence for failure reflection • Error communication • Social backing	Harteis et al. (2008)
Error-averse/blaming culture	Unsafe environment where employees risk punishment or exclusion when associated with failures.	• Lack of trust • Silencing or hiding of failures • Blaming others or external conditions	Gronewold et al. (2013), van Dyck (2009), van Dyck et al. (2005)
Shared understanding			
Organizational goals and practices	Shared understanding among employees about common goals and practices	• Provide conditions for employees to be aware of potential and actual failures, and thus be offered opportunities to share them	Roberts & Bea (2001), Sellen (1994), Vogus & Sutcliffe (2007)
Shared norms			
Management intolerance to failures	Managers attribute most failures as blameworthy. Failures should be punished or corrected.	• Blameworthy vs praiseworthy failures • Employees perceive a threat of punishment • Evokes negative emotionality • Impedes failure sharing	Edmonson (1996; 2011), Perrow (1999), Shepherd (2011), Zhao (2011)

Psychological safety	How safe the environment is for interpersonal risk taking—especially at group-level	Individuals dare to: • Seek feedback • Share errors & failures • Share ideas • Ask for help • Experiment Shows a positive relationship to failure communication	Edmondson (1996, 1997, 2018)

2.7 Summary of key findings and limitations in previous error and failure research

Based on the review of the error management and learning-from-failure literature, several central antecedents to failure sharing have been identified (see Tables 2.1 and 2.2). Additionally, several issues in existing research have emerged. Four key limitations are particularly noteworthy:

- Emphasis on formal error reporting: Current research predominantly emphasizes error reporting as "a formal act toward managers or supervisors, or through formal error reporting systems" (Zhao & Olivera, 2006: 1012), where errors are usually objectively defined as deviations from specified procedures. While formal reporting is undeniably a critical part of error management and learning and likely includes certain informal communicative aspects with others in the organization, the consequences of errors and failures can also be mitigated—and potential learning and well-being achieved—through broader communication with peers. Therefore, it is crucial to understand the underlying mechanisms shaping this informal and deliberate communication process.

- Emotional dimension: Although previous research has recognized the emotional dimension as an important factor influencing failure and error communication, the cognitive dimension has dominated the field, with emotional dynamics being empirically studied to only a limited extent. In particular, the role of negative emotional reactions to failures and their interaction with individual cognition and organizational culture remains understudied. It is crucial to understand how negative emotions affect individuals' decision-making processes regarding the sharing of failures in various ways.

- Context of research: Most existing error and failure research has been conducted in high-risk organizations characterized by standardized error communication operations and procedures (see Lei et al.,

2016). In these settings, error management and communication are integral to daily procedures and have clear benefits. However, not all organizations operate within such standardized frameworks. This thesis broadens the research scope to include knowledge-intensive business services, where failures are more challenging to define, and professionals must navigate the dual pressures of maintaining impressions and managing failures. In these contexts, the value of failure sharing may be less apparent.

- Organizational norms and values: Existing research has predominantly focused on the "practice" dimension of error management and learning-from-failure cultures (e.g., van Dyck et al., 2005), often overlooking the broader norms and values that underpin these practices. This highlights the need to better understand which organizational norms and values support or hinder individuals' failure sharing. Specifically, it is crucial to investigate how different organizational norms and values—such as an emphasis on positivity, success, and infallibility, which typically reflect a low level of failure normalization—evoke various negative emotions and cognitive responses and how these psychological factors influence professionals' failure-sharing behaviors within these cultures.

Chapter 3

Methodological Considerations

To further explore the issue of failure sharing, this chapter outlines the methodological considerations of my research, including the approaches and methods employed, along with their respective advantages and limitations. The study begins with a case study approach to illuminate the micro-dynamics of failure sharing and to develop a conceptual model. This model is subsequently examined and tested through two cross-sectional survey studies.

To execute this research strategy, I utilize a combination of qualitative and quantitative methods. This hybrid approach is particularly advantageous in field research, where both exploration and validation of a phenomenon are necessary (Edmondson & McManus, 2007; Eisenhardt, 1989). Hybrid methods, which combine qualitative and quantitative data, enable a more comprehensive understanding of complex organizational phenomena. By integrating these approaches, I can test key associations and relationships identified through exploratory and inductive qualitative analysis by developing and proposing testable models.

This methodological synergy allows for a deeper exploration of the data and enhances the robustness of the research findings. According to Eisenhardt (1989), blending data in this way helps researchers identify unanticipated relationships, verify their understanding of qualitative data, and increase their confidence in qualitative inferences when the two types of data converge. A hybrid method provides a deeper understanding and rationale for proposed new constructs (Edmondson & McManus, 2007) and offers

both insights and rigor when used appropriately (Jick, 1979; Yauch & Steudel, 2003).

However, some theorists have raised concerns about the adequacy of mixing qualitative and quantitative methods within a single research project. These concerns often focus on the potential difficulties in integrating philosophically inconsistent paradigms and the possibility that the strengths of each method may be diluted (e.g., Greene, Caracelli, & Graham, 1989; Sale, Lohfeld, & Brazil, 2002). Despite these concerns, I argue, in line with previous methodological research in management studies (e.g., Edmondson & McManus, 2007; Yauch & Steudel, 2003), that combining the two methods can be a successful methodological fit.

This combination of methods is well-suited to the current fieldwork's aim: to generate novel insights and a better understanding of less researched antecedents (e.g., social emotions) influencing failure sharing in a less-researched context such as knowledge-intensive business services. In this organizational context, I propose potential associations between novel constructs (e.g., failure sharing) and more established constructs (e.g., psychological safety, individual mindsets) and conduct exploratory testing of these propositions.

To broadly illuminate my methodological considerations, this chapter first highlights the empirical context of knowledge-intensive business services (KIBS). I then introduce a two-phased research process. The first phase abductively explores failure sharing in real organizational settings through a qualitative case study, enabling the creation of a conceptual model. In the second phase, this model is deductively tested in two cross-sectional survey studies. Next, I detail the methodologies employed in each study, beginning with the case study involving two Swedish consulting firms. Following this, I outline the two quantitative survey-based studies: an online sample of U.S. and U.K. professionals from various knowledge-intensive industries and a large-scale field survey study involving professionals working in a Swedish auditing firm. Each study is discussed at length in Chapters 4, 6, and 7.

3.1 Empirical setting—Knowledge-intensive business services

To explore professionals' considerations of failure sharing in knowledge-intensive business services (KIBS), the empirical setting in research phase 1 focuses on two Swedish consulting firms: one specializing in leadership development and the other in media and public relations services. In phase 2, the empirical setting broadens to include samples of professionals from knowledge-intensive industries in the United States and the United Kingdom, as well as auditors in a Swedish auditing firm.

All three consulting firms deliver complex business services primarily to Swedish clients, where the value of failure sharing may be less apparent due to the absence of well-defined procedures and norms for communicating errors and failures. Additionally, these firms face challenges associated with professionals needing to manage failures while simultaneously maintaining positive impressions. Complex business services are characterized by heterogeneity, intangibility, and co-creation between client and consultant (Parasuraman, Zeithaml, & Berry, 1985). This context often creates ambiguity about the value provided, making these services highly reliant on consultants' ability to demonstrate competence, professionalism, and value to clients (Alvehus, Avnoon, & Oliver, 2021; Alvesson, 1993; Dinovitzer, Gunz, & Gunz, 2014; Harrington, 2017).

Maintaining a flawless professional "trademark" places consultants in a precarious position, particularly when addressing and managing failures (Sturdy, 1997). This challenge emphasizes the need for firms to support their consultants' self-esteem and impression management (Alvesson & Robertson, 2006). Studies suggest that fostering an elite identity—emphasizing consultants' unique and superior performance—enhances self-esteem and positive emotions, both crucial in the service–customer relationship (George, 1991; Subramony & Pugh, 2015). To sustain this elite identity, providers of complex business services often adopt strategies to attract and retain high-performing individuals. These strategies include well-developed career systems and structured performance management systems that motivate individuals to uphold a high-performance identity.

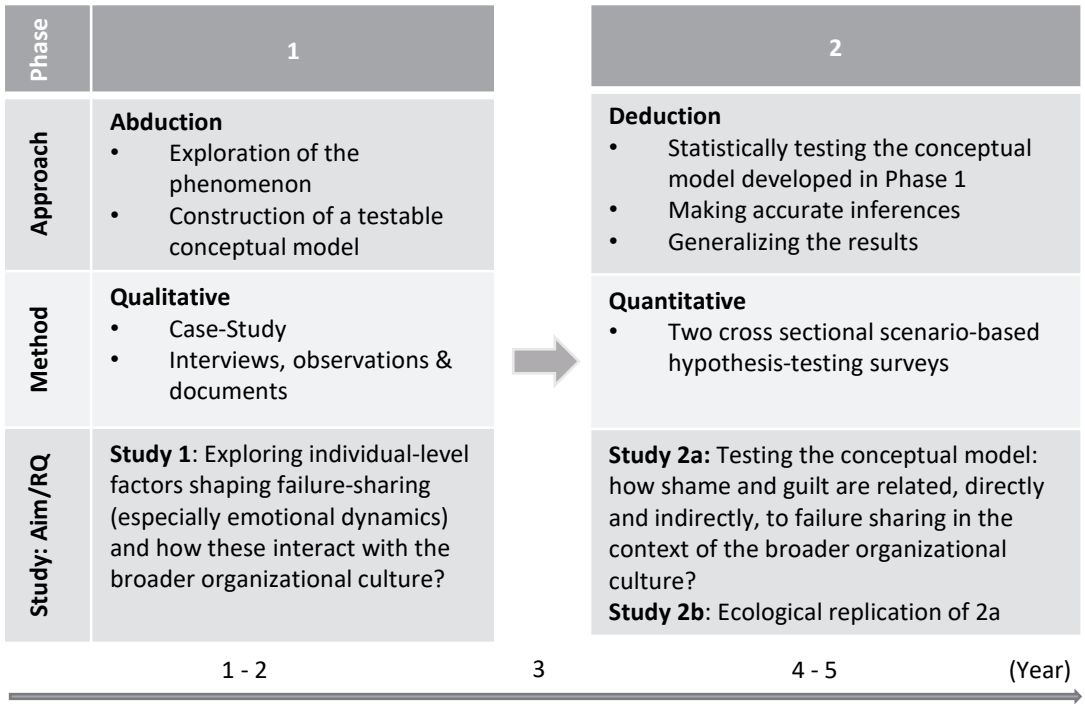
3.2 A two-phased research approach

To address the research questions and deepen the understanding of failure sharing, this thesis adopts an abductive approach involving multiple studies (Alvesson & Sköldberg, 2017; Van de Ven, 2007). Given the limited existing knowledge of the phenomenon, an abductive research strategy is particularly well-suited (Alvesson & Sköldberg, 2017; Meyer & Lunnay, 2013; Van de Ven, 2007). This iterative strategy allows the theoretical framework and methodological choices to evolve as the research progresses, guided by the empirical findings from each study. Each study informs the subsequent steps, enabling a progressively deeper understanding of the phenomenon under investigation and refining the selection of the most relevant research methods.

From the literature review, one conclusion drawn was that the emotional dynamics of failure sharing have been insufficiently investigated, particularly in the context of complex business services. Thus, applying a purely deductive, quantitative approach based on pre-formulated hypotheses would not be an appropriate starting point. As the research builds on established constructs and findings from previous studies on error management and learning from failure, a purely inductive approach would also be unsuitable. Such an approach risks making overly broad generalizations based on single observations, potentially overlooking the underlying mechanisms explaining the phenomenon. By relying solely on induction, the research might fail to capture the deeper structures and dynamics essential for a comprehensive understanding (cf. Alvesson & Sköldberg, 2017).

In the initial phase of the research process, I begin with a qualitative case study, employing abductive analysis to generate novel insights. This is followed by a second, deductive phase in which I conduct two quantitative cross-sectional survey studies to test and refine the findings from the first phase. Figure 3.1 provides an overview of the two phases, detailing the specific approaches, methods, and empirical studies utilized in each phase.

Figure 3.1: Holistic representation of the two-phased research approach



3.2.1 Phase 1—Abductively exploring failure sharing

In line with the abductive approach, I initially employed a qualitative case study–based research method to investigate failure sharing in two consulting firms—referred to as LeadCon and ComCon. Rather than testing hypotheses derived from prior research, case studies provided a valuable means of exploring novel insights by producing in-depth descriptions and interpretations of failure sharing over a relatively short period (e.g., Hays, 2003; Pratt, 2009). This method enabled me to develop a thorough understanding of failure sharing within a real-life context by drawing on multiple sources of evidence (Yin, 1994).

Given my expectation of uncovering "new and unusual interactions, events, explanations, interpretations, and cause-and-effect connections" (Hays, 2003: 218-219), this method was particularly well-suited. A notable advantage of the case study method is its ability to help researchers demonstrate empathy toward participants in vulnerable positions (Eisenhardt, 1989;

Silverman, 2013). This feature is especially significant for the current research, as failure sharing is recognized as an emotional, sensitive, and potentially risky process (Carmeli & Gittell, 2009). By fostering rapport with participants, this approach facilitated their willingness to disclose underlying reasons for engaging in—or avoiding—failure sharing. Additionally, the case study method enabled a deep exploration of consultants' lived experiences when confronting failures, allowing me to "get under the skin" of participants and gain profound insights into their perspectives.

A central concern in applying case studies in management research relates to the generalizability of their findings to other contexts. Although case studies are widely used in management research, they are often criticized for their limitations (George & Bennett, 2005). In particular, the ability to generalize findings beyond the specific empirical base is frequently called into question. This critique highlights a perceived weakness of case study research compared to quantitative methods, as selection bias may either overstate or understate the relationships being studied. Additionally, case studies are often viewed as limited in their ability to capture the universality of a phenomenon across different populations and contexts.

However, qualitative research scholars challenge these arguments, emphasizing that generalization depends on the epistemological perspective and the definition of generalization itself (e.g., Alvesson & Sköldberg, 2017; Tsoukas, 1989). Alvesson and Sköldberg (2017) contend that focusing solely on surface-level regularities restricts the applicability of patterns observed in one context to others. Instead, they advocate for examining latent patterns and tendencies that underlie and implicitly shape surface phenomena. By doing so, it becomes both feasible and desirable to broaden the empirical scope within a specific context, potentially allowing case study findings to be generalized across diverse situations and settings. Moreover, in the present research, the use of a hybrid approach that combines qualitative case studies with quantitative survey-based methods significantly mitigates concerns about generalizability.

Study 1

Empirical setting

In the broader empirical context of KIBS, two consulting firms were selected for participation in Study 1. These firms were chosen for their explicit commitment to excellence, positivity, and success, though they approached these values in different ways. One firm emphasized the competence and expertise of its consultants as the key to success, while the other focused on cultivating a culture of positive emotions and feedback. This distinction allowed for an examination of how differing approaches to success and positivity might influence attitudes toward failure and its sharing.

Both firms shared comparable characteristics in terms of size, market position, reputation, and profitability. They offered complex business services and were recognized for their innovative, entrepreneur-driven approaches and strong market brands, making them vulnerable to failures—particularly in client engagements that could potentially damage their reputation. However, such failures also presented valuable opportunities for learning and improvement. A detailed discussion of the specific characteristics of these two firms will be presented in Chapter 4.

Data sources

In employing a hybrid method, utilizing multiple data sources—such as different types of collected data and their combination—provided a comprehensive understanding of the dynamics within the researched context (Jick, 1979). To align with the objectives of Study 1, which aimed to investigate individual-level factors influencing failure sharing and their interaction with the broader organizational context, the methodology included interviews, group observations, and document analysis of employee handbooks and strategic frameworks. This approach provided dense and rich data on how professionals situated within a KIBS context deliberate on whether to share failures with others.

Interviews

To explore professionals' concerns about sharing failures with peers, I conducted 24 semi-structured interviews across the two consulting firms in collaboration with a colleague. Conducting interviews in a commercialized setting, where failures can carry potential negative implications, often involves

managing impressions and regulating both personal and organizational images. This can lead to defensiveness and social desirability biases. To mitigate these risks, several precautions were taken. First, strict assurances of anonymity were provided for all quotes. Second, the interviews were carefully prepared, and a critical analysis approach was adopted to identify and address potential inconsistencies in the collected narratives. Third, to create a more open and secure interview environment, discussions about failures were supplemented by exploring consultants' experiences in sharing their successes. This balanced approach aimed to promote a comprehensive understanding of their sharing behaviors, encompassing both positive and challenging professional experiences. Fourth, employing a semi-structured interview design allowed consultants to shape the direction of the interviews. As rapport developed, consultants became increasingly willing to articulate their thoughts and feelings regarding the factors influencing their decisions to share or withhold information about both successes and failures. This approach facilitated a nuanced exploration of the circumstances and considerations underlying their sharing behaviors.

The selection of interviewees aimed to ensure diversity in terms of tenure, age, experience, gender, and roles (see Chapter 4, Appendix A, Table A1). Interviews were structured around four distinct categories: (a) sharing a success, (b) sharing a failure, (c) not sharing a success, and (d) not sharing a failure. Before the interviews, consultants were asked to envision specific work scenarios for each of the four categories. The interviews then focused on exploring the characteristics of these situations, the emotions experienced (both initially and during the sharing process), the consultants' concerns and beliefs that influenced their decisions to share or withhold information, and their perceptions of the outcomes resulting from those decisions. The objective of these interviews was to establish trust with the consultants, allowing us to explore the psychological and contextual factors that shape their approach to failure sharing.

Observations

To gain additional perspectives, I complemented the empirical data gathered from the interviews with observations. In cases where the phenomenon under investigation is complex, such as in this study, the interview setting may not fully capture the authentic nature of the consultant or the broader social

reality (Alvesson & Sköldberg, 2017). Augmenting interviews with observations provides the advantage of capturing more comprehensive aspects of consultants' social reality. For instance, observing how consultants communicate, interact, and approach failure sharing in real-life settings within their natural social environments can uncover causal relationships that may not be immediately apparent. In this study, I conducted audio-recorded and verbatim transcriptions of two team meetings at each consulting firm. These meetings, which included discussions about past and upcoming client interactions, offered valuable insights into how experiences and insights were shared among team members.

Documents

To gain a deeper understanding of the organizational cultures at the two case study firms and how consultants engage with failure sharing, I examined internal documents that articulate various practices, values, and norms. At the PR consulting firm (ComCon), a key document reflecting these aspects was the employee handbook titled "10 Reasons to Work at ComCon," authored by the CEO as a comprehensive summary of the firm's culture. Widely circulated among current and prospective employees, this handbook encapsulates the organizational ethos. In contrast, at the leadership development consulting firm (LeadCon), the primary document defining its culture was the "LeadCon Strategic Framework," developed through a collaborative process led by the partner group. This framework provides the foundation and operational guidelines across roles and functions at LeadCon, serving as a reference for daily operations. Additionally, customer proposals collected from LeadCon highlighted the firm's cultural philosophy. These documents offered essential insights into the organizational cultures in which consultants navigate failure and consider sharing their experiences. Chapter 4 provides a detailed exploration of the cultures at these two consulting firms.

Data analysis

My analytical approach was primarily abductive, involving an iterative process that moved between the phenomenon under study, my pre-existing understanding, relevant literature, and the empirical data (Alvesson & Sköldberg, 2017). The goal was to identify patterns and insights into how consultants in the two firms made decisions about sharing failures while also

exploring the antecedents influencing this process. Using NVivo 11 qualitative research software, I analyzed all interviews, observations, and documents. The inclusion of observations and documents enriched the analysis, providing a more nuanced understanding of the consultants' shared reality in which failure sharing occurred.

The abductive data analysis was conducted in three broad steps, which I will illustrate using the example of consultants' negative emotional reactions to failures. Chapter 4 presents a detailed account of the analysis and findings from the case study.

In the first step, I familiarized myself with the data by sequentially reading all the interview transcripts to uncover what the consultants said about their emotional responses to perceived failures. While the literature on error management and learning from failure informed my initial understanding, I refrained from applying any specific theoretical framework at this stage.

In the second step, I adopted a broad analytical focus on negative emotions, deliberately avoiding the use of any theoretical concepts as a priori codes. Instead, I engaged in open coding, concentrating on passages where participants articulated how they felt about themselves or the situation. For instance, one LeadCon consultant shared, "When sharing a failure, I was struck by a strong doubt in myself that emerged in my thoughts, how bad I was as a consultant," while a ComCon consultant noted, "I feel confident as a presenter, so I personally felt okay [as the presentation failed]. I focused on the content of the presentation; I had failed to understand the needs of the target group. I discussed this with my boss. [...]."

In the third step, I turned to the literature for guidance on the emotions expressed, particularly social emotions. This exploration led me to the literature on negative self-conscious emotions (e.g., Tracy, Robins, & Tangney, 2007), which has extensively examined these emotions. I became familiar with the phenomenology of shame and guilt: shame is often tied to one's identity, leading to behaviors such as hiding and blaming, whereas guilt is linked to one's behavior, encouraging acknowledgment and attempts at repair. Returning to the data, I discovered that I could categorize the emotions theoretically according to these two dimensions. It became clear that the emotions participants expressed were not simply captured by the labels they used but rather by the underlying emotional experiences they described. For

example, the expression from the LeadCon consultant above was coded as reflecting shame, while the statement from the ComCon consultant was coded as expressing guilt.

Finally, by organizing the codes based on the concepts of shame and guilt from the self-conscious emotions literature, differences between the two firms emerged. This analytical step revealed that failure in LeadCon was more strongly linked to shame, while in ComCon, the emotions were more closely associated with guilt. This insight guided the next phase of analysis, where I examined how consultants perceived their organizational culture, including collective norms, values, and beliefs. For example, in LeadCon, a consultant shared, "Shame can be an obstacle [for sharing] here. I failed with an assignment… both with a customer and with a colleague. I really haven't shared it with many. … I might realize that, truly, I should be somewhere else since how we behave is contrary to our deeper values of being competent, generous, and successful." In contrast, at ComCon, expressions were more like, "Some feelings of guilt, and your self-confidence gets hit—'Am I as good at this as I should be?' … I talked a lot with those I collaborated with and how it felt during the entire process. We talked: 'What do we think about this? What went wrong? How can we avoid it happening again? What should we think of next time?'" Based on these statements, I conducted a similar iterative process (as with the expressed emotions), which led me to explore the literature on organizational mindsets (e.g., Canning et al., 2020; Murphy & Reeves, 2019). This literature helped establish plausible theoretical connections between organizational mindsets and the emotions of shame and guilt. For instance, in organizations with a fixed mindset, emotional reactions to failure tend to be more intense and are often characterized by feelings of shame.

My abductive data analysis, utilizing a "working backward" approach—tracing behavior through emotions to organizational culture—which culminated in the development of a conceptual model (presented in Chapter 4). The model visualizes the complex relationships among the key factors influencing professionals' decisions regarding failure sharing, providing a clearer understanding of how emotions, organizational mindsets, and other psychological and organizational factors are involved in these decisions.

3.2.2 Phase 2—Deductively testing the conceptual model

The subsequent deductive research phase, following the qualitative case study (Study 1), aimed to further explore and test the findings through two sequential quantitative studies. First, an online study (Study 2a) was initiated to quantitatively test the variables identified in the conceptual model developed from the exploratory case study. Conceptual models serve as intermediary tools that map theories to empirical data (Van de Ven, 2007). In the second step, Study 2b aimed to replicate these findings in a real-life organizational context to enhance ecological validity.

Studies 2a and 2b employed a variance-based approach (Van de Ven, 2007) using a hypothesis-testing quantitative survey method to rigorously test the conceptual model. This methodological choice was informed by insights gained from the abductive research phase, as well as by previous research in error management, failure learning, and related fields. The approach has demonstrated its efficacy in facilitating reliable inferences and generalizing results within acknowledged bounds of error and bias (Marshall & Rossman, 2014).

It is acknowledged that deductive hypothesis-testing surveys have limitations, such as their potential to overlook complex social dynamics, entertain alternative explanations, or reveal unexpected phenomena beyond the scope of initial hypotheses. These limitations were addressed during the qualitative abductive phase, mitigating potential drawbacks. The hybrid approach, integrating qualitative and quantitative methods across the two research phases, was carefully aligned with the specific goals of each study. This methodological synergy enhanced the robustness and comprehensiveness of the research strategy, allowing for a nuanced exploration and validation of the factors influencing individuals' failure sharing.

Study 2a—Empirical setting

To efficiently reach a substantial number of participants, I utilized Prolific, an internet-based platform known for online experiments and behavioral research (Palan & Schitter, 2018; Peer, Brandimarte, Samat, & Acquisti, 2017). The sample recruited via Prolific consisted of full-time employed individuals (n = 149) from diverse knowledge-intensive services industries, all with at

least a college education, residing in either the United States or the United Kingdom, and having English as their primary language.

Testing the conceptual model on a U.S. and U.K. sample, which differed somewhat from the sample of the two Swedish consulting firms in Study 1, offered several advantages. It allowed for the validation of the hypotheses in a broader context, beyond Swedish boundaries, and encompassed employees from different knowledge-intensive organizations. This approach aimed to assess the generalizability of the findings and evaluate the validity of the hypotheses across varied cultural and professional settings.

Study 2b—Empirical setting

To validate the findings from Study 2a within an authentic organizational setting, a sample of employees (n = 385) was recruited from a third consulting firm, specifically the Swedish branch of one of the "Big Four" global accounting firms. The selection of this firm was based on several considerations:

- The firm operates as a classic professional services firm (Von Nordenflycht, 2010), offering a complex business service environment that aligns with the study's focus.

- The organization's size provided sufficient statistical power for robust research outcomes.

- A longstanding partnership existed between my research institute and the accounting firm.

- Key stakeholders within the organization demonstrated a strong commitment to collaboration and recognized the value of partnering with a research institute.

In summary, this empirical setting offered a solid foundation for ecologically testing the conceptual model. Further details of the empirical context will be elaborated upon in Chapter 7.

Study 2a and 2b—Data collection and potential methodological shortcomings

I collected quantitative data using two hypothesis-testing, cross-sectional, scenario-based survey studies. Scenario-based surveys offer several benefits for investigating failure sharing among professionals in real-life work contexts. First, they provide a realistic and contextualized environment where participants can envision themselves facing failure and failure-sharing dilemmas. Second, by presenting hypothetical scenarios, these surveys allow predictions about how participants might feel, behave, and make decisions regarding failure sharing. Third, they enable the exploration of ethical dilemmas and decision-making in situations where real-life experimentation would be impractical or unethical. This is particularly relevant in the current study, which involves sensitive topics and potential harm to participants. Fourth, scenario-based surveys facilitate the exploration of complex concepts and relationships, such as the emotional dimensions of failure sharing, which may not be easily observable in real-world settings. These scenarios can be designed to probe nuanced aspects of individual behavior or organizational dynamics. Fifth, findings from scenario-based surveys contribute to generalizable knowledge by examining responses across diverse samples or contexts. Finally, these surveys offer insights into the cognitive processes involved in decision-making about failure sharing, helping to understand the underlying mechanisms driving these decisions.

The online study (Study 2a) aimed to test the associations within the conceptual model using a sample of employees with relevant work experience. Prolific provided a platform for prompt feedback on whether the conceptual model, translated into testable hypotheses, was supported. To achieve a statistical power of over 80% for correlational effect sizes of 0.25 (derived from prior research), data were collected from 149 participants. Participants were presented with a scenario depicting a work situation in which they experienced a public work-related failure (see Chapter 6, Figure 6.2). Following the scenario, participants completed a self-report questionnaire assessing their emotions, intended actions, and the reasoning behind their intended actions.

Second, to validate the findings from the online study (Study 2a) in a real organizational setting, a large-scale survey study (Study 2b) was conducted with auditors employed in a Swedish accounting firm (n = 385). The design

and content of the large-scale survey mirrored that of Study 2a, with additional contextual adaptations discussed further in Chapters 6 and 7. The questionnaires predominantly utilized established measures from prior research, reflecting the constructs included in the model. However, certain measures had to be newly developed, particularly for constructs introduced in this research (e.g., failure sharing), or existing measures had to be refined due to their failure to meet psychometric standards when applied in this context. Detailed descriptions and analyses of Studies 2a and 2b are presented in Chapters 6 and 7. Cross-sectional survey data from both studies were analyzed using quantitative research software, specifically SPSS v. 29 and STATA 16.1.

When utilizing self-report surveys, as in Studies 2a and 2b, several potential limitations should be acknowledged. First, self-reported data can be influenced by social desirability bias, as observed during the qualitative data collection phase. Social desirability bias refers to respondents' tendency to answer questions about sensitive topics in a manner that aligns with societal norms and values (Krumpal, 2013). As a result, respondents may underreport socially undesirable behaviors while overreporting socially desirable ones. In contexts characterized by high performance and success, such as knowledge-intensive business services, professionals may feel compelled to present themselves favorably, especially when discussing failure sharing. Failure to mitigate social desirability bias could distort and undermine the accuracy of survey estimates. To address this issue, survey items assessing potential social desirability concerns (Hart, Ritchie, Hepper, & Gebauer, 2015) were included and analyzed. Respondents scoring high on social desirability scales were identified, and their responses were evaluated accordingly and, in some cases, excluded (see Chapters 6 and 7).

Furthermore, cross-sectional surveys inherently limit the ability to establish definitive causal relationships among variables (Spencer, Zanna, & Fong, 2005). Ideally, the variables in the conceptual research model would be measured across multiple time points to ascertain temporal sequences. Implementing a longitudinal approach within real organizational settings is often challenging due to practical constraints and potentially low response rates. Consequently, cross-sectional surveys remain a common methodological choice in management research (Bell, Bryman, & Harley, 2022), as discussed

further in Chapter 8. The respondents were also assured that there were no correct or incorrect answers and were encouraged to respond honestly.

Finally, when utilizing self-report data for numerous variables in a study, there is a risk of common method bias. Common method bias refers to "variance that is attributable to the measurement method rather than to the constructs the measures represent" (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003: 879). This measurement error can undermine the validity of the conclusions (Conway & Lance, 2010). For example, if a respondent tends to answer questionnaires in a compliant manner, they are likely to respond similarly across different measures, regardless of the content. As a result, the measures could appear correlated even if the underlying constructs are not. Method-based covariance can also arise when different types of measures are taken at the same time, as the respondents' states may create similarities in their responses independent of the constructs themselves.

To mitigate common method bias, several measures can be implemented when constructing and analyzing survey studies. Confirmatory factor analysis and multiple-method factor approaches are considered particularly advantageous (Podsakoff et al., 2003). In analyzing both survey studies, exploratory factor analysis was used to identify potential sources of common method bias and to ensure the convergent and discriminant validity of the different constructs. These analyses are detailed in Chapters 6 and 7. I argue that these implemented measures have significantly strengthened the methodological rigor of the study.

Next, I present the three forthcoming empirical studies. In Chapter 4, I introduce the qualitative case study conducted in two consulting firms (Study 1). This study is a co-authored article published in a special issue of the *Academy of Management Discovery* journal, focused on "errors in organizations." As a result, the article uses the term "errors" instead of "failures," although it is the same definition as applied to failures in this thesis. In Chapter 6, I present the results of the quantitative online study (Study 2a), and in Chapter 7, I detail the findings from the ecological replication (Study 2b). These quantitative findings are then discussed in Chapter 8.

Chapter 4

Failure Sharing in Consulting Firms: A Case Study on Positivity´s Influence

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SHARING ERRORS WHERE EVERYONE IS PERFECT: CULTURE, EMOTIONAL DYNAMICS, AND ERROR SHARING IN TWO CONSULTING FIRMS

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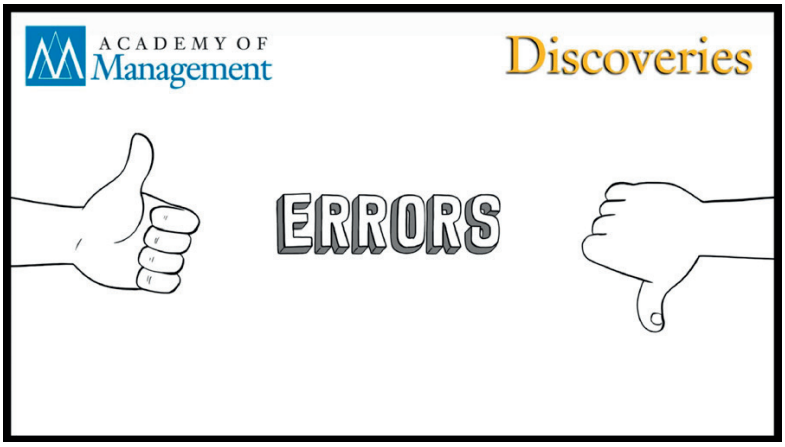

Providers of complex business services often focus on creating positive experiences to manage their clients' impressions and their consultants' self-esteem. This, however, creates challenges to sharing errors. Based on case studies of two consulting organizations, both explicitly committed to positivity, we explore how consultants make decisions about error sharing. We discover two versions of positivity (trait based and experience based), which are coupled with two different organizational mindsets (fixed vs. growth). These pairs shape an organization's view of errors, and they create different cultural contexts for error sharing. With trait-based positivity and a fixed organizational mindset, the predominant emotion when committing errors was shame; only costs of error sharing were seen, and errors were shared only with a small group of trusted peers. With experience-based positivity and a growth organizational mindset, the predominant emotion instead was guilt; both costs and benefits of error sharing were considered, and errors were shared more widely. These findings contribute to research on error management by laying the ground for further theorizing about the relationship between organizational norms and values, emotions, cost–benefit considerations, and decisions about error sharing. They also hold implications for managers regarding how to emphasize the positive without muting error sharing.

> We want to create a positive mood in the organization. This means that we do not share errors, because that could affect the mood negatively. (CC9)

> We should be perceived as successful. Problems are not natural here. We are positive and successful. There should be a facade that is positive and wise. We are consultants and we can handle all challenges. (LC8)

Errors and failures represent a threat to organizations and individuals, but they are also an important source of learning and development (Argyris, 1993; Sitkin, 1992). The literature on error

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Author's Voice:
What motivated you to undertake this research?

management has, for some time, argued that organizations—to minimize the negative effects of errors and maximize their positive effects—should engage in error management, including error detection, open communication about errors, damage control, and learning (Frese & Keith, 2015). The current paper focuses specifically on the communication of errors, as this has been suggested to be the most important error management practice (van Dyck, Baer, Frese, & Sonnentag, 2005) and a key aspect of an error management culture (EMC) (Frese & Keith, 2015; Gronewold, Gold, & Salterio, 2013; van Dyck et al., 2005). However, as illustrated by the opening quotations from the organizations we studied, this is not always easy to achieve, especially in organizations that provide complex business services. They often strive for positivity in order to manage their clients' impressions (Subramony & Pugh, 2015) and consultants' self-esteem and commitment (Alvesson & Robertson, 2006). Positivity creates challenges to sharing experiences of error, as these are typically seen as negative events. These challenges, however, are not yet fully understood.

Despite the importance of error communication to the error management process, the current understanding of the mechanisms through which an EMC shapes decisions about error sharing, and how differences in EMC may be understood more specifically, is limited (Frese & Keith, 2015; Keith & Frese, 2011; Sutcliffe, Vogus, & Dane, 2016; Zhao & Olivera, 2006). This has led to calls for further investigations into the micro-dynamics of EMCs (Keith & Frese, 2011: 150). The current study aims to address this and add to previous research, in three ways.

First, we move beyond the focus in previous research on error reporting as a formal act toward managers or supervisors (Zhao & Olivera, 2006: 1012). While this formal reporting is an important part of the error management process, the consequences of errors might be mitigated and learning from them derived by sharing them more broadly with peers (van Dyck et al., 2005). Against this background, we focus on "error sharing" as the conscious and voluntary disclosure of self-made errors to others in the organization. Error sharing thus includes error reporting, but it goes beyond it by including communicating errors to peers, which may or may not have the primary goal of error management.

Second, we specifically focus on the emotions involved in error sharing, and how these are intertwined with individual and shared cognition (organizational culture). In line with previous research (e.g., Zhao & Olivera, 2006), we conceptualize the error-sharing decision as shaped by both cognition and emotions. The emotional dimension of error sharing has, however, been studied empirically only to a very limited extent.

Third, we extend the context of error management research from high-hazard organizations (such as health care and nuclear power plants) to complex business services, where the value of error management is less obvious and where error management faces different challenges related to employees' simultaneous needs to manage both impressions and errors (Gronewold et al., 2013). These services are characterized by intangibility, heterogeneity, and co-production between client and consultant (Parasuraman, Zeithaml, & Berry, 1985). This induces ambiguity regarding the value provided by these services, and it makes them highly contingent on the consultant's ability to convey the impression of professionalism, competence, quality, and value to the client (Alvehus, Avnoon, & Oliver, 2021; Alvesson, 1993; Clark, 1995; Dinovitzer, Gunz, & Gunz, 2014; Harrington, 2017). Continuously projecting the image of the infallible professional puts the consultant in a vulnerable position (Sturdy, 1997), and it creates a challenge to the firm to support consultants' self-esteem and impression management (Alvesson & Robertson, 2006).

Studies have shown that one way to do this is by fostering an elite identity that emphasizes consultants' unique and superior performance and status (Kipping, Bühlmann, & David, 2019). This contributes to self-esteem, and fosters positive emotions, which previous research has found to be important in the service customer relationship (George, 1991; Subramony & Pugh, 2015). Consulting firms have consequently been shown to focus their socialization on emphasizing positivity (Kaiser, Muller-Seitz, & Creusen, 2008). In this paper, we explore error sharing in two consulting organizations that provide complex business services. Both focus on positivity, but they do so in different ways, creating different emotionality, cost–benefit considerations, and error-sharing behaviors.

A managerial focus on the positive to promote self-esteem, commitment, and performance is in line with key arguments in positive organizational scholarship (Cameron & Spreitzer, 2012; Dutton, Glynn, & Spreitzer, 2008). This approach argues for a shift in focus away from "problems, threats, and weakness" and toward "strengths, capabilities, and possibilities." It has inspired both research

and management practices and generated normative conclusions such as:

> The bottom-line message is that organizational members should consider cultivating positive emotions in themselves and others, not just as end-states in themselves, but also as a means to achieving individual and organizational transformation and optimal functioning over time. (Fredrickson, 2003: 164)

This focus on the positive has the support of research, and it is attractive to contemporary organizations. However, it has also been criticized for muting and pathologizing negative events and emotions, which are a natural part of life and an important source of learning (Argyris, 1994; Fineman, 2006). A key question for error management in the context of complex business services thus becomes how focusing on the positive and supporting consultants' self-esteem and impression management may be combined with a focus on error management.

In line with Zhao and Olivera (2006: 1013), "errors" in the current study are defined as "individuals' decisions and behaviors that (a) result in an undesirable gap between an expected and a real state and (b) may lead to actual or potential negative consequences for the organizational functioning that could have been avoided." This definition highlights the subjective nature of errors, and it is well suited to the specific context of complex business services. While most error management research has conceptualized errors as deviations from an explicit (procedural) norm, in many contexts, such norms are missing. Organizations that thrive on creativity and innovation, such as providers of complex business services, often lack specific and well-defined procedural norms. Instead, adapting to the specific needs of each situation and client is viewed as characteristic of professional behavior (Kubr, 2002). This makes "improvisation" a key attribute of a successful professional (Furusten, 2009; Harrington, 2017). In this context, the "desired state" against which to define an error is elusive and subjective. An error in the current study is thus defined by the professional's perception of it.

PREVIOUS RESEARCH ON ERROR REPORTING AND POSITIVITY CULTURES

Error reporting has been viewed in previous research as a discretionary and potentially risky behavior. This implies that it involves a deliberate decision-making process that is affected by both individual and contextual factors (Zhao & Olivera, 2006). Zhao and Olivera (2006) suggested that, when individuals experience an error, they engage in a situation assessment to determine whether to disclose the error. This assessment has two dimensions. It is a cost–benefit evaluation that is shaped by emotional reactions.

In line with Zhao and Olivera (2006), we also acknowledge that "organizational culture"—the system of shared norms, values, and practices in an organization—shapes this decision-making (Lee, Yang, & Chen, 2015; Zhao & Olivera, 2006). In the following, we first review research on the relationship between error reporting and organizational culture. We then turn to a review of research on the considerations made by individuals when they make decisions about error sharing—that is, the cost–benefit evaluation and how this is influenced by emotional reactions.

Culture

Previous research on error management and error sharing has used the concept of climate or culture to discuss error management at an organizational level (Keith & Frese, 2011; van Dyck et al., 2005; Vogus & Sutcliffe, 2007; Vogus, Sutcliffe, & Weick, 2010). While culture is typically viewed as referring to values, norms, and practices (House, 2004), research on EMC has focused on the "practice" aspect of culture. Van Dyck et al. (2005) thus defined "error management culture" as "organizational practices related to communicating about errors, to sharing error knowledge, to helping in error situations, and to quickly detecting and handling errors" (van Dyck et al., 2005: 1229).

Previous research has shown that organizations may range from high EMCs to error-averse cultures (Gronewold et al., 2013; van Dyck et al., 2005), defined by employees' engagement in error sharing and how those committing errors are treated. In a "high" EMC, people openly and freely talk about their own and others' errors, and errors are greeted with acceptance as long as they create learning and are not repeated. "Error-averse cultures," on the other hand, are characterized by not talking about errors, blaming the person who acknowledges or causes an error, and punishing or excluding them (Gronewold et al., 2013; Homsma, van Dyck, De Gilder, Koopman, & Elfring, 2007; van Dyck et al., 2005). Gold, Gronewold, and Salterio (2013) found that a high EMC results in greater willingness of auditors to report a self-discovered error compared to an error-averse culture. Other studies of professional services firms show similar positive effects of high EMC on consultants' tendency to communicate errors with others (e.g., Grohnert, Meuwissen, & Gijselaers, 2017; Gronewold et al., 2013).

One limitation of previous research on EMC is, however, its focus on practices to the neglect of the

broader values and norms underpinning those practices. As the sharing of errors is typically viewed as a key aspect of EMC, this concept is of limited value for understanding variations in the sharing of errors and the mechanisms behind differences in error-sharing behaviors in different organizational contexts. This raises the question of what values and norms in the organization enable (or hinder) the sharing of errors and thus support (or hinder) error management. Two research streams in relation to organizational culture become salient in the context of complex services and their focus on positivity. They are research on positivity and research on organizational mindsets regarding the fixed or developmental nature of talent and ability, as these have been seen as shaping the normative context of error sharing.

Positivity. Positivity is a broad normative orientation anchored in research fields such as positive psychology, positive organizational scholarship, and positive organizational behavior. It may be understood as a three-pronged phenomenon comprising a focus on positive experiences and feelings (e.g., happiness, joy, flow), positive individual traits (e.g., love and vocation, courage, self-esteem, wisdom, and forgiveness), and organizations that enable and nurture these feelings and traits in the pursuit of organizational virtues (e.g., responsibility, civility) (Fineman, 2006; Peterson & Seligman, 2003). This approach is a reaction against a focus on negative deviations and thus engagement with problems, error detection, harm mitigation, illness, and "the worst things in life" (Fineman, 2006: 271).

Positive organizational scholarship identifies and shows the benefits of "positivity" in several areas, including creativity, interpersonal trust, productivity, health, stress management, and motivation (Cameron, 2008). Such findings have led to conclusions that organizations should focus on positive deviances, including individual positive traits and experiences rather than negative deviations, including errors (Fredrickson, 2003: 164). These normative conclusions have become popular among organizational consultants and HR practitioners, and this has spurred numerous management concepts built on the ideas of positivity. These include appreciative inquiry, empowerment programs, emotional intelligence programs, and fun-at-work activities (Fineman, 2006). Furthermore, as illustrated in the introduction to this paper, organizations delivering complex services often pursue such a general agenda of positivity, although exactly what this entails has seldom been studied (Kaiser et al., 2008).

Critics, however, have pointed out that the implicit neglect of negative experiences and feelings flowing from the well-intentioned focus on the positive creates unintended consequences such as amplifying impression management and stigmatizing errors as potential personal flaws. This impairs sharing and learning from errors (Bolino, Klotz, Turnley, & Harvey, 2013; Fineman, 2006). As argued by Argyris (1994: 79):

> In the name of positive thinking … managers often censor what everyone needs to say and hear. For the sake of "morale" and "considerateness," they deprive employees and themselves of the opportunity to take responsibility for their own behavior by learning to understand it.

A strong norm of positivity is said to induce a state of "antilearning" in organizations (Argyris, 1994). In the same vein, Armstrong (2009) argued that a "failure-phobic" attitude in the field of organizational development has represented a threat to learning and development. This makes positivity a potentially inimical normative context for error sharing. The relationship between positivity and its different implementations and error sharing, however, remains to be further explored empirically.

Fixed versus growth organizational mindset. The normative context of error sharing is further shaped by the organizational mindset. Canning, Murphy, Emerson, Chatman, Dweck, and Kray (2020: 627) identified the "organizational mindset" as "people's perceptions of the organization's belief about the fixed or developmental nature of talent and ability." It is a core belief that shapes organizational culture, including the propensity to engage with errors. They identify two contrasting organizational mindsets—fixed and growth—which create different normative contexts for error sharing (Canning et al., 2020; Dweck, 1986; Dweck & Leggett, 1988; Heimbeck, Frese, Sonnentag, & Keith, 2003).

A "fixed organizational mindset" is founded on the core belief that individuals' talent and abilities are fixed, inherent qualities that cannot be developed much. This drives cultural values that celebrate genius, brilliance, and achievement. It promotes behaviors that strive toward recognition for performance and competition with colleagues for star status (Canning et al., 2020; Murphy & Dweck, 2010). It also reduces motivation to engage with errors, as errors in this context may cast doubt on employees' abilities (Canning et al., 2020; Dweck, 1986; Dweck & Leggett, 1988).

A "growth organizational mindset," on the other hand, is founded on the core belief that talent and ability can be developed through hard work and persistence. This drives cultural values that reward learning and development and value errors as learning opportunities. It promotes behaviors such as engaging in learning from one's own and others'

errors (Canning et al., 2020; Dweck, 1986; Dweck & Leggett, 1988).

Situation Assessment

Having discussed the cultural context of error sharing, we now turn to the individual's decision-making, which is understood as taking place within the context of those organizational beliefs, values, and norms, as these will shape the individual's interpretation of and reactions to discovering an error. Following Zhao and Olivera (2006), we assume that the situation assessment underlying the decision to share errors comprises a cost–benefit evaluation that is shaped by the emotional reactions to committing an error.

Cost–benefit evaluation. The "cost–benefit evaluation" of decisions about error sharing refers to people's perceived costs of sharing (e.g., impaired image) and its benefits (e.g., learning) (Gronewold et al., 2013; Zhao & Olivera, 2006). Previous research has shown that people tend to not report an error if the perceived costs outweigh the benefits (Morrison & Phelps, 1999). Even if the individual sees the benefit of sharing with the group or organization, they may be reluctant to talk about the experience because of excessive individual costs (Baker & Norton, 2001; Cannon & Edmondson, 2001; Uribe, Schweikhart, Pathak, Marsh, & Fraley, 2002).

The "costs of sharing" include material costs, damage to one's image, effort costs, economic costs, and reputation costs (Zhao & Olivera, 2006). "Material costs" include people's fear of concrete costs related to themselves, such as monetary penalties, suspension, rewards deducted by the organization's incentive system, lack of career development, missing assignments, and job loss. "Damage to one's image" is about the fear of being perceived as less competent and less attractive in the eyes of others. "Effort costs" are about the perception that reporting errors consumes time and energy. When people find that reporting errors can increase their workload, it is likely that they will avoid it (Chiang, 2001; Uribe et al., 2002). "Economic costs" refer to financial consequences that the group or organization may suffer if the error becomes public—for example, by losing a client. "Reputation costs," finally, are about the person's fear that errors will adversely affect the team's or organization's standing.

Against such costs of sharing errors, individuals weigh potential benefits. These include sustaining self-image, personal learning, group learning, and organizational learning (Zhao & Olivera, 2006). "Sustaining self-image" is about the motivation to share an error if it confirms or strengthens self-image of, for example, being honest or altruistic (Pinder, 1998). Furthermore, people are more likely to report their own errors if they believe that this will benefit "personal learning" (Barach & Small, 2000). People can also be motivated to report errors if they feel that this will stimulate "learning at the team or organizational level."

Emotional reactions. Previous empirical research on reporting errors has primarily focused on the cost–benefit evaluation, so the emotional aspects of decisions about error sharing have mostly been discussed on a conceptual level (e.g., Zhao & Olivera, 2006). Error management research has shown that people inevitably perceive errors negatively, inducing emotions such as anxiety, anger, guilt, shame, and sadness (Carmeli & Gittell, 2009; Frese & Keith, 2015; Zhao, 2011). Zhao and Olivera (2006) thus proposed that emotional reactions are as important to understanding individuals' situation assessment in error sharing as the cost–benefit evaluation. Emotions, they argued, can affect behavior directly, but, more often, they have an indirect effect on the perceived costs and benefits of error sharing. The relationship between the broader organizational culture and the emotions stirred by error has, to the best of our knowledge, not been explored in previous research.

Zhao and Olivera (2006), in a conceptual paper, identified four potential emotions that may affect error sharing. The first is *fear* of an unpleasant or harmful outcome that individuals might not escape or avoid. This is said to create a pessimistic mode and thus draw attention to the costs rather than the benefits of sharing. Fear is also likely to induce flight from a problem rather than making efforts to deal with it (Zhao, 2011). Second, individuals may feel *embarrassed* by exposing the error to the public. This rather transient emotion is said to increase attention to socially desirable behaviors, which often include the benefits of sharing errors. Third, individuals may feel *shame*. This powerful emotion involves a negative evaluation of the self, based on a felt discrepancy between a desired and a perceived self. This may be experienced as feeling small, worthless, and powerless, and it can create a desire to hide or escape (Stoeber, Harris, & Moon, 2007; Tangney & Dearing, 2003). Shame is said to increase the salience of the costs of error sharing, especially costs related to damage of one's image (Zhao & Olivera, 2006). Fourth, feelings of *guilt* may arise when errors are attributed to specific actions or behaviors that led to the error (rather than an inadequate self). The experience of guilt may involve tension, remorse, and regret, and it may trigger desires to confess, apologize, or repair (Tangney & Dearing, 2003). Guilt may increase the salience of the benefits of error sharing as a way to preserve a positive

self-concept. Besides these four emotions, Zhao (2011) found that errors may trigger *sadness*, "resulting from the perception that a goal has been lost, without the possibility of restoration given one's current abilities" (Lench, Tibbett, & Bench, 2016: 13). Sadness can induce passivity, which is not likely to motivate restorative action (Zhao, 2011: 455), but may help to understand the cause of the error.

Against this background, the current study aims to contribute to the understanding of the micro-dynamics of error sharing in complex service contexts where impression management motives drive a focus on positivity, which may create an inimical context for error sharing. More precisely, the aim is to better understand the underlying mechanisms of decisions about error sharing (especially emotional dynamics) and how these interact with the broader organizational culture (including positivity and organizational mindset).

METHOD

Case Study Approach

Error sharing is an emotional and sensitive process (Carmeli & Gittell, 2009; Frese & Keith, 2015; Zhao, 2011). Individuals may thus be unwilling and unable to report the general reasoning underlying decisions about error sharing. This makes qualitative case studies a suitable approach, as it enables us to build rapport and explore decisions about error sharing in a specific context (Eisenhardt, 1989; Silverman, 2013).

Fieldwork was carried out in two consulting firms in Sweden that have committed to ideas of "positivity." One was a communication consulting firm (which, in the following, will be called "ComCon"), and the other was an organization and leadership development consulting firm ("LeadCon"). A crucial criterion for choosing the companies was that both had strong explicit ambitions to create "positive" cultures with a focus on excellence, strength, and possibilities.

Both organizations were also sensitive to errors, especially errors in client projects that could negatively affect their reputations and yet could contain important opportunities to learn about what works and what does not in different client contexts. The errors experienced by consultants were mainly at the client interface, and they included episodes such as a workshop in which participants refused to follow the suggested design, so intended outcomes were not achieved, and an accidental breach of client confidentiality that threatened an important client relationship.

Data Collection

Data collection included qualitative semi-structured interviews, observations of team meetings, and reviews of internal documents. We carried out 24 semi-structured interviews of 45 to 60 minutes in which we explored respondents' reasoning about their choices to share experiences of error, and, to have a contrast, success with their peers. We conducted 13 interviews in ComCon and 11 in LeadCon. The semi-structured interviews gave the respondents opportunities to shape the conversation, and, as rapport developed, respondents revealed their perceptions and the conditions that influenced their reasoning and decisions to share or not to share errors and successes. Talking about sharing both errors and successes was a way to create conditions for openness in the interview, as this created a safer atmosphere for participation.

In selecting the sample, we aimed to include as much variety as possible in terms of tenure in the company, age, experience, gender, and roles (see Appendix A, Table A1). All interviews were audio-recorded and transcribed verbatim. The interviews focused on four different types of situations: (1) sharing of an experienced success; (2) sharing of an experienced error; (3) non-sharing of an experienced success, and (4) non-sharing of an experienced error. Before the interview, the interviewees were asked to think about a concrete situation representing each of the four types. The interviews then focused on exploring the nature of each situation, the factors and reasoning that led the respondents to the decision to share or not share, and the perceived consequences of that decision. In addition, we observed, audio-recorded, and transcribed two meetings at each organization. The meetings all had some elements of sharing experiences among participants. One meeting in each organization has been further analyzed for its error-sharing dynamics. The meeting analyzed in LeadCon was a two-hour project team meeting of 12 consultants. The objective of the meeting was to evaluate a service delivery to a client. In ComCon, the meeting analyzed was a one-hour weekly team meeting of six consultants, including the team manager.

In both organizations, we also collected documents that formulated and communicated the organization's espoused culture (especially values and norms). The most important document in ComCon was the employee handbook, titled "10 Reasons to Work at ComCon." It was written by the CEO, who referred to it as a summary of the culture of ComCon. This document was circulated among existing and prospective employees, and it formulated the culture in terms of 10 keywords/phrases: engagement, openness, efficiency, action, own responsibility, collaboration, customer value, learning, balance in life, and long-term orientation. These were thoroughly described in terms of the values they represented, as

Author's Voice:
How did the paper evolve and change as you worked on it

well as the actions through which they should be manifested. Consultants in the interviews often referred to this document as an accurate description of the culture.

In LeadCon, the key document formulating the espoused culture was the "LeadCon Strategic Framework," which had been developed in an inclusive process by the partner group to formulate the "basis and the agreed framework for us working at LeadCon in different roles and functions." It aimed to "serve as a framework and a reference for our everyday work" (LeadCon Strategic Framework). The document covered aspects such as mission, vision, business idea, and core values. Other documents collected in LeadCon included proposals to customers that presented the espoused culture and philosophy of LeadCon.

Data Analysis

The interviews with consultants were analyzed in a two-step process. In a first step, they were searched for factors that respondents considered in their reasoning regarding whether to share their error experiences. The episodes and observations were coded using NVivo11 coding software. Approximately 100 empirical subcategories emerged. These subcategories were then aggregated into the following empirical main categories: supporting (e.g., feedback culture, trust, formal arenas), hindering (e.g., internal competition, blaming, lack of routines and know-how), channels (e.g., e-mail, intranet, face to face), emotional reactions (e.g., fear, guilt, shame), coping (e.g., apologizing, problem-solving), type of error (e.g., lost customer assignment, failed client workshop), and consequences (e.g., learning, openness, image risk).

In the second step, we created three main theoretical categories inspired by previous research: (1) culture, (2) cost–benefit evaluation, and (3) emotional reactions. We then aggregated the relevant empirical categories generated in Step 1 into the theoretical categories and subcategories. For example, perceived costs and benefits such as learning and image risk were coded into "cost–benefit evaluation." As an indicator of the salience of experienced emotions in the two organizations, we counted the number of individuals mentioning the respective emotion in their reflection on whether to share an error. More individuals mentioning a specific emotional reaction was taken as an indicator that this emotion was more salient in that organization.

Author's Voice:
Was there anything that surprised you about the findings?

In the descriptions of the two organizations and their view and application of positivity, the interviews were complemented by impressions from the observed meetings and the internal company documents formulating the espoused values of the organization. Finally, we compared the two cases to identify similarities and differences. The findings from the data analysis are presented below.

FINDINGS

Case 1: ComCon

Context. ComCon, founded in 2000, had approximately 30 employees and a turnover of 4 million euros. It was one of the most successful companies in its industry. The organization had been profitable since the start and had received several awards, such as those pertaining to "most satisfied customers," "most satisfied employees," and "fastest-growing profitable company." The company operated mainly in the Swedish market and its services focused on media relations and lobbying. The mission was to increase the number of people involved in public debate on societal issues to support both democracy and social development.

Services were delivered mainly as projects, always staffed with at least two consultants to ensure knowledge transfer and learning. Each customer had a client manager appointed, and the projects were led by a project manager. The staffing process was decentralized; it took place in negotiations between the client manager, project manager, and consultant. Each consultant was accountable for their own utilization rate, which was followed up monthly by the CEO.

Culture and error-sharing practice. The CEO was strongly involved in building the culture of ComCon, and he viewed this as a key success factor of the organization. The company actively worked with what they called "a profitable kindness culture," which in its most condensed form was described as "wanting others well." A key underlying assumption was that, by creating positive experiences, employees would feel confident and be helpful to one another, cooperation would become more efficient, and creativity and quality would increase. In ComCon's employee handbook "10 Reasons to Work at ComCon," employees were reminded that they "have a responsibility to contribute to a positive mood," to "share their successes," and to "praise their colleagues." Positive feedback

from customers, so-called "customer bragging," was shared extensively to create positive energy:

> Successes are emailed to everyone when something is done well. It is a strong and conscious culture that has settled. In our company, you actively share "brags" with each other to boost yourself and others. (CC6)

> We are encouraged to share experiences of successes because, in this type of business, the climate affects the outcome. (CC13)

At the same time, the ambition to create positive emotions and experiences was also a reason not to share negatively tainted experiences and information:

> One does not want to negatively affect the positive culture. I feel we share errors relatively rarely compared to how we share successes. It happens, but not so often. (CC9)

> We want to create a positive mood in the organization. This means that we do not share errors, because that could affect the mood negatively. For example, the CEO stopped sharing information that could be perceived as depressing rather than uplifting, so he stopped doing that. (CC6)

The focus on positive experiences in ComCon was paired with a strong emphasis on feedback and learning. The employee handbook described ComCon consultants as having "high self-esteem, with all their human flaws, open and honest, willing to develop and continuously become a little better" and "proud but not satisfied. Nothing is so good that it cannot become better." Consultants were also encouraged to provide praise and constructive feedback to each other after each client meeting. Further, the employee handbook stated there is "zero tolerance against moaning" and claimed that this "zero tolerance helps us create a change culture where frustration and dissatisfaction are used to develop the business." The focus on a culture where there is always something to improve—articulated in the employee handbook—was confirmed in the interviews and legitimated failing and the sharing of errors as a source of learning and development:

> We are supposed to give each other feedback, it's a strong feedback culture. After a customer meeting, I ask myself the question: "What could we have done better? Although it went well, there must be three things we could do better." This culture helps us to be open and honest with things that went bad. … Making mistakes is not an error—rather, it helps us do better next time. (CC1)

> After customer meetings, we do follow-ups in pairs. Negative feedback is provided in individual conversations. I usually give constructive advice or recommendations. (CC8)

> We actively give each other feedback—and we are used to it. … I think that our feedback culture can help us share error experiences because we constantly give feedback to each other. … We often reflect upon how we work and how we can improve. (CC9)

ComCon had also established several arenas for sharing knowledge and experiences at the group, department, and company levels. These arenas could be "sharing lunches," during which consultants were encouraged to share relevant insights or experiences, and the week's "hit and shit," where both experiences of success and error could be shared and discussed:

> We invited everyone to a "sharing lunch." There we shared what happened, why things went well, and important lessons learned. (CC12)

> We have department meetings where you can share experiences. … We have had "hit and shit" as a weekly concept. (CC13)

These claims were also supported when we observed team meetings. In one meeting, a manager brought up an error in the recruitment process, with the explicit aim to learn from it:

> MANAGER: I will start the meeting by saying that consultant X has resigned after one month in the company. When a colleague resigns after only a month, it makes you think. How can we become better at creating the right expectations? We see that there are quite a few misunderstandings emerging toward the end of the recruitment process. We evaluate each recruitment round.

> CONSULTANT: I am curious. How do we do that? Just verbally, or do we document it somehow—like what went well and what went badly—so that we gather the knowledge?

> MANAGER: The CEO and I talk about how we should improve the process for next time. And then he summarizes this in writing.

Situation assessment. The situation assessment following an error and shaping the decision to share the error was concerned with "emotional reactions" and the "evaluation of costs and benefits." *Emotional reactions* were dominated by guilt (Table 1, Box 1; mentioned by eight out of 13 consultants), but also included sadness (Table 1, Box 2; mentioned by three out of 13 consultants), and fear (Table 1, Box 3; mentioned by three of the 13 consultants). Indicative of the emotion of guilt was the negative evaluation of specific actions, such as, "Am I as good *at this* as I should be?" (CC1) and "I had failed to understand the needs of the target group" (CC7). There was also a focus on reparative action: "I immediately began to

TABLE 1
Emotional Reactions in the Situation Assessment in ComCon

Emotional Reactions	Exemplary quotations
Guilt (mentioned by 8/13 consultants)	*Box 1* Some feelings of guilt, and your self-confidence gets hit—"Am I as good at this as I should be?" … I talked a lot with those I collaborated with, how it felt during the entire process. We talked: "What do we think about this? What went wrong? How can we avoid it happening again? What should we think of next time?" (CC1) And when it [the error] was discovered, I panicked and despaired. … Feelings of guilt overwhelmed me. … I immediately began to apologize to the customer. … Asked about how we could solve the problem. … I contacted the CEO immediately, and a colleague as well, and shared the situation. (CC4) I feel confident as a presenter, so, personally, I felt okay [as the presentation failed]. I focused on the content of the presentation. I had failed to understand the needs of the target group. I discussed this with my boss. We always evaluate each course with the key account manager, who also was my boss. (CC7)
Sadness (mentioned by 3/13 consultants)	*Box 2* It felt sad [that the client reduced their engagement] but still expected. This type of error is, in a way, part of everyday life. (CC9) It felt sad [to lose the client]—we liked them. Mostly because we believed that we could have collaborated well. … What makes it sad is that the client didn't give me any information about what we could have done better. (CC11) [*Commenting on the loss of a big assignment:*] We failed to understand what was most important [to the customer]. That felt really sad, disappointing. But it triggered me to understand what went wrong, what can we do better? (CC2)
Fear (mentioned by 3/13 consultants)	*Box 3* This is like an internal job market. Nothing is for free. Everyone needs to prove themselves. You constantly must sell yourself to colleagues. If you start to share errors, the risk is that nobody wants to work with you. The consequence is nobody shares errors—it's too risky. (CC2) [INTERVIEWER: How did it feel to share the error with your boss?] It was of course tough. Part of me was afraid to be fired … the biggest fear was to lose my future income. (CC6) It can be a feeling that everyone is perfect here, sharing an error is not safe. That probably limits us. If everyone is always doing good stuff, what happens to other peoples' perceptions of me if I share something I have not succeeded with? (CC10)

apologize to the customer" (CC1) and "I discussed with my boss" (CC7). Sadness, as an emotion that is triggered by an error seen as impossible to repair, was in ComCon typically related to the loss of a client. This was viewed as being beyond personal control: "part of everyday life" (CC9); "the client didn't give me any information about what we could have done better" (CC11). When sadness was salient, we found no tendencies toward immediate reparative action, but, as predicted by previous research (Lench et al., 2016), there were efforts to understand the causes of error: "It triggered me to understand what went wrong" (CC2). Finally, ComCon consultants expressed fear that sharing errors would affect their image in the organization—the main cost in their cost–benefit analysis. Sharing errors was viewed by some as potentially "too risky" (CC2) and "not safe" (CC10).

Besides the emotional reactions to errors, the decision to share errors was guided by an evaluation of the potential *costs and benefits of sharing*. The main cost of sharing was potential damage to personal image and material costs following from the damage (Table 2, Box 1) and the potential harm to the positive culture (Table 2, Box 2). The potential benefits referred to the learning that could be derived by the organization from sharing an error (Table 2, Box 3). The costs of sharing errors, especially the potential damage to their personal image, were moderated by the relationship quality in the context of sharing. This was repeatedly described as a function of the format being a "personal conversation." In such conversations, characterized by trust and empathy, the costs of sharing were mainly mitigated, and this supported the sharing of errors in these contexts (Table 2, Box 4).

Case 2: LeadCon

Context. LeadCon, founded in 1999, had approximately 60 associated consultants and a turnover of 7 million euros. It was one of the largest leadership consultancies in Sweden. Its services focused on leadership and team development. The mission of leadership development was to "set free the leader in all individuals to realize their full potential and thereby contribute to a better future for society" (LeadCon Strategic Framework).

TABLE 2
Costs and Benefits Considered in the Situation Assessment in ComCon

Costs/benefits	Exemplary quotations
Damage to personal image	*Box 1* We have an internal market where I need to show myself [as] attractive. This may create incentives not to share [errors]. "Everything goes to hell in my assignments—work with me." Your value on the internal market can be affected if you share too many failures. (CC1) We are consultants and we face internal competition. Therefore, it is better not to share errors. Say if person A made three mistakes and shared them and person B made the same three mistakes but did not share them, the likelihood is that you will choose person B for your assignment. (CC3) If someone sticks an error on you, that isn't good for your development and image. (CC13) When thinking about whether to share an error, I consider the risk that people may see me as less competent rather than seeing it as an opportunity for learning. A good image is important for us. (CC7)
Harm to the positive culture	*Box 2* There is a risk that, if we begin to share too much of our errors, it could negatively affect our culture of success. This is a barrier [to sharing errors]. (CC10) You are expected to contribute with positive energy. It can be difficult to combine that role with sharing errors since it can negatively affect the positive mood. (CC13) The positive culture can be an obstacle [to sharing errors]. For example, I never share when we lose a bid. We need to appear positive and happy, and not negatively affect the positive mood. (CC4)
Learning opportunities	*Box 3* Yes, I have often thought about this situation [own error]. It motivates me to share this experience with new employees. I also often think about whether and how my experience would benefit the company if I shared it. (CC4) [INTERVIEWER: What in the culture promotes the sharing of errors?] That we think there is a learning opportunity—there is nothing shameful or embarrassing to share errors. (CC11) I think we learn things from each other [when we share errors]—then we as human beings develop. (CC1)
Relationship quality	*Box 4* In personal conversations, and in smaller groups, where I feel trust, I have no problem sharing my errors. (CC1) In a personal conversation, it is easier to explain and get compassion, sharing personally becomes more intimate. (CC3) [I share with] people I work with and have worked with, people I feel more empathy with. (CC12)

Although LeadCon consultants were formally self-employed, they worked exclusively for LeadCon, and LeadCon invested in developing shared approaches and procedures and creating a shared company culture. Beyond collaboration in projects, LeadCon consultants met at least four times each year for mandatory "LeadCon days" in which short- and long-term issues for LeadCon were discussed and competence was developed. Considerable time and effort were also spent on the onboarding of new consultants. The external brand was strong, and clients typically believed that consultants were employed by LeadCon. The typical recruit was an experienced and often high-profile individual with a background in management and sometimes HR in the public, private, or non-profit sector. The consultants were attracted by the firm's image and mission, but they were responsible for generating their own income. This could be done by selling services externally to paying clients or internally helping colleagues deliver in larger assignments or engaging in internal management or development tasks. Staffing largely took place in bilateral negotiations between project owners and consultants.

Culture and error-sharing practice. LeadCon, in its consultation and internal operations, relied on ideas of positivity among personal traits, especially positive attitudes and "minds." A customer proposal describing the philosophy of LeadCon spelled out the commitment to and positive effects of individuals' positive attitude and mind as follows:

> With organizing principles based on a positive attitude, people often make smarter choices than those who are negative or cynical about life. … People with positive minds take greater responsibility for life and for the situation they are in. (Excerpt from a customer proposal)

A commitment to an emphasis on positive traits including strengths, capabilities, and possibilities was further illustrated by the "LeadCon Strategic Framework," which stated:

> LeadCon shall be the place in the world where the belief in the inherent power of every human is the strongest. (Strategic Framework)

Again, the positive orientation was described in terms of the *characteristics* of individuals. This was

in contrast to ComCon's focus on behaviors and actions that lead to positive experiences. It was about consultants having an exceptionally strong "belief in the inherent power of every human." The strategic framework further listed many positive traits of LeadCon consultants, including that they were wholehearted, compassionate, courageous, vulnerable, in possession of unlimited resources (to be unleashed), confident, creative, entrepreneurial, present, curious, generous, and collaborative. Not living up to these ideals was viewed as an error in LeadCon. In the words of the CEO:

> What is an error for a LeadCon consultant? To not be curious, to act like a victim, to blame others—that would be seen as an error by other consultants. But a workshop [with a client] that did not go well would be seen as a smaller error. (LC2)

The internal culture to be developed was characterized by "laughter, playfulness, dialogue, depth, creativity, and we support each other and challenge in a way that generates warmth, energy, joy and dedication" (LeadCon Strategic Framework). Beyond this, and in opposition to ComCon, very little was stated in the official documents describing how ideal consultants would behave. Furthermore, "success" was repeatedly inscribed as a characteristic of the LeadCon consultant in the company's strategic framework, which stated:

> LeadCon is an attractive company supporting successful leaders and consultants … Every consultant will grow into an attractive lotus flower in our "garden." She is the seed, the bud, and the flower at the same time … We deserve our external success. (Strategic Framework)

As opposed to ComCon, no statements relating to errors, improvements, learning opportunities, or other aspects indicating the existence of less-than-perfect performance could be found in the official documents. There were also no routines nor arenas for sharing failures within LeadCon.

> Unfortunately, we lack routines or processes for sharing errors, which means that there will be no collective learning—only for a minority of us. (LC8)

> Formal sharing arenas are not available. We miss the type of arenas where experiences of errors can be reflected upon. (LC3)

This denial of errors was further confirmed in our observation of meetings in LeadCon, where we found an active avoidance of engaging with consultants' own errors. In an internal meeting with 12 consultants regarding a struggling client project, no own mistakes were admitted, and no self-examination was performed. Instead, many shortcomings and errors linked to the client's organization were discussed. Protecting the image of being successful and excellent was an explicit theme throughout the conversation:

> I think we should be fair to ourselves. …. The way the change took place [within the client organization] you can still say was very good, and we should take some credit for it because we provided a forum to the client that was not planned for in advance. (Consultant A)

> I think it is important that we pat ourselves on the back and realize that the conditions were different from what was expected from the start. (Consultant B)

The overall focus on and concern with positivity as the traits of consultants and the ascription of success to LeadCon consultants were described as challenging error sharing:

> I think we want a culture of success here, which can be an obstacle [to error sharing]. We want to be perceived as successful. Problems are not natural for us here, we should be positive and successful. On the surface, we must be positive and smart. We are consultants and should successfully manage every challenge … There may be an expectation that we are more successful and balanced than others, and that we know ourselves well, and have come a long way in our personal development. That can cause errors to be left in the dark; that we are unsafe here. (LC8)

> I sense that, in LeadCon, compared to other companies I have worked in, another rhetoric is needed to address challenges that can be perceived as negative and problematic. We are opportunity focused and want to think positively. I express myself in a limited way—that is, I need to turn a challenge into an opportunity when I bring something up. (LC4)

> When I shared an error experience, and dissatisfaction with my contribution with my project team, and asked for their feedback, I got the feeling that I received no response. … a feeling of a non-open climate. It was not accepted to feel dissatisfied as a LeadCon consultant. LeadCon cannot be bad. We tell our customers that errors are important for learning, but we ourselves do not live as we learn. Although we say that we should be open and courageous, we are not—we do not practice what we preach. (LC1)

When consultants talked about the focus on the "positive," they confirmed the view that this was about personal traits: "we should be positive and successful" (LC8); "we are opportunity focused and want to think positively" (LC4); "it was not accepted to feel dissatisfied" (LC1).

These statements also indicated a discrepancy between the espoused values of the LeadCon culture

and what consultants experienced in terms of behaviors. The experiences reflected in those quotations were rather far from the "laughter, playfulness, dialogue" described in the LeadCon Strategic Framework document. As stated by LC9:

> We have a fantastic philosophy that we talk to customers about, but we don't use it internally. (LC9)

This discrepancy created some emotional stress for consultants that felt that they may not live up to being as "compassionate, courageous and vulnerable" as the official documents indicated they should be—and they would like to be (see also the quotation from LC8 above):

> I think we push ourselves pretty hard because we know very well when we fail, and thus judge ourselves harder. (LC5)

Situation assessment. The situation assessment foregoing error sharing in LeadCon was to a large extent shaped by *emotional reactions.* These were dominated by shame (Table 3, Box 1; mentioned by 9 out of 11 consultants) and fear (Table 3, Box 2; mentioned by 6 of the 11 consultants). Given the high ambitions and the large number of positive traits ascribed to the LeadCon consultants in the espoused organizational culture, consultants easily felt inadequate as individuals when experiencing errors. The ideal consultant was successful—"an attractive lotus flower," "deserving external success," "possessing unlimited resources" (Strategic Framework)—and possessed personal characteristics that should make the sharing of errors natural and easy: compassionate, courageous, vulnerable, generous (Strategic Framework). However, the experience of errors and any concerns regarding the sharing of errors triggered negative self-evaluations, especially shame (Table 3, Box 1). These emotions operated both on the individual level—"Am I good enough? Am I ok the way I am?" (LC8); "I felt insecure and doubted my ability" (LC9)—and on a collective level: "We fail to live our external approach … with ourselves" (LC3); "how we behave is contrary to our deeper values" (LC6).

TABLE 3
Emotional Reactions in the Situation Assessment in LeadCon

Emotional reaction	Illustrative quotations
Shame (mentioned by 9/11 consultants)	*Box 1* Shame can be an obstacle [for sharing] here. I failed with an assignment … both with a customer and with a colleague. I really haven't shared it with many. … I might realize that, truly, I should be somewhere else, since how we behave is contrary to our deeper values. A lot of shame and guilt can arise when people realize they are in the wrong place. (LC6) But there is always the question "Am I good enough?" in combination with high ideals—that we should be tremendously skilled, and that we ourselves realize that we are not capable of making our own internal development process work. … When thinking about whether to share errors, I feel some kind of uncertainty about what is ok [to share] and what is not. This is founded in a lack of confidence. "Am I good enough?" "Am I ok the way I am?" (LC8) We fail to live our external approach (such as being open, courageous, compassionate) with ourselves. One of the big questions and frustrations. (LC3) It happened [sharing of error] when I was new as a consultant. I didn't understand my role, what was expected, felt that my colleague was not so interested … The feeling was diminishing. I felt insecure and doubted my ability. It was frustrating not to be able to meet the customer's needs. (LC9) When sharing an error, I was struck by a strong doubt in myself that emerged in my thoughts, how bad I was as a consultant. (LC7)
Fear (mentioned by 6/11 consultants)	*Box 2* We feel fear to open up and show more of who we are as consultants and what our competence is. We fear not to be accepted. Especially in regard to errors. I don't know whether it is ok to talk about what is not going well. (LC1) There is a small group of people with a lot of power who decide who will be part of what assignments. Everyone relates to them and no one shares their shortcoming with that group because they fear being excluded. This is a question of survival … "Do I get assignments or not?" (LC5) I fear [when sharing errors] that people will turn their back on me, that they don't want to work with me, to be excluded. Our social relations are so important for whether I will get assignments or not. (LC6) [Interviewer: What hinders you from sharing errors?] Fear to be excluded and judged on our internal market in a negative way. (LC8) My fear is to be perceived as young and inexperienced … I am not so afraid of the immediate reactions [to sharing errors]. I am more afraid of the long-term effect, to not be asked to join assignments, or to not match the image I want to project of myself (LC11) Among the less established consultants, there may be a fear that, if I share an error, I may be less attractive or can be perceived as less attractive. (LC2)

LeadCon consultants also expressed fear triggered by their anticipation of potential negative consequences of sharing errors, especially in relation to how their internal image and attractiveness would be affected. Their fear of exclusion from the internal labor market was noted repeatedly (Table 3, Box 2; mentioned by 6 out of 11 consultants). In LeadCon, therefore, the sharing of errors took on an existential dimension. Errors not only raised questions about consultants' behavior in a single case. They called into question their perceived worthiness to be part of the ambitious and attractive LeadCon project and threatened their financial income. As LeadCon consultants were self-employed, the stakes involved in image damage were high.

LeadCon consultants' attitudes about sharing errors were further shaped by a *cost–benefit analysis*. As in ComCon, the main cost attributed to error sharing was the potential damage to personal image and the material costs of not getting assignments (Table 4, Box 1). This was seen earlier as inducing rather widespread emotions of fear. In addition, LeadCon consultants did not see any upsides of error sharing in the organization. Instead, they perceived a lack of interest from their colleagues to learn from their experiences, and this added to high effort costs of error sharing (Table 4, Box 2). To mitigate the potentially negative effects of sharing on their image, consultants shared their errors only with individuals whom they trusted and with whom they had strong relationships (Table 4, Box 3). The interview excerpts show that the number of trustful relationships was limited—"there are a handful of individuals I can share with" (LC6); "I share with a single person whom I trust" (LC7)—and the quality of relationships was built over time rather than being viewed as a function of the format of the relationship ("personal conversation"), as was the case in ComCon.

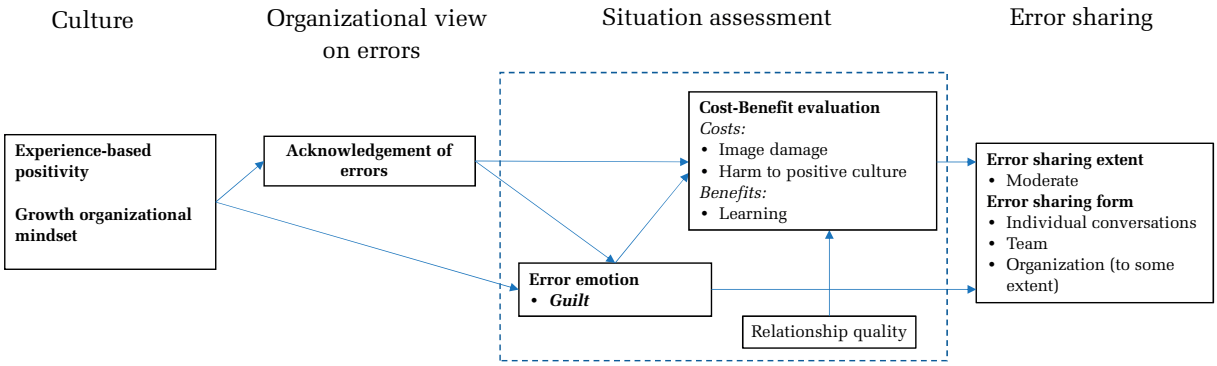
DISCUSSION OF DISCOVERIES AND CONTRIBUTIONS

The current paper set out to contribute to the understanding of the micro-dynamics of error management in complex service contexts in which the aims of impression management often put a focus on positivity. Given that failures are perceived as

TABLE 4
Costs and Benefits Considered in the Situation Assessment in LeadCon

Costs/benefits	Exemplary quotations
Damage to personal image	*Box 1*
	I think about how often I have heard someone say, "I really screwed up. Can anyone help me solve this?" Never. It [sharing errors] becomes a question of position and status, how others perceive you. … I feel that we do not share our errors, because the consequence can be not to be selected. (LC5)
	If I share an error, it may be passed on to others; it's a feeling that I am assessed and judged. Some individuals I do not trust. The people I trust have been open with their shortcomings or showing me their vulnerability. I usually share errors, but it has hit back negatively on me, unfortunately. (LC7)
	I am very dependent on other peoples' perception of me as a competent and attractive consultant. Our internal marketing is extremely important. My knowledge and skills can easily drown among 50–60 peers. … Some of my colleagues think I shouldn't talk so much about my flaws, as this may become a truth among others. (LC6)
Lack of interest	*Box 2*
	I cannot tell if anybody is really interested in hearing my experiences. (LC5)
	I do not feel that there is the same interest, receptivity, motivation, or tolerance to have this kind of discussion [about errors]. (LC6)
	They, my peers, are not curious. … That's why I do not continue to share. The recipient must show interest. (LC8)
	[Interviewer: You and your colleague never talked about what actually happened—how come?] We never got to it. I felt that my colleague was not interested. (LC9)
Relationship quality	*Box 3*
	I share my errors with those I feel trust and compassion from. In that context, I can raise issues. There are a handful of individuals I can share with. (LC6)
	Most often, I share with a single person whom I trust. Sharing errors in larger groups rarely happens. (LC7)
	[I share with] my colleague with whom I have a trusting relationship and who I know will not judge me negatively (LC3)
	I would share [an error] with those I feel that I have a close relationship with. (LC4)
	[You share with] those who are closer—not anyone … those you have worked with and know well and trust. (LC8)

FIGURE 1
Culture, Organizational View of Errors, Situation Assessment, and Error Sharing in ComCon



negative events and typically evoke negative emotions, positivity-oriented cultures are potentially inimical to error sharing. However, based on the two case studies, we find that positivity may have different versions, shaping emotional reactions and practices of error sharing in different ways. More specifically, in this section, we discuss two discoveries: (1) the enactment of different versions of positivity and organizational mindsets and how they shape different contexts for assessing both the costs and benefits of error sharing and error-sharing behavior; (2) the emotional dynamics involved in decisions about error sharing and how these are intertwined with the broader cultural context. The goal is to contribute to the literature on error management and positive organizational scholarship.

Different Versions of Positivity, Organizational Mindset, and EMC

In the context of delivering complex business services, the positive is emphasized both to manage client impressions and to support the potentially vulnerable services providers' self-esteem. Based on our study, we can identify two versions of positivity linked to different organizational mindsets. These shape different views on errors and influence the error-sharing decision in different ways (see Figure 1 for how this plays out in ComCon and Figure 2 for how it plays out in LeadCon).

As argued by Fineman (2006; see also Peterson & Seligman, 2003), positivity is a rather broad concept that includes a commitment to positive experiences and emotions and to positive individual traits. While these two aspects of positivity have been viewed as integrated and complementary, the current study shows that organizations may enact these two aspects differentially and thus choose to emphasize either positive experiences or positive traits. This creates very different conditions for error sharing. The two versions of positivity illustrated by ComCon and LeadCon reflect such a differential application: ComCon focuses its positivity culture on positive experiences while LeadCon focuses on positive traits.

Author's Voice:
What is the social relevance of your research?

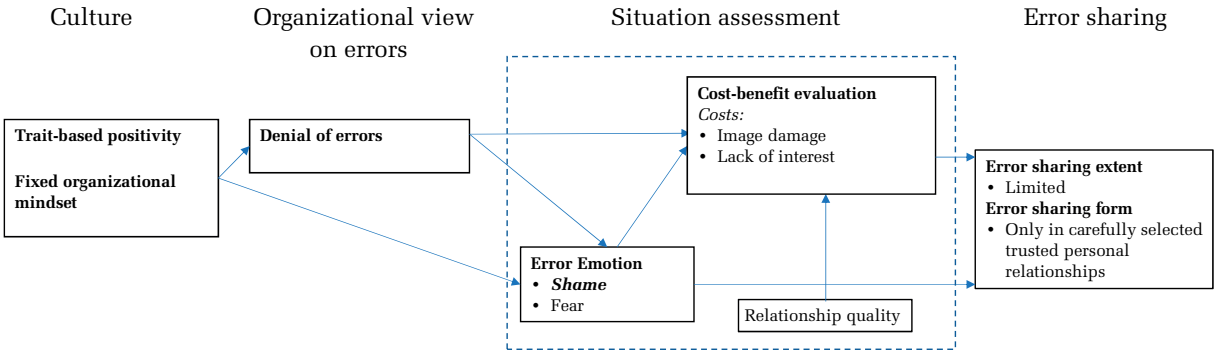
Experience-based positivity and growth mindset in ComCon. In ComCon, the effort to create *positive feelings and experiences among consultants* reflects an experience-based positivity (Figure 1). Based on a shared understanding that, "in this type of business, the climate affects the outcome" (CC13), consultants are committed to "boost yourself and others" (CC6) by sharing positive experiences. Positive experiences and emotions are assumed to contribute to confidence and increase collaboration, energy, innovation, and quality.

While this focus on positive experiences does not explicitly acknowledge the existence of errors, it also does not deny them. However, it creates a cost to sharing errors related to their negative impact on the positive experiences and emotions in the organization.

By combining the experience-based positivity with a growth organizational mindset, errors are framed as learning opportunities, and the benefits of error sharing emerge. By depicting the ideal consultant as "proud but not satisfied," "striving to become better," and committed to both provide and seek feedback, a growth mindset reflects a willingness to explore errors for organizational learning (Canning et al., 2020; Dweck, 1986; Dweck & Leggett, 1988; Heimbeck et al., 2003).

Taken together, the focus on positive experiences in combination with the organizational growth

FIGURE 2
Culture, Organizational View of Errors, Situation Assessment, and Error Sharing in LeadCon



mindset allows for the existence of errors and their value as a learning opportunity and, as a result, arenas and procedures for sharing errors, such as "sharing lunches" and "hit and shit." This organizational view of errors shapes the consultants' cost–benefit analysis in a way that learning is acknowledged as a benefit of error sharing and the potential harm of error sharing to the positive organizational emotions and experiences is considered as a potential cost. Experience-based positivity in ComCon, thus, does not mute the sharing of errors. Rather, it induces consciousness about its frequency—"We share relatively few errors compared to successes" (CC9)—and what errors to share: "I never share when we lose a bid. We need to appear positive and happy and not affect the mood negatively." (CC4). ComCon thus displays key features of an EMC—encouraging an "open, free and constructive communication about errors" (van Dyck et al., 2005: 1234) while acknowledging concern for protecting positive experiences and emotions. Like van Dyck et al. (2005), we also found that the EMC is consciously crafted by management, explicitly acknowledging the existence of errors and their potential value for learning.

Trait-based positivity and fixed organizational mindset in LeadCon. In LeadCon, positivity is instead viewed as a characteristic of the ideal consultant, reflecting a trait-based positivity. The LeadCon consultant *is* "positive and successful" (LC8) and is ascribed many positive traits such as "wholehearted," "courageous," "confident," "creative" and "entrepreneurial." This trait-based version of positivity, to a large extent, denies the existence of errors. The depiction of the LeadCon consultant as inherently successful also implies a fixed organizational mindset that celebrates genius and brilliance. The LeadCon consultant is "entrepreneurial and excellent," has extensive "inherent power" (LeadCon Strategic Framework), and is not allowed to "feel dissatisfied" (LC1).

In this context of trait-based positivity and a fixed organizational mindset, there is no natural space for committing and sharing errors, and arenas and procedures for sharing errors are therefore missing. This indicates a low EMC (van Dyck et al., 2005). This view of errors shapes the cost–benefit analysis of error sharing by emphasizing the costs of damage to personal image and revealing a lack of interest in sharing errors among colleagues (effort costs). It also mutes any potential benefits of error sharing. In a context where consultants are characterized by fixed positive traits, sharing errors represents a strong potential threat of damage to a consultant's image. These concerns about damage to one's image are further aggravated by the high stakes involved in the precarious employment context of LeadCon. While the consultants' image is important on the internal labor markets of both ComCon and LeadCon, the consequences of damage to one's image are more severe in LeadCon as it directly affects the self-employed consultants' income.

The discovery of two versions of positivity, and how they shape the sharing of error experiences among consultants who provide complex business services, contributes to the literature on both error management research and positivity in organizations. This latter research has pointed out that positivity may make it difficult for individuals to deal with negative experiences and events (Argyris, 1994; Armstrong, 2009; Fineman, 2006). The current study confirms these challenges, but it also shows that they are contingent on how positivity is construed. Previous research has pointed at two facets of positivity that highlight different aspects: positive experiences and emotions on the one hand and positive individual traits on the other (Fineman, 2006; Peterson & Seligman, 2003). While previous research has treated these two facets as complementary and coexisting,

our findings indicate that organizations may construe positivity based on either of these aspects, and they shape error-sharing behavior in different ways. A focus on positive experiences and emotions (an experience-based positivity) implicitly admits that errors are made, but acknowledges their costs to the positive experiences and emotions of communicating them. This is in contrast to trait-based positivity, wherein the existence of errors is implicitly denied.

These two versions of positivity, which shaped the view of the *existence* of errors, were combined with different organizational mindsets, which shaped the view of the potential *value* of errors. While a fixed mindset sees errors as potential threats to the celebration of genius and performance, a growth mindset appreciates errors as opportunities for learning at various levels of the organization. Thus, with trait-based positivity, only a fixed mindset is theoretically possible, as a growth mindset assumes that failures are acknowledged. However, for experience-based positivity, both fixed and growth organizational mindsets would be possible. In ComCon, a growth mindset combined with experience-based positivity shaped a view of errors in which communicating them was seen as learning opportunities. Furthermore, the value of this communication had the potential to exceed the costs of the threats to positive emotions and experiences. At the same time, a fixed mindset would have been possible. We can only speculate what would have occurred in such a cultural context, but where the existence of errors is not denied but errors are seen as a threat to the celebration of brilliance and achievement, we would expect extensive sharing of positive examples and experiences and a rather private discussion of errors.

The discovery that different versions of positivity can shape an organization's view of the existence of errors in different ways, and that an organizational mindset can alter the estimation of the value of errors, also adds to the literature on error management. It increases the understanding of values and norms in the broader organizational culture that shape error sharing and the micro-foundations of EMC. Thus, this answers the call for more research on what drives the establishment and effects of EMC (Keith & Frese, 2011). EMC has mainly been studied as an isolated aspect of organizational culture and with a focus on practices (e.g., Gold et al., 2013; Gronewold et al., 2013; Sutcliffe et al., 2016; van Dyck et al., 2005). Previous research has highlighted the open sharing and discussion of errors as a key aspect of EMC. This has left the question of what broader values and norms enable the communication of errors in these cultures mainly unanswered. The current study sheds light on the emotional and cognitive processes underlying error-sharing practices, and how these processes are shaped by the broader cultural context of the organization. It shows that error sharing is closely intertwined with specific values and norms regarding the nature of positivity (experience based vs. trait based) and the nature of organizational skills and talent (growth organizational mindset vs. fixed organizational mindset). These different values and norms shape the organization's view on errors and employees' cost–benefit analysis (what costs and benefits are considered) as well as their emotional reactions (which will be discussed below) and thereby their error sharing practices.

The Emotional Dynamics of Error Sharing

The emotionality of error sharing has been acknowledged in previous conceptual work (e.g., Frese & Keith, 2015; Vogus, Rothman, Sutcliffe, & Weick, 2014; Zhao & Olivera, 2006), but it has rarely been subject to empirical investigation. Our understanding of the lived experience of making errors has thus remained incomplete, hindering a full understanding of error-sharing behavior, a key element of an EMC. The current investigation fills this void and shows that the intensity and the kinds of emotions experienced when committing errors are shaped by organizational values and norms. This study also shows that the emotions experienced in relation to errors help to determine consultants' decisions about error sharing both directly and indirectly, through their effect on the cost–benefit evaluation. In the following, we discuss both these aspects in turn.

Different emotions in different cultural contexts. As the findings have shown, the emotions evoked by committing an error differed considerably in the two organizations. In the following, we explore how these different emotions are linked to different versions of positivity, organizational mindsets, and organizational views on errors (see Figures 1 and 2).

In ComCon, experiencing errors induces feelings of guilt and, to a limited extent, sadness and fear (Figure 1). The dominating emotional reaction is guilt (Table 1, Box 1; mentioned by 8 out of 13 consultants). Errors are understood in terms of failed actions (rather than failed selves). This may be explained by the experience-based version of positivity, which allows for the existence of errors, and a growth organizational mindset, which acknowledges the imperfect, improvement-oriented consultant and encourages the exploration of errors as learning opportunities.

In LeadCon, the emotional dynamics are instead dominated by shame (Table 3, Box 1; mentioned by 9 out of 11 consultants) and fear (Table 3, Box 2; mentioned by 6 of the 11 consultants). This limits error sharing both directly and indirectly (Figure 2). This shame-dominated emotionality follows from the trait-

based version of positivity and fixed organizational mindset in LeadCon, where the ideal consultant is viewed as having a fixed set of positive traits and abilities. The ideal consultant in this cultural context is viewed as "positive and successful" (LC8), and the sharing of experiences (including errors) should be unrestricted in the espoused (but not enacted) culture of "laughter, playfulness, dialogue, depth, creativity, and we support each other and challenge in a way that generates warmth, energy, joy, and dedication" (LeadCon Strategic Framework).

This trait-based version of positivity, reflecting a fixed organizational mindset, infuses errors with shame through dynamics on two levels. In the first dynamic, an organization's image of excellence and its consultants' fixed ability and talent leave little room for errors and learning. Thus, any errors are infused with shame and fear. As errors do not happen in LeadCon (and, if they do, they are not discussed publicly), they induce the shame of being the only one making errors and thus not having what it takes to be part of LeadCon. Errors also induce fear of being excluded from the internal labor market, which, in the precarious employment context of LeadCon, has direct consequences for the consultants' ability to support themselves financially. This strong negative emotionality of errors, and the prevalence of shame in LeadCon, is in line with the findings of Dweck and Leggett (1988) that, in a fixed organizational mindset, emotional reactions to errors are strong and include shame.

The second-level dynamic that induced shame in LeadCon is based on the mismatch between a consultant's emotions and the actions taken after making an error and the espoused values and norms of the organization. Considering the LeadCon consultants' positive traits of being able to deal with their own and others' errors and the culture's claims of supportiveness, consultants' experiences of shame and reluctance to share errors further drive the feeling of not living up to others' expectations, and this further increases their shame (Bagozzi, Verbeke, & Gavino, 2003). This second-level shame, founded on the discrepancy between a desired and a perceived self when it comes to sharing errors, operates not only on an individual level but also on a collective level. On the collective level, consultants know that they (as a collective) did not deal with errors in the way their organization's values suggested: "How we behave is contrary to our deeper values" (LC6); "Although we say that we should be open and courageous, we are not—we do not practice what we preach" (LC1). This created a sense of collective shame among consultants regarding how they, in the context of LeadCon, dealt with errors.

The direct and indirect effects of emotions on error sharing. As part of the situation assessment that leads to the decision about error sharing, the emotional experience of errors has been found to have both direct and indirect effects (Zhao & Olivera, 2006). This is illustrated and elaborated on by the current study. In ComCon, the prevalence of guilt has a direct positive effect on error sharing by inducing motivation for reparative action (Figure 1). Contrary to shame, guilt involves a negative evaluation of specific behaviors somewhat apart from the global self (Tangney, 1995). This allows guilt to create motivation in the person to repair their behavior in the form of recognition (and sharing) and apology, or by attempts to manage and undo the harm done (Tangney, Niedenthal, Covert, & Barlow, 1998). Consequently, the examples of guilt-infused errors experienced in ComCon are accompanied by efforts to fix them and their negative consequences, and sharing the errors is an integrated aspect (Table 1, Box 1): "we talked" (CC1); "I immediately began to apologize" (CC4); "I discussed this with my boss" (CC7). Thus, we suggest that emotions of guilt associated with errors in organizations have a direct positive influence on error sharing.

The prevalence of guilt in ComCon also indirectly influences error sharing through the cost–benefit analysis (Figure 1). Zhao and Olivera (2006) theorized that guilt may increase the salience of the benefits of error sharing that contribute to a positive self-concept. This is confirmed by the acknowledgment of "learning opportunities" as a benefit of error sharing in ComCon. Given the view of the ideal consultant as always "striving to become better," emphasizing learning from errors enhances individuals' self-concept. The perceived benefits of error sharing and guilt-induced sharing are, however, limited by a concern to have positive emotions and experiences in the organization and sadness, in some cases, about having lost clients and fear related to consultants' future attractiveness on the internal labor market (although mentioned by only 3 out of 13 consultants).

In LeadCon, the emotional reactions to errors mainly have a negative influence on decisions about error sharing. Shame triggers a desire to hide, become invisible, or flee from the situation (Lazarus, 1991; Lewis, 2000; Tangney, 1995; Tangney et al., 1998). Thus, it creates a direct emotional barrier to the public sharing of errors (Figure 2). As a result, errors are shared, if at all, only with a few, carefully selected and trusted colleagues. At the same time, the second-level individual and collective shame of not being able to live the organization's values limits any open, collective discussions of error sharing in LeadCon (Lickel, Schmader, & Spanovic, 2007; Tangney & Dearing, 2003). This creates a context of silence regarding both consulting practices (what went more or less well in assignments) and internal (error-sharing) practices. This restricts the sharing of errors to a few carefully selected and trusted individuals: "a

handful of individuals" (LC6); "a single person" (LC7).

The shame-dominated emotionality in LeadCon also affects error sharing indirectly through the cost–benefit evaluation. Zhao and Olivera (2006) posited that shame makes the costs of image damage more salient, and fear may make it hard to see any benefits of error sharing. These hypotheses are confirmed by our findings that the cost–benefit evaluation of LeadCon consultants is dominated by costs in general (no potential gains were seen) and costs related to image damage in particular (Figure 2).

These findings contribute to error management research by demonstrating how the emotions experienced when making errors play an important role in the error-sharing decision directly by creating barriers and indirectly by shaping the cost–benefit analysis. Our study also shows how these emotional dynamics are affected by the broader organizational culture and its different versions of positivity and organizational mindsets. Our findings suggest that experience-based positivity that allows for the existence of errors, in combination with a growth organizational mindset that acknowledges the value of errors for learning, affects an organization's view of errors, making it more open to error sharing. By contrast, trait-based positivity combined with a fixed organizational mindset creates an organizational view of errors that mainly denies their existence. The former cultural context induces a less intense and guilt-dominated emotionality that supports error sharing, while the latter context induces a strong emotionality dominated by shame and fear, which hamper error sharing. Our findings further contribute by pointing to the existence of both first-level shame (related directly to the error committed) and second-level shame (related to the felt reactions to the error: shame and fear, non-sharing). This shame is not in line with the positive traits of the consultant communicated by trait-based positivity. This shows that the emotionality surrounding errors is not only linked to the organization's view of errors but also to the organizational cultures' view of how individuals are to react to negative events, including errors.

Taken together, these discoveries regarding the relationship between organizational culture, emotional reactions to errors, cost–benefit analysis, and error sharing behavior lay the foundation for future development of theories about the cross-level dynamics of error management.

These findings also contribute to research on positivity by drawing attention to the emotional dynamics triggered by different versions of positivity. This adds to our understanding of the mechanisms underlying the tension between positivity and engagement with errors pointed out in previous research (e.g., Argyris, 1994; Fineman, 2006). The contrast of emotionality dominated by guilt versus shame under different versions of positivity and the different effects on error sharing call for future research into how positivity shapes emotionality in organizations and how this affects individual and organizational outcomes.

The current study also comes with some limitations. The qualitative case study approach provided deep insights into two rather different consulting organizations, and it allowed us to uncover the microdynamics of error sharing in these organizations. However, the generalizability of these findings should be established in research that involves a broader set of organizations and a survey-based research design. The conceptualization of the relationship between organizational culture (version of positivity and organizational mindset), organizational view of errors, emotionality, cost–benefit analysis, and error sharing proposed in this paper provide a basis for a broader survey-based study. Such a study might shed light on other combinations of positivity and organizational mindset (especially experience-based positivity and fixed organizational mindset, which was not covered in this study). Such a study should also pay attention to how the precariousness of the employment relationship might moderate the relationship between organizational culture and the emotionality and cost–benefit analysis underlying the error-sharing decision. The current study included some variation in this dimension, and we may expect stronger emotionality and higher perceived costs in a precarious employment relationship, as this increases the stakes involved in making errors.

MANAGERIAL IMPLICATIONS

Based on these findings, managers who want to maintain a positivity culture and still enable the sharing of errors may be advised to create a cultural context that emphasizes positive experiences (rather than the consultants' positive traits) and communicates the developable nature of individual abilities and talent. This may be achieved by actively communicating that positivity is about creating positive experiences and emotions that aim to support the self-esteem, loyalty, and energy of the consultants but does not deny that negative experiences like errors are part of organizational life. Positive experiences should thus be shared to maintain a positive energy. However, to avoid the communication of a fixed mindset, focus should be on communicating happiness and pride in the achievement, along with the hard work, engagement, motivation, endurance, and sacrifices underpinning the success.

Also, the existence and value of errors must be communicated together with the importance of positive experiences. This may be accomplished by effecting

an organizational growth mindset and emphasizing the developable nature of individual talent and ability. In effecting a growth mindset, managers may set learning goals rather than performance goals. They may also reward effort, initiative, and learning in addition to results and achievements in everyday feedback, performance reviews, and promotion decisions. The existence and value of failure as a source of learning may further be communicated by creating dedicated arenas for sharing errors—such as the sharing lunches or "hit and shit" meetings we observed in ComCon, or an annual failure day during which employees were encouraged to share their failure experiences with their colleagues we observed in another organization. Such an orientation toward both positive experiences and emotions and development is well summarized in the slogan "proud but not satisfied" that was communicated consistently by ComCon's management and ingrained in its organizational culture. Furthermore, management may engage in building strong and trustful relationships among employees, as these may moderate the perceived costs of error sharing.

The findings of the current study also show that celebrations of the ideal consultant as successful and in possession of positive traits, such as a positive attitude and mind in company documents and management communication, should be avoided. Although well intentioned to boost consultants' self-esteem and energy, the current study shows instead that this denies both the existence of errors and the negative feelings that come with them, creating a double shame that effectively mutes error communication.

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APPENDIX A: INTERVIEW RESPONDENTS

TABLE A1
Characteristics of Interview Respondents

Respondent	Company	Gender	Age	Role	Tenure
CC1	ComCon	Male	40s	Consultant	5
CC2	ComCon	Female	30s	Consultant	3
CC3	ComCon	Male	40s	Consultant	1
CC4	ComCon	Male	40s	Manager	11
CC5	ComCon	Male	50s	CEO	16
CC6	ComCon	Male	50s	Consultant	<1
CC7	ComCon	Male	40s	Consultant	2
CC8	ComCon	Female	40s	Consultant	3
CC9	ComCon	Male	40s	Consultant	4
CC10	ComCon	Female	40s	Manager	7
CC11	ComCon	Male	40s	Manager	8
CC12	ComCon	Female	40s	Consultant	5
CC13	ComCon	Male	40s	Manager	7
LC1	LeadCon	Female	50s	Consultant	4
LC2	LeadCon	Male	40s	CEO	7
LC3	LeadCon	Female	40s	Consultant	2
LC4	LeadCon	Female	50s	Consultant	<1
LC5	LeadCon	Male	60s	Consultant	9
LC6	LeadCon	Male	50s	Consultant	4
LC7	LeadCon	Female	40s	Consultant	3
LC8	LeadCon	Female	60s	Consultant	5
LC9	LeadCon	Female	60s	Consultant	4
LC10	LeadCon	Female	40s	Admin	6
LC11	LeadCon	Female	30s	Consultant	2

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Chapter 5

Understanding Failure Sharing: Theoretical Framework and Hypotheses Development

The purpose of this chapter is to present a testable conceptual model that integrates key antecedents shaping individuals' failure-sharing behaviors. The development of this model is based on both theoretical and empirical foundations, drawing on insights from the abductive qualitative case study presented in Chapter 4, as well as previous research in areas such as error management, failure and error learning, and related fields like social and cognitive psychology, which were reviewed in Chapter 2. Failure sharing is defined as the deliberate and voluntary act of individuals communicating their work-related failures to others within the organization. This process requires considering both organizational and individual-level antecedents to better understand the subjective nature of failures and how they influence individuals' decisions to share them. Therefore, the conceptual model incorporates psychological (cognition and emotion) and organizational (norms and values) antecedents, along with their mutual interactions. To make the conceptual model testable, I propose several hypotheses to examine potential direct and indirect associations, as well as possible mediation effects among the variables. These hypotheses will be tested in subsequent quantitative studies.

Based on previous research, failure sharing can be understood as a consequence of the interaction between individuals' cognition, emotions, personal dispositions, and the context in which the decision-making process

occurs. The exploratory qualitative case study indicated that emotional reactions to failures influence the rational cost-benefit evaluation of failure sharing (referred to as failure-sharing cognition in this thesis), thereby affecting consultants' approaches to failure sharing. This finding aligns with research suggesting that a cognitive perspective must be complemented by an emotional one to fully understand the micro-dynamics underlying error and failure communication in organizations (e.g., Frese & Keith, 2015; Lei & Naveh, 2023; Vogus, Rothman, Sutcliffe, & Weick, 2014; Zhao & Olivera, 2006).

Personal dispositions drive different approaches and coping strategies related to failure experiences. The case study revealed how consultants' self-theories about the impermanence of intelligence and talent (Dweck, 2013) shaped their views of failure and their negative emotional reactions. Self-compassion, another key personal disposition highlighted in the literature review, also potentially influences both failure-sharing cognition and failure emotions (Shepherd & Cardon, 2009). Additionally, the case study demonstrated that the intensity and types of negative emotional reactions to failure are influenced by the organization's norms and values. Viewing failure sharing as an individual decision-making process shaped by cognitive, emotional, dispositional, and contextual antecedents resonates with research suggesting that the open communication of errors and failures is affected by both psychological and contextual factors (e.g., Lee et al., 2015; Uribe et al., 2002; Zhao & Olivera, 2006). In this chapter, I discuss these individual and organizational-level antecedents and their consequences for failure sharing in more detail.

The chapter proceeds as follows: In the first section, I present theoretical and empirical arguments related to key failure-sharing antecedents identified in the literature review in Chapter 2 and the qualitative case study in Chapter 4. Based on these arguments, I provide an overview of the conceptual model, which includes failure-sharing antecedents at both the individual and organizational levels. Following this, I discuss potential direct and indirect relationships between the various antecedents (e.g., emotions) and failure sharing, as well as interactions among the antecedents themselves (e.g., emotion and cognition). Through this process, I gradually develop testable hypotheses. Finally, I present a table summarizing these hypotheses, followed by the conceptual model incorporating them.

5.1 Conceptual model: Individual and organizational-level antecedents to failure sharing

5.1.1 Individual-level antecedents to failure sharing

One key finding from the case study was the direct and indirect relationships between shame and guilt in failure sharing, as illustrated in the two cases. In ComCon, widespread feelings of guilt had a positive direct effect on failure sharing and also indirectly influenced failure sharing through a cognitive cost-benefit evaluation path. This was supported by consultants' framing of failures as "learning opportunities." In contrast, in LeadCon, shame was the dominant emotional reaction, which appeared to have a direct negative effect on consultants' failure sharing. This shame-dominated emotionality also negatively affected the cost-benefit evaluation, making the costs of sharing more salient. Exposing a failure could potentially damage one's image, creating a cognitive barrier to failure sharing. Research has shown that in cases of adversity, shame and guilt can lead to negative evaluations of one's identity or actions, respectively (Tangney & Dearing, 2003; Tracy & Robins, 2004; Tracy et al., 2007). These emotions are suggested to play a central role in influencing failure-sharing cognitions and error reporting (Zhao & Olivera, 2006). Thus, the emotional dynamics of shame and guilt are likely key antecedents to failure sharing.

Extensive cognitive and social psychology research has examined individuals' self-theories regarding fixed and growth mindset beliefs about intelligence, abilities, and talents. A growth mindset views these attributes as learnable and improvable through effort, while a fixed mindset sees them as inherently stable and unchangeable over time (Dweck, 2013; Dweck & Leggett, 1988). These contrasting beliefs are proposed to influence whether individuals adopt a learning goal orientation (growth mindset) or a performance goal orientation (fixed mindset; Dweck, 1986; Dweck, Chiu, & Hong, 1995). These orientations may shape how individuals perceive failure sharing—either as an opportunity for learning or a potential risk—thereby indirectly affecting their motivation to share or conceal failures.

To fully understand how different mindsets affect failure-sharing dynamics, as highlighted in the case study, it is also crucial to consider individuals' capacity to cope with themselves after wrongdoing. Self-compassion has been found to reduce negative emotionality (Leary et al., 2007). Specifically, Shepherd and Cardon (2009) argue that it influences the relationship between negative emotions and learning from failures.

Self-compassion refers to the capacity to handle one's own negative self-feelings, particularly shame, in situations of perceived failure or inadequacy (Neff, 2023). In LeadCon, shame was the dominant emotional reaction to failure, potentially inhibiting failure sharing. Despite its significance, self-compassion has been empirically researched only to a limited extent in organizational contexts. Therefore, individuals' fixed and growth mindset beliefs, together with self-compassion, emerge as dispositional antecedents to failure sharing that appear important and promising to investigate.

Additionally, self-efficacy (Bandura, 1977) may also influence individuals' failure-sharing cognition and, consequently, their failure and error communication (Kirkpatrick & Locke, 1996; Lee et al., 2015; Seckler, Fischer, & Rosing, 2021). However, given that self-efficacy has been extensively studied in various research fields, including organizational studies, and my primary focus is on novel predictors, I treat self-efficacy as a covariate—a variable that may influence failure sharing but is not of direct interest for further exploration.

5.1.2 Organizational-level antecedents to failure sharing

A second key finding from the case study was the link between different types of positivity cultures, organizational mindsets, and associated emotional dynamics. In the ComCon case (see Figure 1, Chapter 4), an experience-based version of positivity, combined with an organizational growth mindset, predominantly triggered feelings of guilt following failures. This guilt-dominated emotionality appeared to support failure-sharing; my interpretation was that guilt motivated consultants to acknowledge failures and take steps to repair the harm caused.

In contrast, the LeadCon case (see Figure 2, Chapter 4) revealed emotional dynamics dominated by shame, shaped by an organizational culture characterized by trait-based positivity and a fixed organizational mindset.

This culture effectively denied the existence of failures, thereby discouraging their sharing. This observation aligns with previous studies suggesting that an organization's mindset—whether it views human talent and ability as inherently limited or as developable—can influence individuals' mental and emotional responses to failure, subsequently affecting their behavior. Drawing on the theories of organizational mindset (Canning et al., 2020; Dweck, 2013; Dweck & Leggett, 1988; Murphy & Dweck, 2010), I further explore how organizational antecedents shape individuals' failure-related emotions and their cognitive evaluations of failure sharing. Finally, the case study highlighted that consultants in both firms carefully weighed the potential negative consequences of sharing failures, such as harming their professional image, disrupting the work environment, or encountering disinterest from colleagues. These concerns underscore how failure sharing is perceived as a risky endeavor, particularly in competitive environments where peers might exploit the shared information. Subjective beliefs about whether it is safe to share failures significantly shape failure-sharing cognition and subsequent behavior.

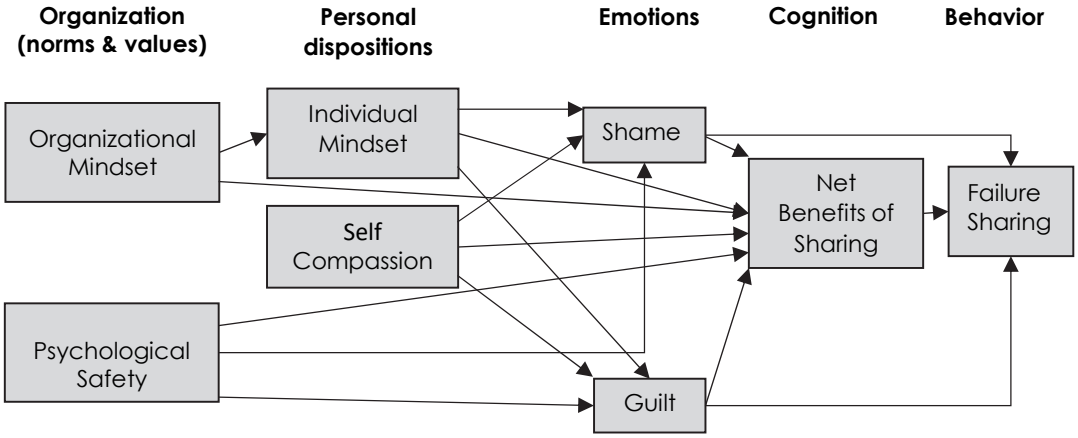
Psychological safety, identified in the literature review as a crucial organizational-level antecedent, refers to the subjective belief that individuals within an organization can take interpersonal risks without fear of rejection, punishment, or embarrassment. Psychological safety fosters confidence that speaking up will not lead to adverse outcomes. In organizational cultures where norms and values promote high levels of interpersonal safety, employees may feel more comfortable exposing inadequacies with less fear of exclusion or humiliation. This, in turn, influences their cognitive and emotional responses to failure—particularly feelings of shame and guilt—which may indirectly affect their willingness to share failures.

For example, contemporary research on psychological safety has found strong positive associations with employees' motivation to communicate failures and other adverse events (Edmondson & Lei, 2014) and a reduced fear of speaking out (Carmeli & Gittell, 2009; Edmondson et al., 2004). In theorizing about the cultural context of failure sharing, I integrate theories of psychological safety (Edmondson, 1999; Edmondson & Lei, 2014; Nembhard & Edmondson, 2011) alongside organizational mindset beliefs.

These theoretical foundations contribute to the overall conceptual model, which is depicted in Figure 5.1.

The chapter now proceeds with a breakdown of the conceptual model. Starting with the theorized final behavioral outcome on the right (failure sharing), I will work backward to explore the antecedents on the left, concluding with a detailed discussion of organizational norms and values. This breakdown elaborates on the potential associations between key individual- and organizational-level antecedents influencing failure sharing.

Figure 5.1. Conceptual model of individual and organizational-level antecedents shaping individuals' failure sharing.



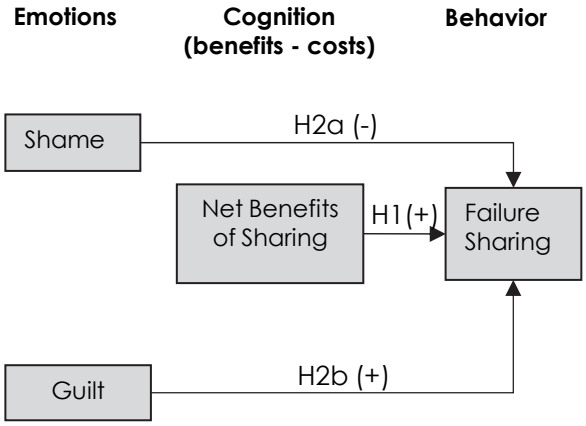
5.2 Hypotheses development

5.2.1 Antecedents to failure sharing

Error and failure communication has been conceptualized in prior research as a behavior involving significant personal and professional risks. The decision to engage in behaviors such as disclosing failures has been theorized using the theory of planned behavior (Ajzen, 1991, 2011), which provides a framework for understanding the cognitive and emotional antecedents influencing failure-sharing behaviors.

According to the theory of planned behavior, individual behaviors are shaped by their attitudes—evaluative beliefs about the behavior. These attitudes encompass both cognitive assessments of perceived costs and benefits and emotional evaluations of anticipated outcomes, such as feelings of shame or guilt. The more favorable the perceived benefits and the lower the perceived costs, the stronger an individual's intention to engage in the behavior.

Figure 5.2. Individual-level cognitive and emotional antecedents to failure sharing.



Cognitive antecedents to failure sharing

Drawing on the theory of planned behavior, a recurring finding in previous research on the open communication of failures is the role of the perceived costs and benefits. Specifically, individuals may lack motivation to share a failure if the perceived costs outweigh the benefits (Morrison & Phelps, 1999). Even if individuals recognize the potential benefits of sharing with their team or organization, they may hesitate to openly discuss the experience due to potential personal costs (Baker & Norton, 2001; Cannon & Edmondson, 2001; Uribe et al., 2002).

These "costs of sharing" include material costs; damage to one's image; harm to interpersonal relationships, such as rejection by coworkers; loss of group or organizational support (Edmondson, 1999); effort costs; economic

consequences for the team or organization; and reputational damage to the team or organization, such as diminished professional credibility from a client perspective (Barach & Small, 2000; Dahl & Werr, 2021; Zhao & Olivera, 2006).

In contrast, individuals may weigh these costs against potential benefits, including maintaining self-image, sustaining professional reputation, personal learning, group learning, organizational learning, and preventing similar incidents or more serious consequences in the future (Dahl & Werr, 2021; Zhao & Olivera, 2006). From this "cost-benefit" evaluation, or failure-sharing cognition perspective, I predict that the perceived net benefits (i.e., benefits outweighing costs) of sharing failures positively influence failure sharing:

> Hypothesis 1 (H1): Perceived net benefits of sharing failures positively relate to failure sharing.

Emotional antecedents to failure sharing

According to the theory of planned behavior, individuals' attitudes toward performing a specific behavior are influenced by emotional beliefs about anticipated outcomes. Combining this perspective with the theory of self-conscious emotions (Tracy et al., 2007) offers deeper insights into how emotional antecedents, such as shame and guilt, may be connected to both failure-sharing cognition and behavior.

The theory of self-conscious emotions posits that shame arises from a negative evaluation of the self, triggered by a perceived inconsistency between an individual's desired and actual self-concept (Lazarus, 1991; Lewis, 2000). This global negative self-assessment often leads to defensive responses, such as hiding, avoiding the situation, or externalizing blame to protect oneself from further emotional harm (Tangney, 1990; Tangney et al., 1992).

In contrast, guilt is associated with a negative evaluation of a specific action or behavior rather than the self as a whole. Guilt emerges from recognizing that one's behavior caused harm or fell short of expectations and is often accompanied by feelings of tension and regret (Tangney & Dearing,

2003). Unlike shame, guilt tends to motivate reparative behaviors, such as acknowledging responsibility, apologizing, or taking steps to address the harm caused.

These distinct negative self-conscious emotions—shame and guilt—may influence failure sharing in different ways: both directly, which I examine in this section, and indirectly through their impact on individuals' failure-sharing cognition, which I explore in the next section.

Shame

Shame is tied to the deep human need for social acceptance and belonging. It is defined as "a dysphoric emotion that involves negative self-evaluations" (Niedenthal, Tangney, & Gavanski, 1994: 586) and serves as a powerful motivational force aimed at protecting one's global self or desired self-concept (Baumeister & Jones, 1978; Leary & Baumeister, 1995; Leary, Landel, & Patton, 1996). The core of shame experiences lies in a perceived threat to or damage to one's self-concept, often triggered by failure, and concerns how the individual believes others will perceive them as a result (e.g., Leary et al., 2007; Lewis, 1971).

Feelings of shame are characterized by experiences of feeling small, worthless, and powerless, which can lead to a strong desire to hide or escape from the negative event (Stoeber, Harris, & Moon, 2007; Tangney & Dearing, 2003). Research identifies four typical responses to shame: avoidance, attacking others, attacking oneself, and withdrawal (Elison, Lennon, & Pulos, 2006; Nathanson, 1994). Consequently, shame is expected to discourage individuals from sharing their failures openly, as it motivates hiding or remaining silent about these experiences. Thus, I hypothesize that:

> Hypothesis 2a (H2a): Feelings of shame negatively relate to failure sharing.

Guilt

In contrast to shame, guilt involves a negative evaluation of specific behaviors rather than a person's global self (Tangney, 1995). Guilt is tied to the recognition of having done something wrong without necessarily affecting one's self-perception. It typically motivates individuals to take reparative

actions, such as apologizing or attempting to manage and undo the harm done (Tangney, Niedenthal, Covert, & Barlow, 1998). This motivation to acknowledge and address a failure should, in theory, increase individuals' willingness to share it with peers.

However, guilt is also an unpleasant emotion that people generally strive to avoid, and this negative valence could potentially reduce its motivational impact. Nevertheless, individuals experiencing guilt in response to failure are expected to be less inclined to remain silent and more likely to share their failures with peers. This effect, however, may be less pronounced compared to the influence of shame on failure sharing.

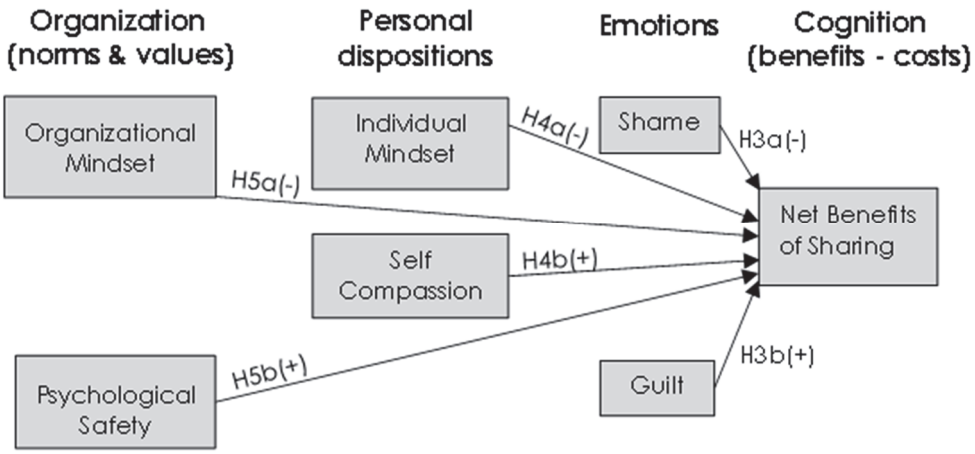
Thus, I hypothesize:

Hypothesis 2b (H2b): Feelings of guilt positively relate to failure sharing.

5.2.2 Antecedents to the cost-benefit evaluation of failure sharing

The conceptual model incorporates emotional and dispositional antecedents at the individual level, as well as normative and value-based antecedents at the organizational level, all of which influence the cost-benefit evaluation of failure sharing. These antecedents are further elaborated in the following section.

Figure 5.3. Individual and organizational-level antecedents to perceived net benefits of failure sharing.



Emotions as antecedent to failure-sharing cognition

Affect infusion theory (Forgas, 1995), along with related frameworks such as the risk-as-feelings perspective (Loewenstein et al., 2001), the rational–emotional model of decision avoidance (Anderson, 2003), and Elfenbein's (2007) framework of integrated intrapersonal emotions in organizations, highlights the pivotal role of negative emotions—such as fear, shame, embarrassment, and guilt—in decision-making processes involving risky behaviors. These emotions can significantly bias cognition by heightening attention to perceived costs while diminishing the consideration of potential benefits, thereby shaping individuals' behavioral intentions.

The emphasis on costs and benefits tends to represent individuals as analytic decision-makers, weighing the pros and cons before acting. However, the input to the decision-making process often extends beyond a purely rational analysis of the situation. Emotional responses can influence judgment and decision-making, indirectly shaping behavior through their effects on cognition (Anderson, 2003; Forgas, 1995; Loewenstein et al., 2001). As argued conceptually by Zhao and Olivera (2006) and supported empirically in the case study presented (Dahl & Werr, 2021), the perceived net benefits (benefits minus costs) of sharing failures may be influenced by the emotions experienced in relation to failing.

Shame involves a negative evaluation of the self, with significant implications for one's desired self-concept, such as perceptions of competence and status (Baumeister & Jones, 1978; Leary, 2019; Leary et al., 1996). Consequently, shame may heighten sensitivity to the perceived costs of failure sharing, particularly concerning how the individual believes they will be perceived by others (cf. Cohen, Wolf, Panter, & Insko, 2011) and how sharing might affect their image and reputation (Dahl & Werr, 2021; Zhao & Olivera, 2006). Additionally, the tendency of shame to provoke withdrawal, hiding, blaming others, or self-criticism (Lazarus, 1991; Lewis, 2000; Tangney et al., 1992) may diminish the salience of potential benefits associated with sharing. Therefore, I propose the following hypothesis:

> Hypothesis 3a (H3a): Feelings of shame negatively relate to the perceived net benefits of failure sharing.

Guilt, in contrast to shame, links failures to a negative evaluation of a specific behavior rather than the self (Tangney & Dearing, 2003) and triggers behaviors aimed at limiting or rectifying the consequences of the failure (Tangney, 1996), such as confession or apology (Lewis, 2000). In line with previous research (Dahl & Werr, 2021; Zhao & Olivera, 2006), I predict that feelings of guilt will make the benefits of sharing failures—particularly those related to learning and maintaining a positive self-image (e.g., being honest or responsible)—more salient. At the same time, guilt should make the perceived costs, especially those related to image and reputation (e.g., Cohen et al., 2011) less salient.

However, I wish to add a caveat: Guilt may have a weaker effect on the perceived net benefits of sharing compared to shame, as argued in hypothesis H2b. Given that guilt is an unpleasant emotion that people generally seek to avoid, its negative valence could potentially diminish its motivational impact on individuals' cost-benefit evaluation.

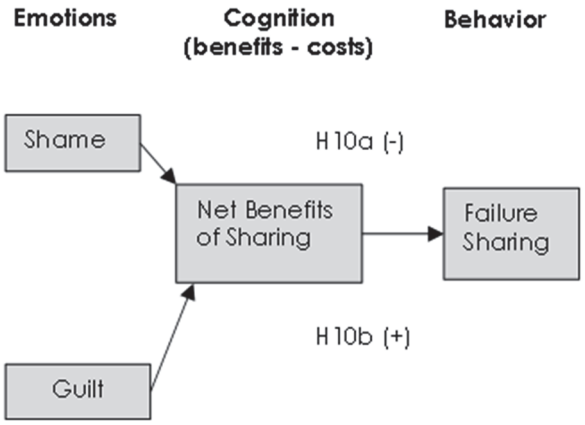
> Hypothesis 3b (H3b): Feelings of guilt positively relate to the perceived net benefits of failure sharing.

If shame and guilt affect the perceived net benefits of sharing (H2a and H2b), and if the perceived net benefits of sharing affect failure sharing (H1), this suggests that the net benefits of sharing failures may function as a mediator between both feelings of shame and failure sharing, as well as feelings of guilt and failure sharing (see Figure 5.4).

Hypothesis 10a (H10a): Feelings of shame negatively affect failure sharing indirectly through perceived net benefits of sharing.

Hypothesis 10b (H10b): Feelings of guilt positively affect failure sharing indirectly through perceived net benefits of sharing.

Figure 5.4. Indirect paths between feelings of shame and guilt and failure sharing, with perceived net benefits of sharing as a potential mediator.



Personal dispositions as antecedents to failure-sharing cognition

Individual mindset

Among the many beliefs individuals hold about themselves, one key aspect is whether they view their intelligence, abilities, or talents as malleable or static. As mentioned earlier in this chapter, extensive research has focused on how these *individual mindset beliefs*—when personally endorsed—predict personal goals (Dweck, 2013; Dweck & Leggett, 1988). This theoretical

framework suggests that fixed mindset beliefs about ability and talent tend to orient individuals toward performance goals. These goals motivate people to prove their competence and avoid negative judgment by concealing incompetence or inexperience. When faced with challenges and failures, people with fixed mindset beliefs are generally more sensitive to negative performance feedback and are preoccupied with maintaining their status or image (cf. Blackwell, Trzesniewski, & Dweck, 2007; Burnette, O'boyle, VanEpps, Pollack, & Finkel, 2013; Hong, Chiu, Dweck, Lin, & Wan, 1999). In contrast, those with growth mindset beliefs tend to orient themselves toward learning goals, seeing failures and setbacks as opportunities to develop their competence. As a result, individuals with growth mindset beliefs often view failures as learning opportunities (Blackwell et al., 2007; Cron, Slocum, VandeWalle, & Fu, 2005; Hong et al., 1999; Nussbaum & Dweck, 2008). Therefore, I predict:

> Hypothesis 4a (H4a): A more fixed (vs. growth) individual mindset negatively relates to the perceived net benefits of failure sharing.

Self-compassion

Self-compassion is an attitude toward oneself that fosters the ability to manage negative self-judgments and emotional responses to setbacks. It involves treating oneself with kindness and understanding, particularly during moments of suffering or pain. The theoretical model of self-compassion includes six core elements: self-kindness, common humanity, and mindfulness, which counteract self-judgment, isolation, and overidentification, respectively (Neff, 2023). Together, these elements promote a balanced perspective, enabling individuals to face challenges with resilience and emotional equilibrium. Importantly, self-compassion is not merely a fixed personality trait but a skill that can be cultivated and strengthened through practice (Neff, 2009; Neff, 2023).

Research on self-compassion has found a number of positive effects on individuals' state of mind while reducing negative emotions. Specifically, self-compassionate individuals exhibit higher trait levels of hope, gratitude, and curiosity (Gunnell, Mosewich, McEwen, Eklund, & Crocker, 2017; Neff, Kirkpatrick, & Rude, 2007; Neff et al., 2018) and display more autonomy and

authenticity (Gunnell et al., 2017; Zhang et al., 2019). Conceptually, self-compassion has been argued to play an important role in organizations, particularly in the relationship between team members' failure experiences and their perception of failures as beneficial for learning and development (Shepherd & Cardon, 2009). Furthermore, research indicates a positive relationship between self-compassion and the belief that failures are learning opportunities, alongside a negative relationship with the belief that failures should be eluded (Miyagawa, Niiya, & Taniguchi, 2020). Self-compassion research also suggests that self-compassionate individuals are less likely to negatively evaluate themselves or experience a loss of status when facing setbacks (Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, Hsieh, & Dejitterat, 2005). As self-compassionate individuals perceive failures as opportunities for learning, are less prone to negative self-evaluation, and generally maintain a more balanced, optimistic, and positive mental state, they likely prioritize benefits (e.g., personal and organizational learning) over the costs (e.g., damage to one's self-concept) when considering whether to share failures.

> Hypothesis 4b (H4b): Self-compassion positively relates to the perceived net benefits of sharing failures.

Organizational-level antecedents to failure-sharing cognition

Organizational mindset

Organizational norms and values are critical determinants of how an organization views failures, as these shared social conventions and understandings shape employees' perceptions and core beliefs. These beliefs, in turn, influence employees' cognitions, particularly regarding what is considered valuable and important within the organization (Canning et al., 2020; Murphy & Dweck, 2010). Canning et al. (2020: 627) proposed that one of the core beliefs is an organization's "mindset," or "people's perceptions of the organization's belief about the fixed or developmental nature of talent and ability." While fixed and growth mindset beliefs have traditionally been viewed as individual self-theories, Canning et al. (2020) recently extended this concept to an organizational-level construct that predicts cultural norms and beliefs.

Organizational mindsets are communicated through the procedures, policies, and practices of an organization, as well as by influential individuals within the organization. These messages indicate how a group or organization perceives the nature of people's talent, intelligence, and ability as either fixed or malleable. For instance, in a fixed mindset, the belief may be that "people either 'have it' or they don't and there is little they can do to change this" (Murphy & Reeves, 2019: 8). An organizational fixed mindset celebrates genius, brilliance, and achievement, thus promoting behaviors that strive for recognition based on performance and competition with colleagues for star status (Canning et al., 2020; Murphy & Dweck, 2010). This type of collective mindset can lead individuals to perceive more costs and fewer benefits in sharing failures, as they may be seen as threatening to their personal image, damaging the organization's reputation, or considered unimportant by colleagues and the organization as a whole. In contrast, an organizational growth mindset reflects the belief that ability and talent are malleable, which shapes individuals' views of failure as a necessity for development, a means to prevent more serious consequences, a source of personal and organizational learning, and beneficial to one's self-concept of being ethical, altruistic, and driven by continuous improvement.

An organization's mindset—whether fixed or growth-oriented—plays a pivotal role in shaping its perspective on failures. This collective outlook influences employees' perceptions and core beliefs, as demonstrated by findings from the qualitative case study and supported by previous research (e.g., Dahl & Werr, 2021; Frese & Keith, 2015; Gronewold et al., 2013). Therefore, I predict:

> Hypothesis 5a (H5a): A more fixed (vs. growth) organizational mindset negatively relates to the perceived net benefits of sharing failures.

Psychological safety

Psychological safety refers to individuals' subjective appraisal of external conditions that support risk-taking, such as divergent thinking, disclosing negative emotions, and sharing failures. The literature defines psychological safety as the level of interpersonal danger individuals perceive when working in teams (Edmondson, 2018). Extensive research has shown a positive

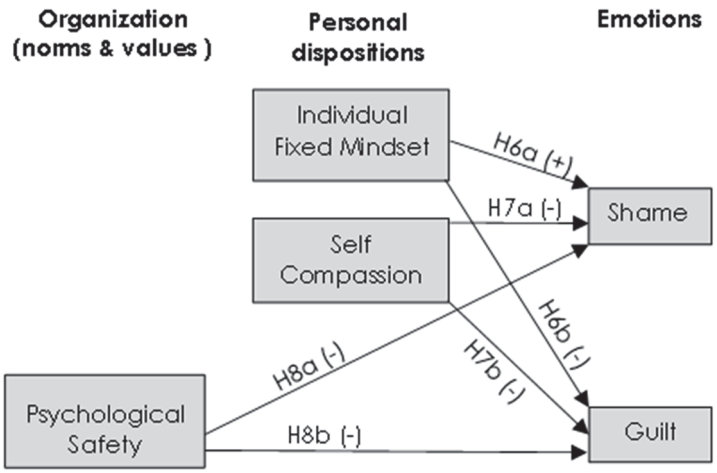
relationship between psychological safety and employees' motivation to communicate failures and other negative events. (Carmeli & Gittell, 2009; Edmondson et al., 2004; Edmondson & Lei, 2014). In such environments, failures and events are perceived as less threatening and as valuable opportunities for individual and team learning. Research suggests that psychological safety fosters team norms that encourage members to share information about both what works and what does not, as well as the belief that discussing the negative consequences of team activities and decisions is beneficial (Garvin, Edmondson, & Gino, 2008). In teams and organizations where individuals experience higher levels of psychological safety, they may be more likely to weigh greater benefits (e.g., learning and improvement) against lower costs (e.g., fear of negative reactions from colleagues, job insecurity, or damaged team reputation) when considering whether to share failures. Therefore, I hypothesize:

> Hypothesis H5b (H5b): Psychological safety positively relates to the perceived net benefits of sharing failures.

5.2.3 Antecedents to failure emotions

The conceptual model incorporates various dispositional and cultural antecedents linked to feelings of shame and guilt. These relationships are explored in greater detail in the following section.

Figure 5.5. Individual and organizational-level antecedents to failure emotions.



Personal dispositions as antecedents to failure emotions

Individual mindset

Surprisingly, research has thus far explored the connections between individual mindset beliefs and self-conscious emotions, particularly in the context of failure, to a limited extent. One exception is Zhao (1998), who, along with colleagues, experimentally compared failure responses in college students with fixed versus growth mindset beliefs, ensuring the participants had similar analytical abilities, confidence in their intelligence, and no signs of depression. Fixed mindset students were more likely to respond to hypothetical failures with statements that undermined the self, such as: "I would think I am dumb," "I feel like a total failure," and "I feel worthless." These responses were far less common among growth mindset students, suggesting that fixed-mindset individuals tend to see failure as a reflection of their intrinsic abilities. Furthermore, fixed mindset students expressed much stronger negative emotional reactions, such as "feeling hopeless or totally depressed" and a desire "to simply quit and escape from the arena in which the failure took place" (Zhao et al., 1998: 46). Because individuals with a fixed mindset view their intelligence, abilities, and talents as immutable and prioritize performance as a confirmation of their competence and self-worth,

failure is often attributed to perceived deficiencies in central aspects of the self. This can lead to feelings of incompetence or inadequacy (Dahl & Werr, 2021; Dweck, 2013; Zhao et al., 1998), with the added fear of social exclusion. Given these attributions of failure to the self in the context of a fixed mindset, I hypothesize that individuals with a more fixed versus growth mindset will be more likely to experience feelings of shame when facing failure.

> Hypothesis 6a (H6a): A more fixed (vs. growth) individual mindset positively relates to feelings of shame.

Unlike fixed mindset students, growth mindset students predominately responded to failures with changed strategies and heightened effort, turning failure into success. They also displayed fewer negative emotional reactions and signs of depression compared to the fixed-mindset students (Zhao et al., 1998). Growth mindset students also showed significantly lower tendencies to attribute failure to the self. Instead, they tended to attribute failures and low performance to their preparations, efforts, and ways of execution. Guilt, in contrast to shame, arises when individuals negatively evaluate specific behaviors or actions somewhat distant from the global self (Tangney, 1995). Guilt relates to having done something wrong or not good enough, which does not have to affect one´s self-perception. In the context of a growth mindset, individuals view their abilities and talents as malleable and possible to improve through persistence and experience. Failures are thus likely to be viewed as a way to develop the self – rather than threatening it – and the attribution of the failure is likely to focus on the actions that caused the failure, and that may be improved as a way to grow the self. I, therefore, hypothesize that a fixed (vs. growth) mindset negatively relates to emotions of guilt when experiencing failure.

> Hypothesis 6b (H6b): A more fixed (vs. growth) individual mindset negatively relates to feelings of guilt.

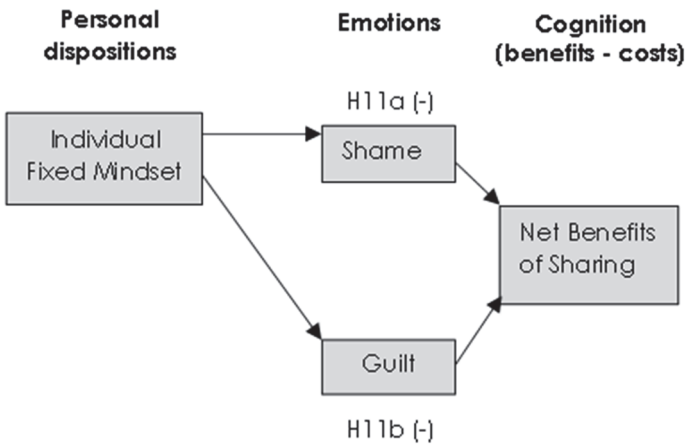
In line with this reasoning, the negative relationship between a fixed individual mindset and perceived net benefits of sharing failures may be mediated

by feelings of shame and guilt (see Figure 5.6). Specifically, a fixed mindset induces shame (H6a), which, in turn, decreases the perceived net benefits of sharing failures (H3a). Conversely, a fixed individual mindset potentially reduces feelings of guilt (H6b), and these reduced feelings then diminish the perceived net benefits of sharing (H3b). Therefore, I hypothesize that feelings of shame and guilt negatively mediate the effect of a fixed (vs. growth) individual mindset on the perceived net benefits of sharing failures, although the fixed mindset influences these emotions in different directions.

Hypothesis 11a (H11a): A more fixed (vs. growth) individual mindset negatively affects the perceived net benefits of sharing indirectly through feelings of shame.

Hypothesis 11b (H11b): A more fixed (vs. growth) individual mindset negatively affects the perceived net benefits of sharing indirectly through feelings of guilt.

Figure 5.6. Indirect paths between individual fixed mindset and net benefits of sharing, with feelings of shame and guilt as potential mediators.



Self-compassion

As previously discussed, self-compassion refers to how individuals relate to themselves in instances of failure, inadequacy, or personal suffering, and it has been examined as an antecedent to failure-sharing cognition (H4b). However, there are reasons to believe that self-compassion can also serve as an antecedent to individuals' failure emotions. Self-compassion tends to reduce the avoidance of negative emotions (Yela, Crego, Buz, Sánchez - Zaballos, & Gómez - Martínez, 2022), decrease entanglement with negative emotions (Miyagawa et al., 2020), enhance emotion regulation skills (Inwood & Ferrari, 2018), and buffer against negative self-feelings while moderating negative emotions (Leary et al., 2007). Management research suggests that professionals' ability to practice self-compassion in the face of project failures explains both the variance in the intensity of the negative emotions induced by the failure and why some individuals recover faster than others (Shepherd & Cardon, 2009).

In relation to self-compassion, the self-evaluative nature of shame and guilt makes them particularly relevant because they constitute forms of internal feedback indicating that a specific goal, expectation, or standard has been violated (Leary & Tangney, 2003). Extensive research has shown negative associations between self-compassion and shame (Neff, 2023). For example, self-compassion predicts less shame among smokers diagnosed with lung cancer (Siwik, Phillips, Zimmaro, Salmon, & Sephton, 2022) and rape survivors (Bhuptani & Messman, 2023). In an experimental study, self-compassionate individuals reported significantly lower shame compared to a control group when recalling a past event that caused them shame and then writing about the event in a self-compassionate manner (Johnson & O'Brien, 2013). Additionally, negative relationships have been found between self-compassion and both shame and guilt in young female athletes who underachieved (Mosewich, Kowalski, Sabiston, Sedgwick, & Tracy, 2011), as well as guilt in homeless veterans (Held & Owens, 2015). Thus, self-compassion is likely to enhance individuals' ability to manage negative self-conscious emotions in situations of perceived failure, especially when feeling shame and guilt.

In conclusion, since feelings of shame and guilt involve self-evaluation, which is precisely when the buffering effects of self-compassion should be

most beneficial, I predict that self-compassion negatively relates to emotions of shame and guilt when experiencing failure:

> Hypothesis 7a: Self-compassion negatively relates to feelings of shame when experiencing failures.

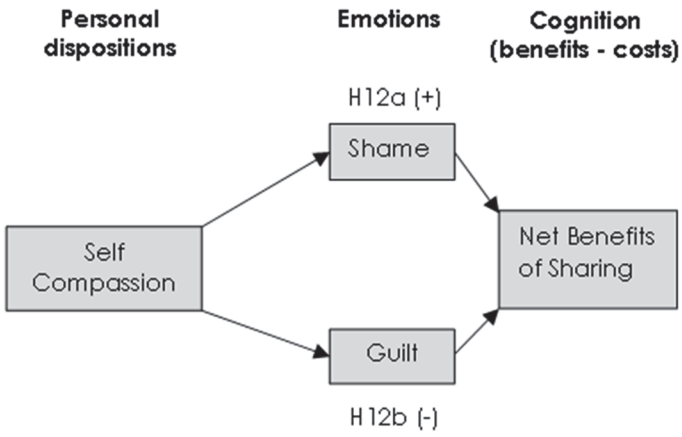
> Hypothesis 7b: Self-compassion negatively relates to feelings of guilt when experiencing failures.

Feelings of shame and guilt may mediate the relationship between self-compassion and the perceived net benefits of sharing failures. However, these mediation effects could be contradictory. While self-compassion is hypothesized to increase the perceived net benefits of sharing (H4b), it is also expected to reduce both shame (H7a) and guilt (H7b). On the one hand, reduced shame may lead to higher perceived net benefits of sharing (H3a). On the other hand, reduced guilt may lead to lower perceived net benefits of sharing (H3b). Consequently, shame and guilt may function as competitive mediators in the relationship between self-compassion and perceived net benefits of sharing failures (see Figure 5.7).

> Hypothesis 12a (H12a): Self-compassion positively affects perceived net benefits of sharing indirectly through feelings of shame.

> Hypothesis 12b (H12b): Self-compassion negatively affects perceived net benefits of sharing indirectly through feelings of guilt.

Figure 5.7. Indirect paths between self-compassion and net benefits of sharing, with feelings of shame and guilt as potential mediators.



Organizational-level antecedents to failure emotions

Psychological safety

Several arguments support the notion of psychological safety as an antecedent to failure emotions. Previous research has identified both managerial tolerance of failures and employees' shared beliefs in the normalization of failures as central predictors of psychological safety. Studies examining these predictors have consistently found significant associations between managerial intolerance of failures and heightened negative emotionality about failures (Edmondson, 1996; Shepherd et al., 2011; Zhao, 2011).

For example, in a qualitative study of U.S. hospitals, nurses reported stronger negative emotions about errors when their superiors were perceived to be intolerant of errors, which, in turn, negatively influenced their sense of safety within the team (Edmondson, 1996). Similarly, an experimental study examining perceived managerial intolerance revealed a significant positive relationship between managerial intolerance and negative emotions such as guilt and sadness (Zhao, 2011). Research by Shepherd et al. (2011) on project failures in German research institutes also found that individuals who perceived failure as highly normalized within their organization experienced fewer negative emotions than those who viewed failure as less normalized.

Further, evidence highlights the importance of high-quality interpersonal relationships. A study on learning behavior and psychological safety found a positive association between individuals' ability to communicate emotions within work relationships and their perception of psychological safety (Carmeli, Brueller, & Dutton, 2009). Organizational scholars argue that greater levels of psychological safety enable employees to better manage negative emotional reactions to failure (Dahlin et al., 2018; Edmondson & Lei, 2014). In work environments characterized by higher levels of interpersonal safety, managerial acceptance of failures, and the normalization of failures, individuals are more likely to experience reduced negative emotions following failures. Building on these findings, I propose that psychological safety is negatively associated with feelings of shame and guilt in failure contexts.

> Hypothesis 8a: Psychological safety negatively relates to feelings of shame when experiencing failures.

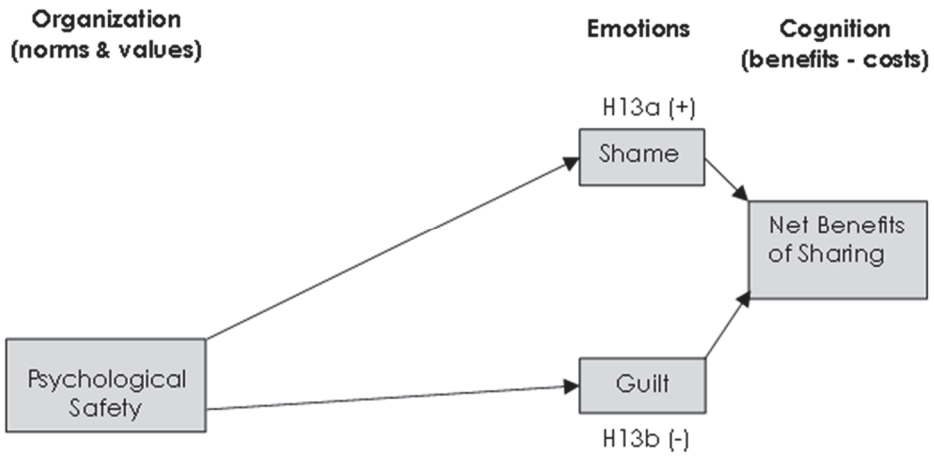
> Hypothesis 8b: Psychological safety negatively relates to feelings of guilt when experiencing failures.

The direct positive effect of psychological safety on the perceived net benefits of sharing failures (H5b) may be influenced by feelings of shame and guilt. Psychological safety has the potential to reduce both shame (H8a) and guilt (H8b). Since shame is associated with relatively higher costs of sharing failures (H3a) and guilt with relatively lower costs (H3b), these emotions may mediate the relationship between psychological safety and perceived net benefits of sharing in opposing directions (see Figure 5.8):

> Hypothesis 13a (H13a): Psychological safety positively affects perceived net benefits of sharing indirectly through feelings of shame.

> Hypothesis 13b (H13b): Psychological safety negatively affects perceived net benefits of sharing indirectly through feelings of guilt.

Figure 5.8. Indirect paths between psychological safety and perceived net benefits of sharing, with feelings of shame and guilt as potential mediators.



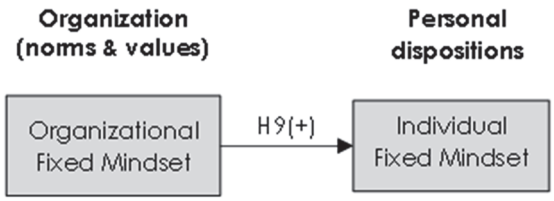
5.2.4 Antecedent to individual mindset

Organizational mindset as an antecedent to individual mindset

When linking the organizational level of analysis with the individual level, previous research on motivated reasoning and self-perception indicates that when people perceive certain dispositions or traits as being valued, these perceptions may influence their current self-concept. This process activates self-conceptions that align with, in the organizational context, the currently desired views of the self (Kunda & Sanitioso, 1989; Schlenker & Wowra, 2003).

If an organizational mindset (i.e., fixed or growth) shapes people's beliefs about the qualities valued within the organization, individuals are likely to exhibit those qualities to gain acceptance and a sense of belonging. This, in turn, shifts their self-concepts to reflect the organization's values (Gardner & Martinko, 1988; Leary, 2019). For example, Murphy and Dweck (2010) demonstrated in their study that an organizational fixed mindset led individuals to perceive themselves as smart, brilliant, and intelligent, which ultimately aligned with a fixed individual mindset.

Figure 5.9. Organizational mindset as an antecedent to individual mindset.



Based on this reasoning, I predict that an organizational fixed mindset positively influences employees' individual fixed mindsets:

> Hypothesis 9 (H9): A more fixed (vs. growth) organizational mindset positively relates to a more fixed (vs. growth) individual mindset.

If a fixed organizational mindset negatively influences the perceived net benefits of sharing failures (H5a), an individual fixed mindset may mediate this effect (see Figure 5.10). Therefore, I hypothesize:

> Hypothesis 14 (H14): A more fixed (vs. growth) organizational mindset negatively affects perceived net benefits of sharing indirectly through a more fixed (vs. growth) individual mindset.

Figure 5.10. Indirect path between organizational mindset and perceived net benefits of sharing, with individual mindset as a potential mediator.

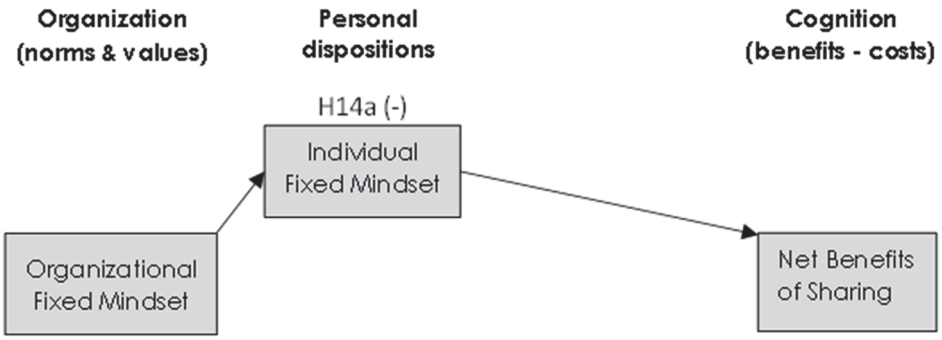
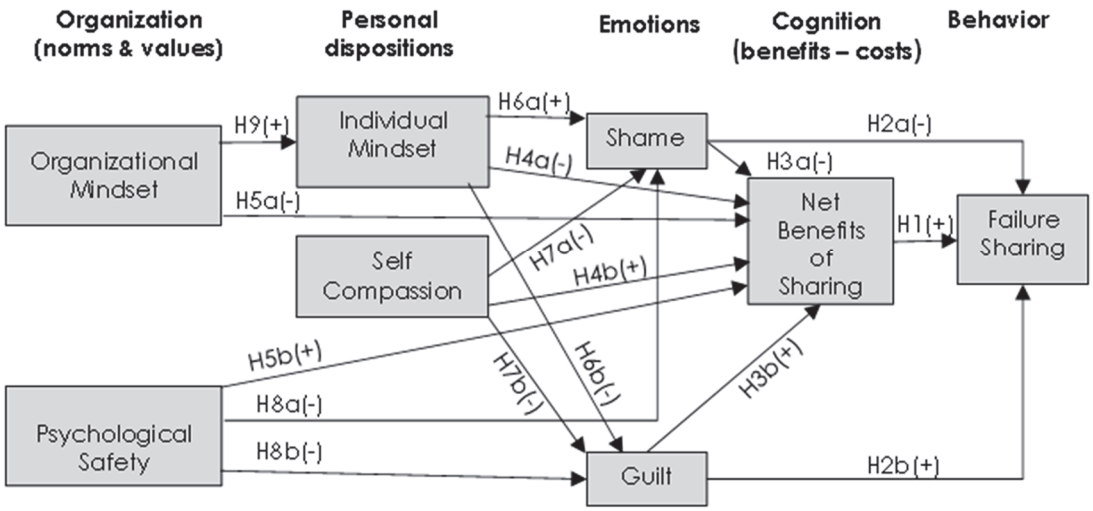


Table 5.1 provides an overview of the developed hypotheses (H1–H14) to be further investigated in the forthcoming studies, referred to as Study 2a and Study 2b. This is followed by Figure 5.11, which illustrates the full conceptual model, including the developed hypotheses of direct relationships (H1–H9).

Table 5.1. Overview of hypotheses.

	Hypothesis	*Study*
H1	Perceived net benefits of sharing failures positively relate to failure sharing.	2a, 2b
H2a	Feelings of shame negatively relate to failure sharing.	2a, 2b
H2b	Feelings of guilt positively relate to failure sharing.	2a, 2b
H3a	Feelings of shame negatively relate to the perceived net benefits of failure sharing.	2a, 2b
H3b	Feelings of guilt positively relate to the perceived net benefits of failure sharing.	2a, 2b
H4a	A more fixed (vs. growth) individual mindset negatively relates to the perceived net benefits of sharing failures.	2a, 2b
H4b	Self-compassion positively relates to the perceived net benefits of sharing failures.	2a, 2b
H5a	A more fixed (vs. growth) organizational mindset negatively relates to the perceived net benefits of sharing failures.	2a, 2b
H5b	Psychological safety positively relates to the perceived net benefits of sharing failures.	2b
H6a	A more fixed (vs. growth) individual mindset positively relates to feelings of shame.	2a, 2b
H6b	A more fixed (vs. growth) individual mindset negatively relates to feelings of guilt.	2a, 2b
H7a	Self-compassion negatively relates to feelings of shame when experiencing failures.	2a, 2b
H7b	Self-compassion negatively relates to feelings of guilt when experiencing failures.	2a, 2b
H8a	Psychological safety negatively relates to feelings of shame when experiencing failures.	2b
H8b	Psychological safety negatively relates to feelings of guilt when experiencing failures.	2b
H9	A more fixed (vs. growth) organizational mindset positively relates to a more fixed (vs. growth) individual mindset.	2a, 2b
H10a	Feelings of shame negatively affects failure sharing indirectly through perceived net benefits of sharing.	2a, 2b
H10b	Feelings of guilt positively affects failure sharing indirectly through perceived net benefits of sharing.	2a, 2b
H11a	A more fixed (vs. growth) individual mindset negatively affects perceived net benefits of sharing indirectly through feelings of shame.	2a, 2b
H11b	A more fixed (vs. growth) individual mindset negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	2a, 2b
H12a	Self-compassion positively affects perceived net benefits of sharing indirectly through feelings of shame.	2a, 2b
H12b	Self-compassion negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	2a, 2b
H13a	Psychological safety positively affects perceived net benefits of sharing indirectly through feelings of shame.	2b
H13b	Psychological safety negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	2b
H14	A more fixed (vs. growth) organizational mindset negatively affects perceived net benefits of sharing indirectly through a more fixed (vs. growth) individual mindset.	2a, 2b

Figure 5.11. Conceptual model illustrating hypotheses H1–H9.



Chapter 6

Examining Failure Sharing in an Online Study

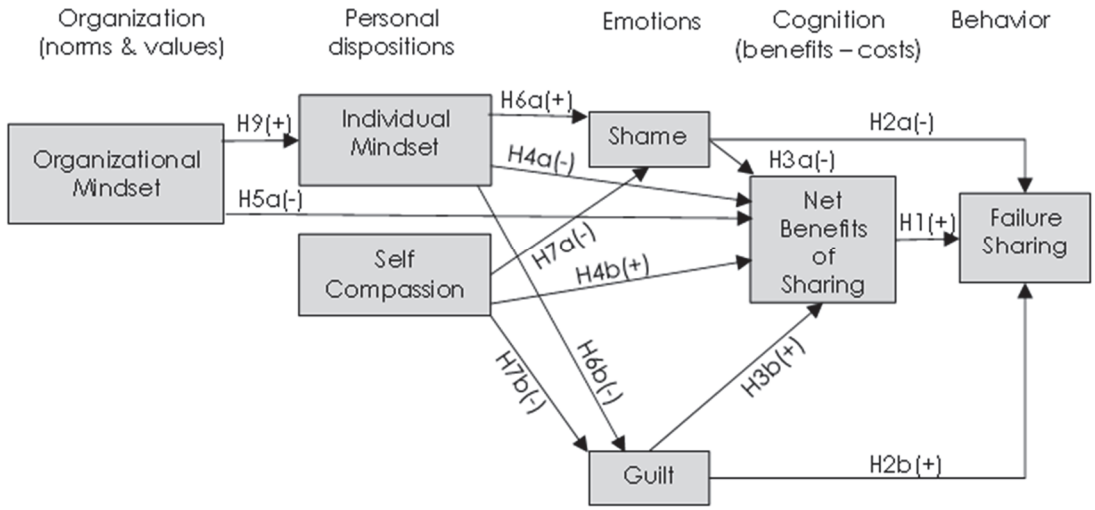
This chapter presents the first of the two cross-sectional survey studies conducted to statistically analyze the conceptual model. The purpose of the first study ("2a") was to investigate a set of hypotheses that collectively form the core conceptual model (see Figure 6.1). Not all potential direct and indirect effects were tested in this study (e.g., psychological safety was excluded) to avoid overwhelming participants with too many items. Research indicates that lengthy and exhaustive surveys can reduce both response rates and response quality (Galesic & Bosnjak, 2009).

The sample for the online study consisted of U.S. and U.K. employees working in knowledge-intensive business services organizations. This contrasts with the subsequent ecological study ("2b"), which focused on auditors from the Swedish branch of a global "Big Four" auditing firm. The survey method and content were designed by integrating findings from the previous qualitative case study with research on error management, failure and error learning, and related fields such as social and personality psychology. The results from the online study offered valuable insights for refining the measures and informed the ecological validation of the model's effects in a real work context. Study 2b is detailed in Chapter 7.

The chapter begins by detailing the research context and the characteristics of the participants. It then describes the research procedure, followed by an explanation of the measures and covariates. In the subsequent section,

two correlation matrices are presented: one displaying bivariate correlation coefficients and the other showing semi-partial correlation coefficients. These matrices provide indications of whether the hypothesized relationships in the model received sufficient support. Next, the chapter introduces simple and multiple regression data analyses to explore the potential total, direct, and indirect effects of the model. The chapter concludes with a table summarizing the level of support for each hypothesis.

Figure 6.1. Conceptual model illustrating hypotheses tested in Study 2a.



6.1 Participants and procedure

The online study aimed to statistically explore the associations in the conceptual model using a sample of employees working full- or part-time in various knowledge-intensive organizations. Participants were required to have at least five months of employment at their current organization and to possess a relevant education level, such as a minimum of technical or community college education. To achieve over 80% power, the sample size was carefully determined based on previous research (derived from previous research, e.g. Canning et al., 2020; Murphy & Dweck, 2010). Data were collected from 155

participants, all of whom were employees residing in the United States or the United Kingdom and had English as their first language. The sample was gathered using Prolific, an internet-based platform commonly used for online experiments and behavioral research (Palan & Schitter, 2018; Peer et al., 2017). Participants were compensated with a recommended amount of money for the time spent completing the survey (approximately 25 minutes). Following recommendations by Buchanan and Scofield (2018), six participants were excluded from the analyses due to incompleteness, failure to pass attention checks, or response times that were too low. This resulted in a final sample of 149 participants, of which 53.7% were women and 1.3% identified as non-binary. Tables 6.1, 6.2, and 6.3 provide an overview of the participants' age distribution, type of employment, and length of employment.

Table 6.1. Overview of participants' age (n = 149).

Age	18-30	31-40	41-50	51-60	61-70
Percent (%)	18	32	32	16	2

Table 6.2. Overview of participants' type of employment (n = 149).

Type	Full-time	Part-time
Percent (%)	86	14

Table 6.3. Overview of participants' length of employment (n = 149).

Length (year)	1-3	4-6	7-10	>10
Percent (%)	24	20	19	34

After providing consent, participants were asked to complete an anonymous survey (see Appendix 1). The survey was described as being for scientific

purposes and included a series of questions about actual and potential work situations. Participants were informed that the researcher was interested in their personal experiences and perceptions, emphasizing that there were no "right" or "wrong" answers. To induce emotional reactions related to failure, participants were presented with a scenario depicting a public work-related failure (see Figure 6.2). They were asked to imagine this scenario occurring in their current work context. This work-situation scenario had been pre-tested (n = 55) to ensure it effectively induced negative emotional reactions, specifically feelings of shame and guilt. After reading the scenario, participants completed a questionnaire assessing their emotional responses (shame and guilt), intended behaviors (failure sharing), and their reasoning regarding sharing and non-sharing (perceived costs and benefits of sharing). They also responded to questions about self-compassion and social desirability.

Figure 6.2. Scenario used in the online study.

You are now going to read about a work situation. Please imagine that this occurs in your current work context.

"As an expert, you are responsible for an important project in your organization. It has been a challenging project, but now that you are approaching the finishing line, you are quite happy with the result. And the time has come for you to present your findings. A dozen managers (not including your manager) are gathered in a conference room eagerly awaiting your findings. They will base an important decision on your report. The presentation is off to a good start, with an attentive audience. But as you open for input from the audience, you get a question that you cannot answer. Follow-up questions become increasingly critical and undermine your main conclusions. You try to respond but struggle to provide satisfactory answers. You realize that you have missed important aspects that the managers had expected you to cover. The meeting ends with the group concluding that your investigation does not provide a sufficient basis for the decision. The managers leave the room chatting with each other. It is obvious that they are annoyed and disappointed with what they have just heard. You pack up your computer and papers and find yourself alone with your thoughts."

6.2 Measures

To obtain measures for the variables in the conceptual model, I consulted previous research on error management, learning from failures, and social and cognitive psychology. For example, I used scales from Canning et al. (2020) and Murphy and Dweck (2010) to examine individual and organizational mindsets. Where no existing items or scales were available, as with failure sharing and perceived net benefits of sharing, I designed new items. To ensure the psychometric validity of these measures, I conducted exploratory factor analyses to assess their factor structures (i.e., underlying dimensions). The internal reliability of each measure was evaluated using Cronbach's alpha (Cronbach, 1951). The decision to use alpha (α) instead of omega (ω), which is increasingly preferred due to its fewer assumptions about scale items, is not expected to significantly affect the results. The Cronbach's alpha values reported in the factor analysis represent the internal consistency of the items that exhibited the highest loadings on each respective factor. Items with item-total scale correlations less than 0.3 were identified as weak items (Field, 2018), and the handling of these weak items is described later in the text. Appendix 1 includes all items used and analyzed. The following section introduces each measure, detailing its design and psychometric properties, beginning with the outcome variable, failure sharing, and then progressing from right to left in the conceptual model (Fig. 6.1).

6.2.1 Failure sharing

Since no established measure existed to capture failure sharing, I developed a new scale. To assess failure sharing, 12 items were designed to capture a broad spectrum of failure-sharing behaviors. The development of these items was informed by findings from the qualitative interviews in the case study and previous research. The failure-sharing measures were designed to capture three distinct behaviors: silencing failures (three reversed items), private sharing (three items), and public sharing (six items; see Table 6.4). This design addresses two main limitations of the established Error Communication (EC) Scale, which forms one of the eight subscales in the broader Error Orientation Questionnaire (EOQ, Rybowiak et al., 1999). First, the EC Scale does not specify with whom one shares failures (e.g., manager, colleague) or

in which context (private, public regulated, or public unregulated). Second, it does not distinguish between the intention to share and the actual sharing behavior, which overlooks theoretical insights from the theory of planned behavior (Ajzen, 1991). The theory of planned behavior establishes a link between the perceived costs and benefits of a behavior, shaping attitudes toward it and, ultimately, influencing the intention to perform the behavior. For instance, one item from the EC Scale states, "When I make a mistake at work, I tell others about it so they don't make the same mistake" (Rybowiak et al., 1999: 547). In this example, the intention to perform the behavior is to prevent others from repeating the same mistake. In the current study, a separate measure was used to capture this dimension (perceived net benefits of sharing), which will be discussed in the next section. Participants rated the failure-sharing items on a scale from 1 (very unlikely) to 5 (very likely) after reading the given scenario.

Table 6.4. Items included in the failure-sharing measure.

Behaviors and Items
Silencing of Failures
I will keep the situation to myself, no need to disturb my colleagues or boss about it
I will just move on and be silent about the situation and hope that nobody will bring it up.
I will keep quiet and avoid the people who were involved
Private Sharing
I will share the situation with a colleague who is also a friend – whom I trust.
I will share the situation with someone outside work, like a partner or close friend.
I will only discuss the situation with someone who I believe can keep quiet about it.
Public Sharing
I will share this situation with those that may be affected by it.
I will discuss the situation with my manager.
I will share this situation with those that have been involved in the process of producing the investigation.
I will share and discuss the situation in our next department meeting.
I will e-mail all in the department to share this experience.
I will call an open meeting to share and discuss the situation.

The analysis began with a preparatory phase to assess the psychometric properties of the new measure by conducting an exploratory maximum-likelihood factor analysis (EFA) on all 12 items, followed by internal consistency reliability analyses. The maximum-likelihood method was chosen to allow for generalization to a larger population, as the findings would be cross-validated in another sample in the subsequent study ("2b"; see Harman, 1976). Given the assumption of correlations between the underlying factors, an oblique rotation (direct oblimin) was applied to better distinguish the factors. The analysis confirmed the sampling adequacy, with a Kaiser–Meyer–Olkin (KMO) measure of 0.82, which is considered "meritorious" (Kaiser & Rice, 1974). KMO values for individual items were all greater than 0.71, exceeding the acceptable threshold of 0.5.

The next phase involved conducting an initial analysis to obtain eigenvalues for each factor in the data. Table 6.5 presents the factor loadings after rotation, grouped according to the three factors identified in the EFA.

Table 6.5 Pattern matrix of exploratory factor analysis for the failure-sharing items (n = 149).

	Rotated Factor Loadings		
Item	1	2	3
I will share and discuss the situation in our next department meeting.	.91	-.09	.02
I will share this situation with those that have been involved in the process of producing the investigation.	.77	.17	.05
I will call an open meeting to share and discuss the situation.	.59	-.05	-.11
I will e-mail all in the department to share this experience.	.61	-.16	-.02
I will share this situation with those that may be affected by it.	.46	.36	-.13
I will share the situation with a colleague who is also a friend – whom I trust.	.12	.69	-.02
I will share the situation with someone outside work, like a partner or close friend.	-.11	.41	-.02
I will keep the situation to myself, no need to disturb my colleagues or boss about it.	-.02	-.15	.76
I will just move on and be silent about the situation and hope that nobody will bring it up.	-.02	-.26	.75
I will keep quiet and avoid the people who were involved.	-.09	.02	.68
I will only discuss the situation with someone who I believe can keep quiet about it.	.01	.32	.56
I will discuss the situation with my manager.	.33	.33	-.38
Eigenvalues	4.61	1.57	1.41
% of Variance	38.46	13.05	11.75
Cronbach Alpha (a)	0.82	0.55	0.82[a]

Note: Extraction method: maximum-likelihood
Rotation method: oblimin with Kaiser normalization
[a] When item "I will only discuss the situation with someone who I believe can keep quiet about it." is deleted

Three factors had eigenvalues exceeding Kaiser's criterion of 1, collectively accounting for 63.27% of the variance. One item from the public sharing subscale, "I will discuss the situation with my manager," exhibited weak loadings across all factors (0.33, 0.33, and –0.38) and was subsequently removed. The items that clustered on the same factor suggested the following interpretations: Factor 1 represented public failure sharing, Factor 2 represented a reduced private failure sharing subscale (only two of the three private sharing items loaded highest on this factor, while the item "I will only discuss the situation with someone who I believe can keep quiet about it" loaded more strongly on Factor 3), and Factor 3 represented the silencing of failures.

The mixed loadings for the private sharing items, combined with the insufficient internal consistency of the private sharing subscale ($\alpha = 0.55$), undermined the interpretation of this potential subscale. Consequently, the private sharing items were excluded from further analysis. To create a comprehensive scale capturing behaviors ranging from actively hiding failures to actively sharing them, I aggregated the two remaining factors into a single index of failure sharing ($\alpha = 0.84$). The index was calculated by averaging the combined items, incorporating both the positive contributions (five public sharing items) and the negative contributions (three reversed ratings of the silencing of failures items).[1]

6.2.2 Perceived net benefits of failure sharing

As with the failure-sharing measure, there was no existing tool to assess individuals' perceived costs and benefits of sharing failures. This necessitated the development of 22 items, which were informed by data gathered from qualitative case study interviews (Dahl & Werr, 2021) as well as studies on error and failure communication (see Liang et al., 2012; Russo et al., 2015; Zhao & Olivera, 2006). The objective in creating these items was to capture a comprehensive range of potential costs and benefits associated with sharing failures.

Examples of items addressing various cost and benefit dimensions included potential image damage ("Sharing is detrimental to my self-concept"), perceived lack of interest from colleagues ("I doubt my colleagues are

[1] MEAN (Share_R1, Share_R3, Share_W1, Share_W2, Share_W3, –Sil1, –Sil2, –Sil3)

interested"), material risks ("My job or position could be at risk"), and learning opportunities ("Sharing is important for the organization and its learning"). This effort resulted in the formation of two subscales: perceived costs of sharing, comprising 12 items (e.g., "Sharing could be detrimental to my professional reputation"), and perceived benefits of sharing, consisting of 10 items (e.g., "Sharing is beneficial to my self-concept").

Instead of conducting an initial factor analysis, the decision was made to retain the majority of the developed cost and benefit items to capture a comprehensive range of concerns related to sharing failures with peers, particularly in the context of the public failure scenario presented in the survey. This strategy allowed for a more informed process in determining which items to keep, revise, or eliminate, guiding adjustments to this measure for use in the subsequent study.

An index termed "perceived net benefits of sharing" was created to reflect the continuum from positive (benefits) to negative (costs). This index was established by aggregating the two subscales: perceived costs of sharing ($\alpha = 0.81$) and perceived benefits of sharing ($\alpha = 0.84$). The index was calculated by taking the mean of the combined items, considering both the positive contributions (perceived benefits of sharing items) and the negative contributions (reversed ratings of the perceived costs of sharing items).[2]

Following internal reliability analyses, two items were excluded: one cost item ("I doubt my colleagues are interested"), which had an item-total scale correlation of 0.22, and one benefit item ("Sharing would prevent my supervisor or colleagues from getting upset"), which had a correlation of only 0.12. While conducting internal reliability analysis somewhat contradicted the initial strategy of not performing a factor analysis—since reliability analysis typically assumes a single underlying factor—it proved valuable. The analysis offered preliminary insights into how well the items aligned with the underlying construct, which is crucial for assessing the coherence and consistency of the items within the scale.

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[2] MEAN (–Costs1, Benefits1, –Costs2, –Costs4, Benefits4, Benefits3, –Costs6, Benefits5, –Costs7, Benefits6, –Costs3, Benefits7, –Costs8, Benefits9, –Costs10, Benefits8, –Costs11, Benefits10, –Costs12, –Costs9).

The final set of 20 items for perceived net benefits of sharing failures (α = 0.84) were measured on a scale from 1 (strongly disagree) to 5 (strongly agree). These items provided a sufficient foundation for evaluating participants' perceptions of the costs and benefits associated with sharing failures with peers.

6.2.3 Feelings of shame and guilt

Numerous measures exist to examine individuals' feelings of shame and guilt; however, most assess personal traits or dispositions and are detached from the specific situations in which these emotions occur. Two frequently used scenario-based dispositional measures in the social personality literature are the Test of Self-Conscious Affect–3 (TOSCA-3; Tangney, Dearing, Wagner, & Gramzow, 1989) and the more recent GASP scale (Cohen et al., 2011). For an overview of self-conscious emotion assessments, see Tracy et al. (2007: 443-467).

Because I aimed to measure temporary affective states rather than affective inclinations, I used the less commonly applied self-report measure, the State Shame and Guilt Scale (SSGS; Marschall, Sanftner, & Tangney, 1994). This scale was developed specifically to examine feelings of state shame and state guilt simultaneously. The SSGS offers several advantages as a straightforward and effective tool for assessing individuals' state feelings of shame and guilt through self-report questions. Unlike many existing measures, which rely on generic scenarios, the SSGS can be tailored to specific real-world situations. Additionally, it concurrently assesses both feelings of shame and guilt, whereas most other scales, such as the widely used Experience of Shame Scale (ESS; Andrews, Qian, & Valentine, 2002), measure these emotions separately.

The SSGS is based on Lewis's (1971) theory to assess the phenomenological aspects of state shame (e.g., "I feel small") and state guilt (e.g., "I feel tension about what I have done."). It consists of ten items divided into two subscales: state shame (five items, e.g., "I feel like I am a bad person" and "I feel worthless, powerless") and state guilt (five items, e.g., "I feel bad about something I have done" and "I feel remorse, regret"). Previous research demonstrates robust psychometric properties for the two subscales: shame (α: 0.82–0.89) and guilt (α: 0.82–0.87; (Cavalera, Pepe, Zurloni, Diana, &

Realdon, 2017; Tracy et al., 2007). I applied a scale from 1 (not feeling this at all) to 5 (feeling this very strongly) to assess participants' feelings of state shame and state guilt in relation to their experience of the work-related scenario.

To analyze the effects of additional negative emotions, I utilized the Basic Negative Emotion Scale from the PANAS-X (Watson & Clark, 1994), which includes subscales for fear, hostility, guilt/shame, and sadness. The analysis of these emotions did not alter any of the effects identified using the SGSS. The overall results remained consistent.

The next phase of the study involved a preparatory analysis to evaluate the psychometric properties of the SSGS measure, which has been utilized infrequently (Tracy et al., 2007). An EFA was conducted on all 10 items, followed by internal consistency reliability assessments. The maximum-likelihood method was selected (see Harman, 1976) to facilitate the generalization of the findings to a larger population, particularly as these results will be cross-validated in another sample in the subsequent study ("2b").

Assuming correlations among the underlying factors, an oblique rotation (direct oblimin) was applied to better differentiate the factors. The KMO measure confirmed the sampling adequacy for the analysis, yielding a KMO value of 0.93, deemed "marvelous," according to Kaiser and Rice (1974). Individual item KMO values were all above 0.89, far exceeding the acceptable threshold of 0.5 (Kaiser & Rice, 1974).

An initial analysis was conducted to obtain eigenvalues for each factor. Only one factor had an eigenvalue exceeding Kaiser's criterion of 1, accounting for 58.87% of the variance. Table 6.6 presents the factor loadings following rotation, grouped according to the single factor identified through the EFA.

Table 6.6. Pattern matrix of exploratory factor analysis for the SSGS-measure (N = 149).

	Rotated Factor Loadings
Item	1
I feel humiliated, disgraced. (S)	.87
I feel small. (S)	.82
I feel worthless, powerless. (S)	.79
I want to sink into the floor and disappear. (S)	.79
I feel bad about something I have done. (G)	.72
I feel tension, about something I have done. (G)	.70
I cannot stop thinking about something bad I have done. (G)	.69
I feel like I am a bad person. (S)	.66
I feel like apologizing, confessing. (G)	.66
I feel remorse, regret. (G)	.64
Eigenvalues	5.89
% of Variance	58.87
Cronbach Alpha (a)	0.92

Note: Extraction method: maximum-likelihood
Rotation method: oblimin with Kaiser normalization
Four iterations required
S for shame items and G for guilt items

The clustering of all items on a single factor raises concerns, as the SSGS measure in the online sample does not effectively differentiate between state shame and state guilt. This issue highlights the need for a more nuanced exploration of the distinctions between these two emotions. Shame and guilt share several similarities that complicate their differentiation: both are negative, self-conscious emotions triggered when events challenge one's sense of self-worth or perception by others. Both emotions evoke discomfort, often prompting individuals to avoid or mitigate these unpleasant feelings.

Additionally, the self-reported nature of these emotions may blur distinctions in individual perceptions.

It is, therefore, crucial to articulate a clear perspective on the uniqueness of each emotion. A key distinction lies in the focus on how social transgressions are evaluated: Shame is characterized by a negative self-assessment, such as "I am worthless," whereas guilt involves a negative evaluation of one's actions, such as "I did something wrong." Given that these two emotions are highly correlated yet possess unique characteristics, I will approach the subsequent analysis by examining them in parallel while controlling for each other. Specifically, shame will be defined as the unique contribution of shame when guilt is controlled for, and guilt will be defined as the unique contribution of guilt when shame is controlled for.

This approach allows for a more precise understanding of the distinct roles these emotions play in decision-making related to failure sharing. These distinct roles are critical to the current research as I seek to investigate their specific contributions to the hypothesized relationships in the conceptual model. I will proceed with the investigation using the original SSGS measure while acknowledging its limitations in distinguishing between shame and guilt. In the current sample, the state shame subscale demonstrated an internal consistency of $\alpha = 0.89$, while the state guilt subscale exhibited an internal consistency of $\alpha = 0.83$.

6.2.4 Individual fixed mindset

Participants' individual mindset beliefs were assessed using the eight items ($\alpha = .91$) from the entity and incremental beliefs subscales from Dweck's (1991) Theories of Intelligence Scale (TIS), one the most frequently applied measures for assessing mindset beliefs (Lüftenegger & Chen, 2017). Previous research has demonstrated that the TIS exhibits strong reliability (α ranging from 0.82 to 0.97) and construct validity (Dweck et al., 1995).

The entity subscale (fixed mindset beliefs) consisted of four items, while the incremental subscale (growth mindset beliefs) also included four items. These items assessed individuals' general beliefs about fixedness (e.g., "You have a certain amount of intelligence, and you can't really do much to change it") versus malleability (e.g., "You can always substantially change how much

talent you have") of their talent and intelligence. Participants rated the items on a scale from 1 (strongly disagree) to 6 (strongly agree).

In line with previous research (e.g. Canning et al., 2020; Dweck, 2013), I treated individual mindset as a one-dimensional variable ranging from fixed to growth. High values on the scale indicate a fixed mindset, while low values indicate a growth mindset. Accordingly, the subscales were aggregated into a single measure, termed individual fixed (vs. growth) mindset. The index was calculated by averaging the combined items and summing the fixed mindset items from the entity subscale with the reversed growth mindset items from the incremental subscale.

6.2.5 Self-compassion

Extensive research on self-compassion has been conducted since the early 2000s, with one of the most widely used self-report instruments being the Self-Compassion Short Form (SCS-SF), which consists of 12 items (Raes, Pommier, Neff, & Van Gucht, 2011). The SCS-SF includes three subscales designed to measure the core dimensions of self-compassion: self-kindness (e.g., "I'm disapproving and judgmental about my own flaws and inadequacies" [reversed]), common humanity (e.g., "I try to see my failings as part of the human condition"), and mindfulness (e.g., "When something upsets me, I try to keep my emotions in balance"). The SCS-SF has demonstrated strong internal consistency ($\alpha \geq 0.86$) and a nearly perfect correlation with the longer version of the SCS ($r \geq 0.97$; (Raes et al., 2011).

Participants rated their self-compassion using a scale from 1 (almost never) to 5 (almost always). In the current sample, the 12 items of the SCS-SF exhibited excellent internal consistency ($\alpha = 0.91$), with six of the items being reverse-scored.

6.2.6 Organizational mindset

Organizational mindset was assessed using six items, three of which were adapted from previous organizational mindset research (Canning et al., 2020; Murphy & Dweck, 2010). The remaining three items were newly developed as variations on the same theme to expand the item set and ensure a reliable measure. Participants rated the organizational mindset items on a 1 (strongly disagree) to 6 (strongly agree) scale. Consistent with previous applications

(e.g. Canning et al., 2020; Murphy & Dweck, 2010), organizational mindset was treated as a one-dimensional variable ranging from fixed to growth. Higher scores indicated an organizational fixed mindset, whereas lower scores reflected an organizational growth mindset.

The six items were aggregated into a single measure, termed organizational fixed (vs. growth) mindset, by combining the organizational fixed mindset items with the reverse-scored organizational growth mindset items. In the current sample, the six items demonstrated strong internal consistency (Cronbach's $\alpha = 0.92$). In this study, organizational fixed (vs. growth) mindset was the only measured organizational-level antecedent.

6.2.7 Covariates

In addition to demographic data such as gender, age, type of employment, and length of employment, this study included a measure of social desirability to address potential alternative explanations for the antecedents of failure sharing beyond those included in the conceptual model. Social desirability was assessed using eight items from the Balanced Inventory of Desirable Responding Short Form (BIDR-16; Hart et al., 2015). The BIDR-16 comprises two subscales: impression management (IM) and self-deceptive enhancement (SDE), each with eight items. For this study, only the eight IM items were used (e.g., "I sometimes tell lies if I have to" and "I have said something negative about a friend behind their back"). These items demonstrated an internal consistency of $\alpha = 0.74$. Although higher reliability ($\alpha \geq 0.80$) would have been preferable, prior research suggests that the IM scale typically achieves internal consistency around 0.70 (Li & Bagger, 2007). Participants rated the social desirability items on a scale from 1 (totally disagree) to 8 (totally agree).

6.2.8 Adequacy of measures

Common method variance and common method bias

To evaluate whether the survey was influenced by excessive common method variance (CMV), Harman's one-factor test was conducted. This widely used post-hoc technique in business research helps detect potential

common method bias (CMB; Fuller, Simmering, Atinc, Atinc, & Babin, 2016).

According to Harman's one-factor test, problematic CMB and CMV are indicated if the first factor in an exploratory factor analysis (EFA), encompassing all survey items, accounts for more than 50% of the variance (Podsakoff & Organ, 1986). Using the maximum likelihood method for the EFA, the analysis showed that the first factor accounted for 17.79% of the variance, while seven factors collectively explained 51.91% of the variance. Although these findings are not definitive, they suggest that the survey was not significantly impacted by CMB or CMV.

6.3 Hypotheses testing

To investigate the hypothesized relationships in the conceptual model, a bivariate correlation analysis was initially conducted to examine the associations proposed in hypotheses H1, H4a, H4b, H5a, and H9. These hypotheses involved measures that exhibited stronger reliability and robustness compared to those associated with shame and guilt measures.

As outlined in Section 6.2.3, the preparatory analysis revealed challenges in distinguishing between shame and guilt. Consequently, hypotheses addressing the effects of shame and guilt on failure sharing (H2a and H2b) and their association with perceived net benefits of sharing (H3a and H3b) were excluded from the initial bivariate correlation analysis. Similarly, hypotheses involving shame and guilt as outcome variables (H6–H8) were also excluded from this stage of analysis. To gain a more precise understanding of the specific contributions of each emotion, these relationships were analyzed using semipartial correlation analyses. By including both shame and guilt in parallel and controlling for the influence of one while analyzing the other, the semipartial analyses aimed to isolate their unique contributions to the hypothesized relationships.

Finally, to examine the indirect effects (H10–H14), I selected ordinary least squares (OLS) regression as the most appropriate method. First, using OLS and conducting multiple regression analyses on separate parts of the conceptual model provided more robust results. This was particularly important because estimating all variables simultaneously with structural

equation modeling (SEM) made it difficult to disentangle the various effects. Second, for smaller sample sizes, OLS regression leverages a t-distribution, which is more suitable for deriving p-values and confidence intervals for regression coefficients (Hayes, 2022). Third, the OLS PROCESS software is significantly more user-friendly than various SEM programs, enhancing both ease of use and efficiency.

A well-documented debate exists regarding the merits of OLS regression versus SEM for estimating observed variable models (cf. Hayes, Montoya, & Rockwood, 2017; Pek & Hoyle, 2016). While SEM is often praised for its ability to estimate latent variable models by incorporating both observed and latent variables, OLS remains advantageous for its simplicity and suitability for smaller sample sizes. Hayes (2022) argues that both OLS and SEM can be appropriate for the analysis in this thesis, as they fundamentally achieve similar outcomes through different analytical techniques.

Given the lack of normality in some of the variables, bootstrapped confidence intervals were applied, as these are more robust and unaffected by the distribution of scores (Field, 2018). Bootstrapping addresses the problem of lack of normality by estimating the properties of the sampling distribution from the sample data. Unless otherwise noted, the results of bivariate and covariate correlation analyses are based on 1,000 bootstrapped samples. The results of the statistical analyses are presented in the next section.

6.4 Results

6.4.1 Bivariate correlation analysis

To examine the correlations and effect sizes of hypotheses H1, H4a, H4b, H5a, and H9, a bivariate correlation analysis was employed. Assuming linearity and measuring antecedent and outcome variables at the interval level, Pearson's correlation coefficient was used to analyze the relationships between these modeled variables. The results, including Pearson's correlation coefficients for each variable and internal consistency reliability, are presented in the correlation matrix (see Table 6.7).

Table 6.7. Means, standard deviations, and effect sizes (Pearson's correlation coefficients; n = 149).

	M	SD	1	2	3	4	5
1 Failure Sharing (1-5)	.60	.81	**.80**				
2 Net Benefits of Failure Sharing ((-5)-5)	-.02	.58	.72**	**.84**			
3 Individual Fixed Mindset (1-6)	3.11	.91	-.04	-.16*	**.91**		
4 Self-Compassion (1-6)	2.89	.78	.27**	.40**	-.13	**.91**	
5 Organizational Fixed Mindset (1-6)	3.18	.99	-.01	-.27**	.45**	-.23**	**.92**

Note:
** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Cronbach's alpha coefficients are presented in bold on the diagonal

The correlation coefficients were computed with bias-corrected and accelerated 95% confidence intervals (CI), which are reported in square brackets. The results of the bivariate correlation analysis show that participants' perceived net benefits of sharing failures positively relate to their willingness to communicate about them ($r = 0.72$, [0.63, 0.79], $p < .001$), supporting H1. As expected, possessing a fixed (vs. growth) individual mindset negatively relates to participants' perceived net benefits of sharing ($r = –0.16$, [–0.31, –0.00], $p = 0.049$), supporting H4a. Additionally, being more self-compassionate relates positively to participants' perceived net benefits of sharing ($r = 0.40$, [0.26, 0.54], $p < 0.001$), supporting H4b. On the organizational level, when an organization is perceived to hold a fixed (vs. growth) mindset belief, it negatively relates to participants' perceived net benefits of sharing ($r = –0.27$, [–0.41, –0.12], $p < 0.001$), supporting H5a. Finally, as predicted, when an organization is perceived to embrace a more fixed (vs. growth) mindset, participants tend to hold an individual fixed (vs. growth) mindset ($r = 0.44$, [0.27, 0.62], $p < 0.001$), supporting H9.

6.4.2 Semipartial correlation analysis

To examine the hypothesized relationships between shame and guilt on failure sharing (H2a and H2b) and on the perceived net benefits of sharing (H3a and H3b), as well as hypotheses that included shame and guilt as outcome variables (H6–H8), semipartial correlation analyses were conducted. This approach allowed for the inclusion of both emotions in parallel and controlled for the influence of each, thereby facilitating the examination of their unique contributions to the hypothesized relationships. The results, including semipartial correlation coefficients for each variable and internal consistency reliability, are presented in the correlation matrix (see Table 6.8). Correlations and internal consistency values already presented in Table 6.7 are excluded from this table.

Table 6.8. Means, standard deviations, and effect sizes (semipartial correlation coefficients; n = 149).

	M	SD	1	2	3	4	5	6
1 Failure Sharing (1-5)	.60	.81						
2 Net Benefits of Failure Sharing ((-5)-5)	-.02	.58						
3 Individual Fixed Mindset (1-6)	3.11	.91						
4 Self-Compassion (1-6)	2.89	.78						
5 Shame (1-5)	3.63	.86	-.27**	-.26**	.11	-.37**	**.89**	
6 Guilt (1-5)	3.72	.83	.16*	.11	-.005	.006	.80**[a]	**.83**

Note:
** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
a) Pearsons' correlation coefficient
Cronbach's alpha coefficients are presented in bold on the diagonal

The semipartial correlation coefficients were computed with bias-corrected and accelerated 95% confidence intervals (CI), reported in square brackets.

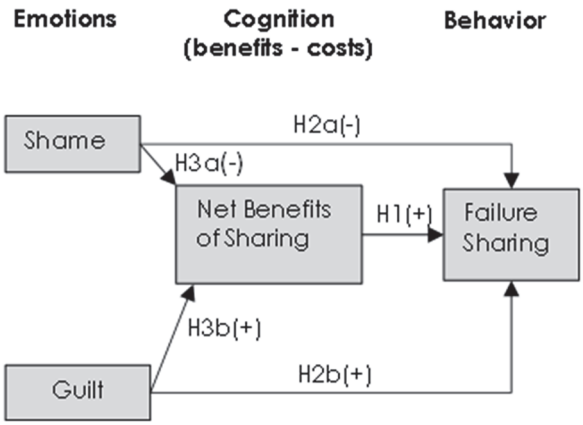
The results indicated that feelings of shame are negatively related to people's intention to share failures (sr = –0.27 [–0.673, –0.176], p < 0.001), supporting H2a. Conversely, feelings of guilt had a positive association with people's intention to share failures (sr = 0.16 [0.005, 0.518], p = 0.046), supporting H2b, although the result was only marginally significant. Additionally, feelings of shame negatively relate to people's cost-benefit evaluation by reducing the perceived net benefits of sharing (sr = –0.26 [–0.470, –0.118], p = 0.01), supporting H3a. However, feelings of guilt showed no significant association with people's perceived net benefits of sharing (sr = 0.11 [–0.051, 0.313], p = 0.156), not supporting H3b. Moreover, participants' fixed (vs. growth) individual mindset was not significantly related to shame (sr = 0.11, 95% CI [–0.083, 0.493], p = 0.162), leading to the rejection of H6a. Similarly, there was no significant relationship between individual mindset and guilt (sr = –0.005, 95% CI [–0.307, 0.288], p = 0.950), resulting in the rejection of H6b. Self-compassion exhibited a significant negative association with shame (sr = –0.372, 95% CI [–0.779, –0.360], p < 0.001), supporting H7a. However, the relationship between self-compassion and guilt was not significant (r = –0.058, 95% CI [–0.124, 0.308], p = 0.402), leading to the rejection of H7b. All semipartial correlation analyses were evaluated for multicollinearity due to the high correlation between shame and guilt variables. Results indicated a Tolerance value of 0.355 (> 0.10) and a VIF of 2.819 (< 10), confirming no multicollinearity issues.

6.4.3 Analysis of indirect effects using OLS regression

To test the indirect effects, a series of mediation analyses were conducted using ordinary least squares path analysis and confidence intervals based on 5,000 bootstrap samples. The confidence level for all confidence intervals in the outputs was 95%. I employed PROCESS 4.2 Model 4 and 6 (Hayes, 2022) to conduct simple and multiple mediation analysis, which included regression models with one or more antecedent variables, one or more mediators, and one outcome variable. I began by examining failure emotions and participants' perceived net benefits of sharing as antecedents to failure sharing and then proceeded to move from right to left in the conceptual model (Figure. 6.1), systematically analyzing all variables. The regression analyses are presented, starting with the antecedents to failure sharing.

Antecedents to failure sharing

Figure 6.3. Individual cognitive and emotional antecedents to failure sharing.



This study assessed the total, direct, and indirect effects (H10a and H10b) of the antecedents shame and guilt on the potential mediator, perceived net benefits of sharing, and the outcome variable, failure sharing (see Figure 6.3), using mediation analyses. To estimate the effects, a multiple regression analysis was conducted to include feelings of shame and guilt as parallel antecedents. The goal was to quantify the unique associations of shame and guilt with the model's mediator (net benefits of sharing) and the outcome variable (failure sharing). The results of the multiple regression analysis indicated that shame negatively relates to the perceived net benefits of sharing, while guilt had an insignificant effect. As shown in Table 6.10 and Figure 6.6, shame was negatively associated with net benefits of sharing ($b = –0.294$, $p = 0.0012$), whereas guilt showed no significant relation to the perceived net benefits of sharing ($b = 0.131$, $p = 0.156$). This finding may stem from how I define shame and guilt—as residual emotions that persist after the other emotion has faded. Notably, the associations with net benefits were opposite for the two emotions: shame showed a negative association, while guilt showed a positive association despite both being experienced as negative social emotions.

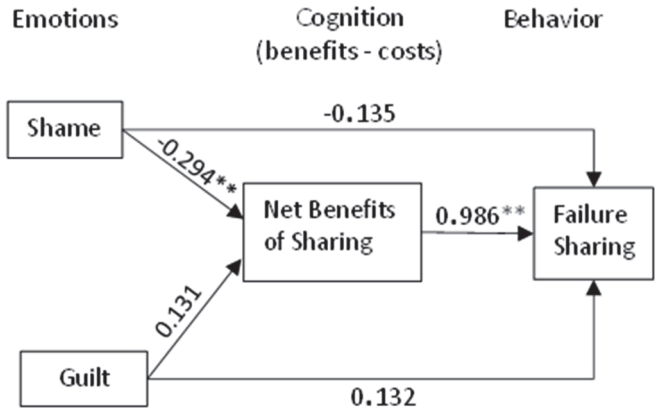
Further analysis indicated a negative indirect effect of shame on participants' intention to share failures through the perceived net benefits of sharing (b = –0.289, 95% CI [–0.474, –0.103]), supporting H10a. However, no indirect effect from guilt was observed (b = 0.129, 95% CI [–0.054, 0.3192], providing no support for H10b.

Table 6.10. Mediation analyses of failure sharing with guilt and shame as parallel antecedents with net benefits of sharing as mediator (n = 149).

		Outcome						
		M (NetBen)				Y (Failure Sharing)		
Antecedent		Coeff.	SE	p		Coeff.	SE	p
X Shame	a_1	-.294	.089	.001	c_1'	-.135	.094	.152
X Guilt	a_2	.131	.092	.156	c_2'	.132	.094	.162
M NetBen		-	-	-	b	.986	.084	<.001
Constant	i_m	.558	.215	.010	i_y	.620	.223	.006
			R^2 = .094 F(2,146) = 7.588, p <.001				R^2 = .582 F(3,145) = 54.088 , p<.001	

The unstandardized path effects in the model are presented in Figure 6.6.

Figure 6.6. Unstandardized regressed path coefficients between feelings of shame and guilt, perceived net benefits of sharing, and failure sharing.



Total effect (shame), b = –0.425, p < 0.001
Indirect effect (shame), b = –0.289, 95% CI [–0.474, –0.103]
Total effect (guilt), b = 0.261, p = 0.046
Indirect effect (guilt), b = 0.129, 95% CI [–0.054, 0.319]

Analyzing confounding variables

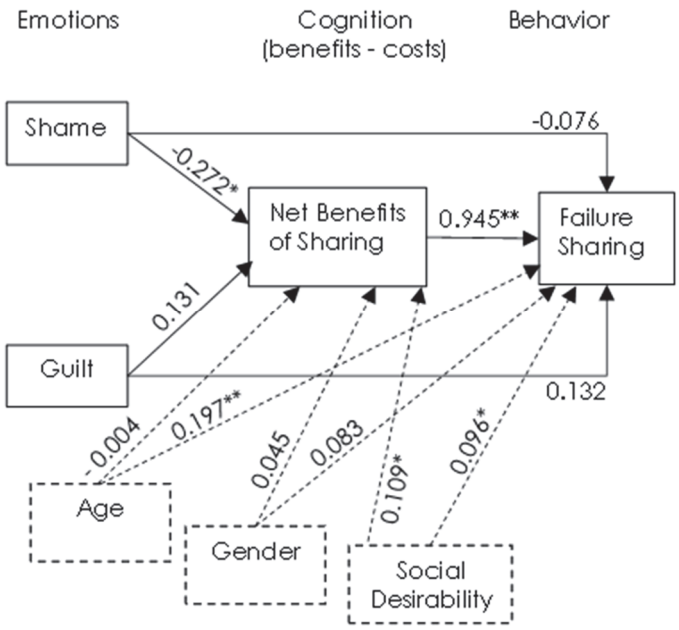
To test alternative explanations for potential failure-sharing antecedents, age, gender, and social desirability were introduced as covariates, along with shame and guilt as simultaneous predictors, in a mediation analysis. The analysis presented in Table 6.11 and Figure 6.7 again shows a significant indirect effect of shame on failure sharing via perceived net benefits of sharing (b = –0.257, 95% CI [–0.436, –0.079]) and no significant effect via guilt (b = 0.123, 95% CI [–0.061, 0.307]). Although the analysis indicated direct relationships between social desirability and net benefits, as well as between social desirability and age in relation to failure sharing, the minor reduction in the indirect effect suggests that participants' social desirability and age do not substantially alter the model. This indicates that the inclusion of these covariates does not undermine the hypothesized mediation model.

Table 6.11. Mediation analyses of failure sharing with guilt and shame as parallel antecedents with perceived net benefits of sharing as mediator, including age, gender, and social desirability (SD)as covariates (n = 149)

		Outcome						
		M (NetBen)				Y (Failure Sharing)		
Antecedent		Coeff.	SE	p		Coeff.	SE	p
X Shame	a_1	-.272	.087	.003	c_1'	-.076	.088	.390
X Guilt	a_2	.131	.091	.152	c_2'	.132	.088	.135
M NetBen		-	-	-	b	.945	.080	<.001
C_1 Age	f_1	-.004	.045	.938	g_1	.197	.043	<.001
C_2 Gender	f_2	.045	.092	.626	g_2	.083	.088	.349
C_3 SD	f_3	.109	.038	.005	g_3	.096	.038	.012
Constant	i_m	-.095	.357	.790	i_y	-.627	.343	.069
			R^2 = .143 F(5,143) = 4.767, p <.001				R^2 = .602 F(6,142) = 35.848 , p<.001	

The unstandardized path effects in the model are presented in Figure 6.7.

Figure 6.7. Unstandardized regressed path coefficients between feelings of shame and guilt, perceived net benefits of sharing, and failure sharing, including age, gender, and social desirability as covariates (dashed).



Direct effect (shame), b = –0.076, p = 0.390
Direct effect (guilt), b = 0.132, p = 0.135
Indirect effect (shame), b = –0.257, 95% CI [–0.436, –0.079]
Indirect effect (guilt), b = 0.123, 95% CI [–0.061, 0.307]

Antecedents to the cost-benefit evaluation

To assess the mediating role of feelings of shame and guilt in the relationship between individual fixed mindset and failure cognition (H11a and H11b), a parallel multiple mediator model was performed. In this model, the antecedent variable, individual fixed mindset, is modeled as being associated with the outcome variable, net benefits of sharing, both directly and indirectly, through shame and guilt as potential mediators. A key aspect of the parallel multiple mediator model is that mediators are treated as independent of one another, meaning that each mediator's effect on the outcome is considered while controlling for the presence of other mediators (Hayes, 2022).

However, this does not imply that the mediators are uncorrelated; in the current study, shame and guilt are highly correlated ($r = 0.80$).

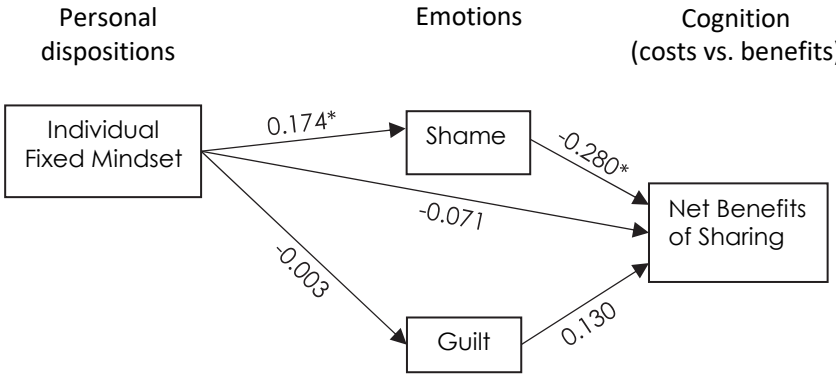
The parallel multiple mediator analysis presented in Table 6.12 showed a significant negative indirect effect of individual mindset on net benefits through shame ($b = –0.049$, 95% CI [–0.108, –0.003]), supporting H11a. However, the indirect effect of individual mindset on net benefits through guilt was not significant ($b = –0.000$, 95% CI [–0.017, 0.016]), providing no support for H11b. Furthermore, the direct effect of individual fixed mindset on net benefits of sharing in the presence of the mediators shame and guilt was not significant ($b = –0.071$, $p = 0.163$). In summary, feelings of shame mediated the relationship between a fixed mindset and the perceived net benefits of sharing failures, supporting H11a. In contrast, guilt did not show any indirect effect, providing no support for H11b.

Table 6.12. Regression coefficients, standard errors, and model summary information for the presumed mediating role of feelings of shame and guilt on the relationship between individual fixed mindset and the perceived net benefits of sharing (n = 149).

		Outcome									
		M1 (Shame)			M2 (Guilt)				Y (NetBen)		
Antecedent		Coeff.	SE	p	Coeff.	SE	p		Coeff.	SE	p
X (IFM)	a_1	.174	.076	.024	a_2 -.003	.046	.950	c´	-.071	.050	.163
M1 (Shame)		-	-	-	-	-	-	b_1	-.280	.089	.002
M2 (Guilt)		-	-	-	-	-	-	b_2	.130	.091	.157
Constant	i_{M1}	3.097	.246	<.001	i_{M2} .910	.209	<.001	i_y	.728	.246	.004
		R^2 = .034 F(1,147) = 5.220, p =.024			R^2 = .645 F(2,146) = 132.79, p =<.001				R^2 = .106 F(3,145) = 5.749 , p=.001		

The unstandardized path effects in the model are presented in Figure 6.8.

Figure 6.8. Unstandardized regressed path coefficients between individual fixed mindset, feelings of shame and guilt, and net benefits of sharing.



Direct effect, b = –0.070, p = 0.163
Indirect effect (shame), b = –0.049, 95% CI [–0.108, –0.003]
Indirect effect (guilt), b = -0.000, 95% CI [–0.017, 0.016]

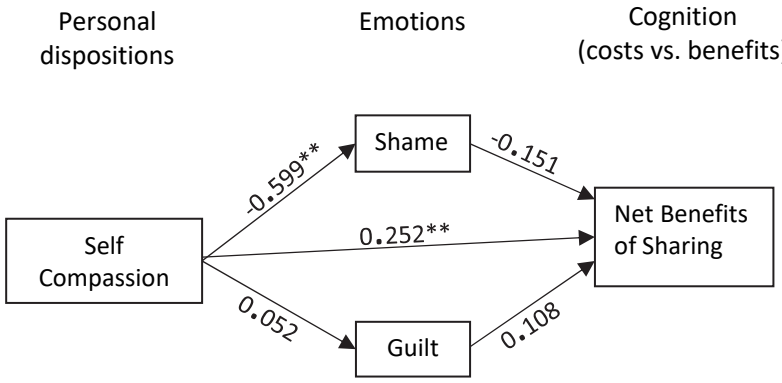
The next step of the study involved assessing the mediating role of shame and guilt in the relationship between self-compassion and the perceived net benefits of sharing (H12a and H12b) using the parallel multiple mediator model. The result showed insignificant indirect effects of self-compassion on net benefits through shame (b = 0.090, 95% CI [–0.042, 0.224]) and through guilt (b = 0.006, 95% CI [–0.014, 0.032]). Furthermore, the direct effect of self-compassion on net benefits of sharing, in the presence of shame and guilt as potential mediators, was significant (b = 0.252, $p < 0.001$). Neither shame nor guilt mediated the relationship between self-compassion and participants' perceived net benefits of sharing, providing no support for H12a and H12b. Table 6.13 presents the mediation analysis.

Table 6.13. Regression coefficients, standard errors, and model summary information for the presumed mediating role of feelings of shame and guilt on the relationship between self-compassion and net benefits of sharing (n = 149).

		Outcome									
		M1(Shame)			M2 (Guilt)				Y (NetBen)		
Antecedent		Coeff.	SE	p	Coeff.	SE	p		Coeff.	SE	p
X (SC)	a_1	-.599	.076	<.001	a_2 .052	.062	.840	c´	.252	.067	<.001
M1 (Shame)		-	-	-	-	-	-	b_1	-.151	.093	.108
M2 (Guilt)		-	-	-	-	-	-	b_2	.108	.088	.223
Constant	i_{M1}	5.367	.227	<.001	i_{M2} 4.968	.657	<.001	i_y	-.604	.370	.105
		R^2 = .298 F(1,147) = 62.473, p <.001			R^2 = .647 F(2,146) = 133.78, p <.001				R^2 = .175 F(3,145) = 10.288, p<.001		

The unstandardized path effects in the model are presented in Figure 6.9.

Figure 6.9. Unstandardized regressed path coefficients between self-compassion, feelings of shame and guilt, and perceived net benefits of sharing.



Direct effect, b = 0.252, p < 0.001
Indirect effect (shame), b = 0.090, 95% CI [–0.042, 0.224]
Indirect effect (guilt), b = 0.006, 95% CI [–0.014, 0.032]

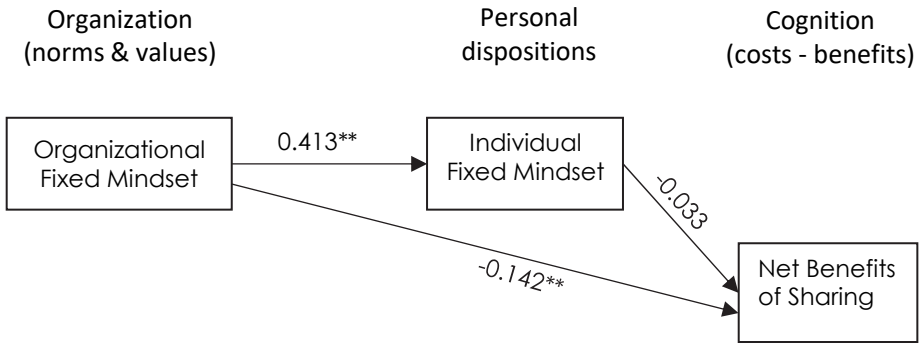
Finally, an analysis focused on the cognitive dimension of individual mindset, in contrast to the previously examined emotional dimension (see earlier tests of H11a and H11b), was carried out. The assessment of the mediating role of individual fixed (vs. growth) mindset in the relationship between organizational fixed (vs. growth) mindset and net benefits of sharing was conducted using a simple mediation model. The analysis showed that organizational fixed (vs. growth) mindset exerts a direct association (b = –0.142, p = 0.007) on perceived net benefits of sharing in the presence of the potential mediator, individual fixed (vs. growth) mindset. The indirect effect was insignificant (b = –0.014, 95% CI [–0.057, 0.038]). No indirect effect was found between organizational fixed (vs. growth) mindset and perceived net benefits of sharing through individual fixed (vs. growth) mindset, providing no support for H14. Table 6.14 presents the analysis.

Table 6.14. Regression coefficients, standard errors, and model summary information for the presumed mediating role of individual fixed (vs. growth) mindset on the relationship between organizational fixed (vs. growth) mindset and perceived net benefits of sharing (n = 149).

		Outcome						
		M (IFM)				Y (NetBen)		
Antecedent		Coeff.	SE	p		Coeff.	SE	p
X (OFM)	A	.413	.068	<.001	c´	-.142	.052	.007
M (IFM)		-	-	-	b	-.033	.056	.553
constant	i_m	1.795	.227	<.001	i_y	.532	.185	.005
			R^2 = .200 F(1,147) = 36.861, p <.001				R^2 = .073 F(2,146) = 5.779, p=.004	

The unstandardized path effects in the model are presented in Figure 6.10.

Figure 6.10. Unstandardized regressed path coefficients between organizational fixed mindset, individual fixed mindset, and net benefits of sharing.



Direct effect, b = –0.142, p = 0.007
Indirect effect, b = –0.014, 95% CI [–0.057, 0.038]

Table 6.15 provides an overview of the results for hypotheses H1–H14, excluding those related to psychological safety (H5b, H8a, H8b, H13a, and H13b).

Table 6.15 Overview of hypotheses and their potential support

	Hypothesis	*Support*
H1	Perceived net benefits of sharing failures positively relate to failure sharing.	Yes
H2a	Feelings of shame negatively relate to failure sharing.	Yes
H2b	Feelings of guilt positively relate to failure sharing.	Yes
H3a	Feelings of shame negatively relate to the perceived net benefits of failure sharing.	Yes
H3b	Feelings of guilt positively relate to the perceived net benefits of failure sharing.	No
H4a	A more fixed (vs. growth) individual mindset negatively relates to the net benefits of sharing failures.	Yes
H4b	Self-compassion positively relates to the perceived net benefits of sharing failures.	Yes
H5a	A more fixed (vs. growth) organizational mindset negatively relates to the perceived net benefits of sharing failures.	Yes
H5b	Psychological safety positively relates to perceived net benefits of sharing failures.	N/A
H6a	A more fixed (vs. growth) individual mindset positively relates to feelings of shame.	No
H6b	A more fixed (vs. growth) individual mindset negatively relates to feelings of guilt.	No
H7a	Self-compassion negatively relates to feelings of shame when experiencing failures.	Yes
H7b	Self-compassion negatively relates to feelings of guilt when experiencing failures.	No
H8a	Psychological safety negatively relates to feelings of shame when experiencing failures.	N/A
H8b	Psychological safety negatively relates to feelings of guilt when experiencing failures.	N/A
H9	A more fixed (vs. growth) organizational mindset positively relates to a more fixed (vs. growth) individual mindset.	Yes
H10a	Feelings of shame negatively affects failure sharing indirectly through perceived net benefits of sharing.	Yes
H10b	Feelings of guilt positively affects failure sharing indirectly through perceived net benefits of sharing.	No
H11a	A more fixed (vs. growth) individual mindset negatively affects perceived net benefits of sharing indirectly through feelings of shame.	Yes
H11b	A more fixed (vs. growth) individual mindset negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	No
H12a	Self-compassion positively affects perceived net benefits of sharing indirectly through feelings of shame.	No
H12b	Self-compassion negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	No
H13a	Psychological safety positively affects perceived net benefits of sharing indirectly through feelings of shame.	N/A
H13b	Psychological safety negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	N/A
H14	A more fixed (vs. growth) organizational mindset negatively affects perceived net benefits of sharing indirectly through a more fixed (vs. growth) individual mindset.	No

In the subsequent chapter, the findings of the ecological replication of the online study are presented.

Chapter 7

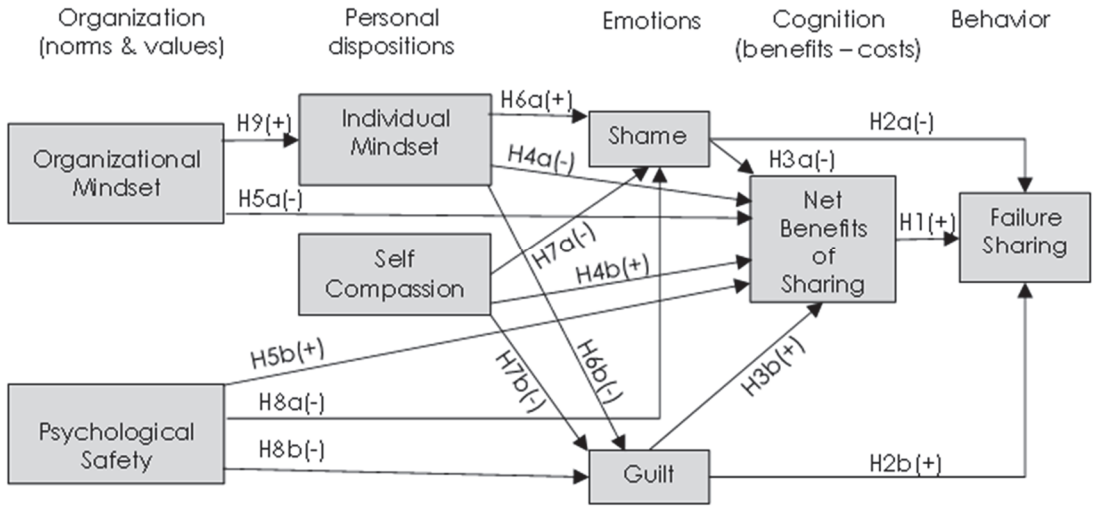
Ecological Replication of Failure Sharing in a "Big Four" Accounting Firm

To further test the conceptual model, this chapter presents a cross-sectional survey study conducted within an auditing services firm, where all participants were employed. The purpose was to replicate the online study within a "real" business organization to gain a deeper understanding of the validity and robustness of the full conceptual model (see Figure 7.1). Additionally, the study aimed to refine the measures used and further explore key findings from the online study. A cross-sectional study was therefore designed (referred to as study "2b") to examine all the developed hypotheses, including psychological safety as an additional organizational-level antecedent. The sample for the ecological study consisted of auditors working in a Swedish branch of one of the "Big Four" global accounting firms. The size of the Swedish branch was large enough to provide greater research power than the previous online study, offering a firmer base for further investigating the conceptual model.

Like Chapter 6, this chapter begins with a description of the research context and the characteristics of the participants. Next, the research procedure is outlined, followed by a description of the measures applied and potential covariates considered. In the subsequent section, two correlation matrices are presented: one displaying bivariate correlation coefficients and the other displaying semipartial correlation coefficients, testing the hypothesized

simple relationships in the model. Then, I present simple and multiple regression analyses, with a particular focus on examining the potential indirect paths within the full conceptual model. The chapter concludes with a table summarizing the examined hypotheses in both survey studies ("2a" and "2b").

Figure 7.1. Full conceptual model tested in the ecological study ("2b").



7.1 Participants and procedure

7.1.1 Empirical context

The study was conducted in a Swedish branch of one of the "Big Four" global accounting firms. The Swedish branch (the "company") is an independent legal entity within a larger global network. The company was chosen for several reasons:

- It operates in a complex business services context with a highly professionalized workforce of auditors.

- The size of the company was sufficiently large to provide greater research power compared to the online study.

- The stakeholders in the company, including one partner with whom I cooperated, demonstrated deep commitment and recognized the benefits of collaborating with academia.

- The stakeholders had initiated an internal effort to enhance a "learning culture."

The company provides auditing, advisory, and tax services. The auditing division where the study was conducted comprises 950 professionals across 16 business units, with each unit ranging from 19 to 155 employees. These units are located in both metropolitan areas and smaller cities throughout Sweden. The company has made a long-term commitment to building and maintaining a learning culture. In recent years, several initiatives have been implemented as part of an internal strategy to strengthen this culture. For instance, they have completed partner training (including workshops) on fixed and growth mindsets; all employees have been invited to attend seminars and workshops on psychological safety, feedback, and coaching; from the associate level, cultivating a growth mindset and coaching skills are included in basic training programs; and further initiatives are being launched to continuously improve the learning culture. The empirical context of the auditing company offers beneficial conditions for exploring failure sharing in a professional services firm.

7.1.2 Participants

The sample consisted of 385 full-time employed professionals, yielding a 41% response rate. Of these, 205 were professionally graded as associate or senior associate, 96 as manager or senior manager, and 84 as director or partner. Due to GDPR and confidentiality regulations, I was prohibited from asking participants their age, and for those working in smaller business units with roles as manager/senior manager or director/partner, their gender. The average age within the company was 33, with associates/senior associates averaging 29, managers/senior managers 36, and directors/partners 47 years.

In terms of professional grading, 65% were associates/senior associates, 22% were managers/senior managers, and 13% were directors/partners. The gender distribution was 57% women, 29% men, 2% non-disclosed, and 32% missing.

Table 7.1. Overview of participants' gender (n = 385).

Gender	Female	Male	Will not say	Missing	Total
Frequency	142	110	8	125	385
Percent (%)	36.9	28.6	2.0	32.5	100

Table 7.2, Overview of participants' professional grade (n = 385).

Grade	Assoc./Senior Assoc.	Manager/Senior Manager	Director/Partner	Total
Frequency	205	96	84	385
Percent (%)	53.2	24.9	21.8	100

The sample shows a slight predominance of directors/partners and fewer associates/senior associates compared to the company's overall distribution of professional grades. Due to GDPR restrictions, it is not possible to determine whether the gender and age distribution in the sample aligns with the company's overall distribution.

The professional role as auditor

The literature on the auditing profession highlights that it is governed by specific guidelines, qualification criteria (e.g., licensed chartered auditor), and ethical and professional standards, collectively shaping an auditor's characteristics and professional identity (cf. Anderson-Gough & Robson, 2018). This professional socialization process is guided not only by auditing training but also by adaptation to the professional norms and values of the sector, as well as the specific organizational values and norms of the firm to which the auditor belongs (Anderson-Gough & Robson, 2018). I suggest that these professional guidelines, standards, norms, and values most likely influence

auditors' view of failure and its sharing. The literature emphasizes that auditors must adhere to three fundamental ethical principles: integrity, objectivity, and independence (see for example, Millichamp & Taylor, 2018). Integrity involves more than truthfulness; it encompasses fairness, courage, and confidentiality in all professional and personal financial relationships. A key aspect of integrity highlighted by the authors is managing conflicts of interest, such as maintaining long-term personal relationships with business owners while simultaneously challenging their actions and, when necessary, being transparent and candid. Confidentiality is equally critical, requiring auditors to safeguard client information, refrain from sharing it with third parties, and avoid using it for personal gain. Carrying out her tasks with professional skepticism can be visualized as a "watchdog" (Millichamp & Taylor, 2018: 154) eagerly monitoring financial errors and deviations in their clients' figures and routines to correct, manage, and support.

Overall, I propose that the interplay of these standards and principles can shape auditors' approaches to handling failures and their willingness to share them. On the one hand, being truthful, honest, showing integrity, and providing an "enquiring mind" (Millichamp & Taylor, 2018: 153), along with urging clients to better manage errors, may encourage sharing of failures with peers. On the other hand, ethical and professional standards such as confidentiality, combined with an elite-based "up or out" career system involving high stakes—especially when the auditor first enters the career system—may discourage sharing failures.

Another aspect of the professional socialization process is the cultural framework of the auditing firm, which establishes the values and norms to which individuals adapt, thereby shaping their professional identity. This cultural framework emphasizes values such as integrity (e.g., speaking up for what is right), creating impact (on colleagues, clients, and society), caring (e.g., supporting others to grow), and working together (e.g., sharing knowledge and ideas beyond boundaries). In addition to this cultural framework, the company has implemented a performance management process to evaluate the individual impact an auditor contributes. The combination of this cultural framework and performance management process aims to create a high-performance culture where professionals are held accountable to always "give their best." This high-performing culture likely creates a dilemma

for auditors, as they must balance engaging in and sharing failures while simultaneously managing impressions to appear competent and successful.

7.1.3 Procedure

To establish favorable conditions and ensure a high response rate, several meetings were initially held with the two key stakeholders—one partner and an HR business partner—who supported the research project. These meetings discussed the aim of the research, relevant procedures, preparatory internal communication, and the reporting of the outcome. To comply with the company's IT policy and external GDPR protocols, legal and ethical considerations were also addressed. The 950 employees were informed through various internal forums by the stakeholders about the forthcoming research project, emphasizing the importance of participation and its connection to ongoing internal initiatives aimed at improving their "learning culture."

The survey study procedure followed the same approach as the online study. Employees received an invitation to participate via e-mail, which included a link to the survey. After reading a brief introduction outlining the study's purpose—without disclosing information that might influence their responses—and providing consent to participate, participants were asked to complete the survey anonymously (see Appendix 2). Similar to the online study, the survey was described as being for scientific purposes, featuring a series of questions about their responses to an actual work situation. Participants were informed that the researcher aimed to gain a deeper understanding of their personal experiences and perceptions regarding the exchange of experiences within the company, emphasizing that there were no "right" or "wrong" answers. I encouraged them to select the response option that best reflected their subjective impressions.

7.1.4 Survey

The survey followed the same structure as in the online study. Participants first answered questions about their individual fixed (vs. growth) mindset. To induce emotional reactions to failure, the survey presented a scenario where participants experienced a public failure (see Figure 7.2) and asked them to imagine the situation unfolding in their current work setting. After reading the scenario, participants answered various questions about how they

felt (failure emotions), how they would behave (failure sharing), and how they reasoned regarding their preferred behavior (perceived costs versus benefits of sharing).

Next, participants responded to questions about their organizational unit, including perceived organizational mindset and psychological safety. They were then asked about three personal dispositions: self-compassion, self-efficacy, and the Big Five personality traits. The survey also included demographic questions such as the name of their organizational unit, gender, age, and professional grade.

The survey concluded with an open question: "Do you have any concluding comments or feedback about the study?" Participants were provided with contact information (name, phone number, and e-mail address) in case they had further questions or needed additional information. The survey remained open for about a month, and to increase the response rate, employees who had not yet participated were reminded via e-mail on several occasions. Overall, the procedure aimed to replicate the approach used in the online study.

Figure 7.2. Scenario used in the ecological study.

You are now going to read about a work situation. Please imagine that this occurs in your current work context.

"You are responsible for an important project/assignment/work task in your company AudCom. It has been a challenging project, but now that you are approaching the finishing line, you are quite happy with the result. And the time has come for you to present your findings. A number of colleagues and managers/leaders (not including your manager) are gathered in a conference room eagerly awaiting your presentation of the work. They will base an important decision on the conclusions of your work. The presentation is off to a good start, with an interested and attentive audience. But as you open for input from the audience, you get a question that you cannot answer. Follow-up questions become increasingly critical and undermine your main conclusions. You try to respond but struggle to provide satisfactory answers. You realize that you have missed important aspects that the audience had expected you to cover. The meeting ends with the group concluding that your investigation does not provide a sufficient basis for the decision. The managers/leaders and colleagues leave the room chatting with each other. It is obvious that they are annoyed and disappointed with what they have just heard. You pack up your computer and papers and find yourself alone with your thoughts."

7.2 Measures

The measures used in the online study were reused in the current study, with some improvements, which are described later. Factor structures for the self-developed measures ("failure sharing" and "net benefits of sharing") and the modified State Shame and Guilt Scale (SSGS) were assessed using exploratory factor analysis (EFA). The frequently used measures of self-compassion, individual mindset, organizational mindset, and psychological safety, which have demonstrated robustness and consistency in previous research, were not subjected to further EFA. Internal reliability for each measure was evaluated using Cronbach's alpha (Cronbach, 1951). All items used and analyzed are presented in Appendix 2. The following section introduces each measure,

starting with the outcome variable, failure sharing, and then proceeding from right to left in the conceptual model.

7.2.1 Failure sharing

To measure failure sharing, the eight items from the online study were re-used. In addition, to capture a potential sharing behavior not included in the online study, I developed one more item: "I will share the situation in one or more of my project teams." The failure-sharing measure was designed to consist of two subscales addressing different non-sharing and sharing behaviors: silencing of failures (three items, e.g., "I will keep the situation to myself; no need to disturb my colleagues or boss about it") and public sharing, spanning from limited sharing to sharing more widely within the organization (six items, e.g., "I will share this situation with those that may be affected by it" and "I will e-mail all in our organizational unit to share this experience"). The failure-sharing items were assessed on a scale from 1 (very unlikely) to 5 (very likely) scale.

To assess the psychometric properties of the measures, I conducted a preparatory analysis by running an exploratory maximum-likelihood factor analysis (EFA) on all nine items, followed by subsequent internal consistency reliability analyses. As in the online study, the maximum-likelihood method (see Harman, 1976) was selected to enable generalization of the findings to a larger population, as the results are cross-validated with the online study sample. Since correlations between the underlying factors were assumed, I applied an oblique rotation (direct oblimin) to discriminate the factors. The Kaiser–Meyer–Olkin (KMO) measure verified the sampling adequacy for the analysis, showing a KMO of 0.78 (almost "meritorious" according to Kaiser & Rice, 1974). KMO values for individual items were greater than 0.74, well above the acceptable limit of 0.5 (Kaiser & Rice, 1974). Two factors had eigenvalues greater than Kaiser's criterion of 1 and together explained 58.79% of the variance. Table 7.3 presents the factor loadings after rotation, grouped according to how the two factors emerged from the EFA.

Table 7.3. Pattern matrix of exploratory factor analysis for the failure-sharing items (n = 385).

	Rotated Factor Loadings	
Item	1	2
I will just move on and be silent about the situation and hope that nobody will bring it up.	.88	.09
I will keep the situation to myself, no need to disturb my colleagues or boss about it.	.86	.06
I will keep quiet and avoid the people who were involved.	.66	-.02
I will share this situation with those who have been involved in the process of producing the investigation.	-.57	-.09
I will share this situation with those that may be affected by it.	-.52	-.04
I will share this situation with colleagues in one or more of my project teams.	-.46	.14
I will share and discuss the situation in our next organizational unit meeting.	.13	.86
I will call an open meeting to share and discuss the situation.	.02	.79
I will share and discuss the situation in our next organizational unit meeting.	-.28	.41
Eigenvalues	3.47	1.87
% of Variance	38.51	20.29
Cronbach Alpha (a)	.82	.62[a]

Note: Extraction method: maximum likelihood
Rotation method: oblimin with Kaiser normalization
Rotation converged in four iterations
a, Cronbach´s alpha = 0.78 if item "I will share and discuss the situation in our next organizational unit meeting" is deleted

The items that clustered on the same factor suggested that factor 1 represented two approaches to failure sharing: silencing of failures and public sharing of failures within an intimate circle of peers, while factor 2 represented public sharing to a wider circle of peers. Using the same procedure as in the online study, the two factors were aggregated into a single index of failure sharing ($\alpha = .79$). The index was calculated by taking the average effect of the combined items, considering both the positive contributions (six

public-sharing items) and the negative contributions (three reversed ratings of the silencing-of-failures items).[3] The extended failure-sharing measure (see Appendix 3) aimed to capture a broader range of failure-sharing behaviors than the measure used in the online study.

7.2.2 Perceived net benefits of failure sharing

To measure participants' perceived net benefits of sharing failures, 16 items were used in the ecological study, 13 of which were included in the online study. Nine items were excluded from the original 22 items used in the online study (see Appendices 1 and 2). Additionally, three new items were introduced: two cost-related items ("If I share the experience, I risk being rejected by my coworkers/peers" and "Sharing could be detrimental to my team's reputation") and one benefit-related item ("Sharing helps me understand what went wrong"). The modified subscale for perceived costs of sharing is presented in Table 7.4.

Table 7.4. Items included in the modified subscale for perceived costs of sharing.

Item
If I share, I fear the negative reactions of my colleagues.
If I share the experience, I risk being rejected by my coworkers/peers
Sharing could be detrimental to my team´s reputation.
Sharing could be detrimental to my professional reputation.
My job or position could be at risk.
It would be emotionally difficult to share.
Sharing is detrimental for my self-concept.
Sharing would cause me extra work.

The modified subscale for perceived benefits of sharing involved eight items, as presented in Table 7.5.

[3] MEAN (–FSilence1, –FSilence2, –FSilence3, FShare_Reg1, FShare_Reg2, FShare_Reg3, FShare_Pub1, FShare_Pub2, FShare_Pub3)

Table 7.5. Items included in the modified subscale for perceived benefits of sharing.

Item
Sharing helps avoid similar situations in the future.
Sharing is important for the organization and its learning.
Sharing helps me understand what went wrong.
Sharing helps us avoid more serious consequences.
Sharing is beneficial to my personal learning.
Sharing helps alleviate my negative feelings.
Sharing is beneficial to my professional reputation.
Sharing is beneficial to my self-concept.

The adjusted measure of perceived net benefits was designed to better capture participants' evaluations of the costs and benefits of failure sharing. To assess the psychometric properties of the adjusted net benefits measure, a factor analysis was conducted using the maximum-likelihood method on all 16 items. An oblique rotation (direct oblimin) was applied to discriminate between the factors. The KMO measure indicated excellent sampling adequacy for the analysis, with a KMO of 0.87 ("meritorious" according to Kaiser & Rice, 1974). KMO values for individual items were above 0.81, well above the acceptable limit of 0.5 (Kaiser & Rice, 1974).

An initial analysis was conducted to obtain eigenvalues for each factor. Three factors had eigenvalues above Kaiser's criterion of 1, but a scree plot analysis suggested that two factors were sufficient to explain the variance, as factor three was below the cut-off point. The cut-off point refers to the point on the scree plot where the curve levels off, indicating that additional factors contribute minimal explanatory value.

The items clustering on the same factor suggested that factor 1 represented the perceived benefits of sharing, while factor 2 represented the perceived costs of sharing. Together, these two factors explained 48.43% of the variance. Table 7.6 presents the factor loadings after rotation. One item, "Sharing would cause me extra work," showed weak loadings on both factors (> 0.20) and was therefore deleted.

To assess participants' perceived net benefits of sharing failures, I followed the same procedure as in the online study and formed a single measure based on an index of the two subscales, termed the net benefits of failure sharing scale (see Appendix 3). The index was calculated by averaging the combined items, considering both the positive contributions (perceived benefits of sharing) and the negative contributions (reversed ratings of perceived costs of sharing).[4] The net benefits of sharing failures items ($\alpha = 0.87$) were assessed on a 1 (strongly disagree) to 5 (strongly agree) scale.

Table 7.6. Pattern matrix of exploratory factor analysis for the net benefits of sharing items (n = 385).

	Rotated Factor Loadings	
Item	1	2
Sharing helps avoid similar situations in the future.	.82	.12
Sharing is important for the organization and its learning.	.71	-.04
Sharing helps me understand what went wrong.	.71	-.00
Sharing helps us avoid more serious consequences.	.66	-.05
Sharing is beneficial to my personal learning.	.60	-.04
Sharing helps alleviate my negative feelings.	.56	-.07
Sharing is beneficial to my professional reputation.	.45	-.20
Sharing is beneficial to my self-concept.	.40	-.14
If I share, I fear the negative reactions of my colleagues.	.11	.76
If I share the experience, I risk being rejected by my coworkers/peers	-.12	.75
Sharing could be detrimental to my team´s reputation.	-.09	.64
Sharing could be detrimental to my professional reputation.	-.11	.61
My job or position could be at risk.	-.07	.60
It would be emotionally difficult to share.	.13	.52
Sharing is detrimental for my self-concept.	-.25	.49
Sharing would cause me extra work.	.02	.17
Eigenvalues	5.38	2.36
% of Variance	33.65	14.77
Cronbach Alpha (a)	.86	.83[a]

Note: Extraction method: maximum-likelihood
Rotation method: oblimin with Kaiser normalization
Rotation converged in eight iterations
a, when item "Sharing would cause me extra work" was deleted

[4] MEAN (–Cost2, –Cost3, –Cost9, –Cost11, –Cost12, –Cost13, –Cost14, Ben3, Ben5, Ben6, Ben7, Ben8, Ben9, Ben10, Ben13).

7.2.3 Feelings of shame and guilt

Based on the concerns discussed in Section 6.2.3 and the insights from the online study, which revealed a high correlation between reported feelings of shame and guilt ($r = 0.80$), as well as the fact that all SSGS items loaded on the same factor, a need was identified to improve the measurement of state shame and guilt in the context of failure sharing. Consequently, the SSGS (Marschall et al., 1994) was modified to address several items that were perceived as unclear or multi-faceted. To achieve this, I designed new items to complement the existing ones and enable more distinct factors. Additionally, I removed or clarified double-barreled items in the SSGS. For instance, the guilt item "I feel regret, remorse" was changed to "I feel regret," and the shame item "I feel worthless, powerless" was separated into two distinct items: "I feel worthless" and "I feel powerless."

Furthermore, to better discriminate between feelings of shame and guilt by emphasizing their unique characteristics, as elaborated in Section 6.2.3, I developed new items that highlight the more motivational aspects of guilt, which, unlike shame, often induces a desire to repair the negative consequences of one's actions. Specifically, I added three new guilt items: "I feel my action was regrettable," "I feel I have to step up to compensate for what I have done," and "I feel I need to fix this."

To address ambiguously expressive items in the existing scale, such as the shame item "I feel small," I developed two new shame items: "I feel like a complete failure" and "I feel destroyed." These additions aimed to provide clearer and more distinct expressions of shame. The modified SSGS thus consisted of 16 items designed to better discriminate between shame and guilt. The scale included two separate subscales: state shame and state guilt. Participants' feelings of state shame and state guilt were assessed using a scale from 1 (not feeling this at all) to 5 (feeling this very strongly).

To assess the psychometric properties of the modified state shame and state guilt measures, an EFA was conducted using the maximum-likelihood method on all 16 items. Similar to the failure sharing and net benefit of sharing scales, an oblique rotation (direct oblimin) was employed to discriminate the factors, as correlations between the underlying factors were expected. The KMO measure verified the sampling adequacy for the analysis with an overall KMO value of 0.94, which is considered "marvelous" according to

Kaiser and Rice (1974). Individual KMO values for items were all greater than 0.86, significantly above the acceptable threshold of 0.5.

An initial analysis was conducted to obtain eigenvalues for each factor in the dataset. Three factors had eigenvalues exceeding Kaiser's criterion of 1. However, a scree plot analysis indicated that two factors were sufficient to explain the variance, as the third factor fell below the cutoff point. Items clustering on the same factor suggested that factor 1 represented feelings of shame, while factor 2 represented feelings of guilt. Together, these two factors explained 58.83% of the total variance.

Table 7.7 presents the factor loadings after rotation. The factor analysis showed two distinct factors, addressing the concern from the online study, which indicated only one factor. Consequently, I decided to create a modified SSGS short scale comprising six items (see Appendix 3). This decision was motivated by the observation that factor 2, representing guilt, included three items with internal consistency above 0.70. To maintain a balance between the number of shame and guilt items, I selected the three shame items with the highest loadings on factor 1. The state shame subscale thus consisted of the following items: "I feel worthless," "I feel like I am a bad person," and "I feel small." (α =0.84). The state guilt subscale included: "I feel I need to fix this," "I feel I have to step up to compensate for what I have done," and "I feel my action was regrettable." (α = 0.72). The modifications to the SSGS scale aimed to better discriminate and measure the unique characteristics of participants' state shame and state guilt in the context of failure sharing.

Table 7.7. Pattern matrix of exploratory factor analysis for the state shame and state guilt items (n = 385).

	Rotated Factor Loadings	
Items	1	2
I feel worthless. (S)	.83	.00
I feel like I am a bad person. (S)	.82	-.04
I feel small. (S)	.79	-.03
I want to sink into the floor and disappear. (S)	.78	-.01
I feel powerless. (S)	.78	-.14
I feel destroyed. (S)	.76	-.04
I feel humiliated. (S)	.75	-.08
I cannot stop thinking about the bad thing I have done. (G)	.75	.06
I feel bad about something I have done. (G)	.73	.15
I feel regret. (G)	.61	.19
I feel tension about what I have done. (G)	.60	.16
I feel like apologizing. (G)	.44	.26
I feel like a complete failure. (S)	.42	.04
I feel I need to fix this. (G)	-.07	.76
I feel I have to step up to compensate for what I have done. (G)	.15	.64
I feel my action was regrettable. (G)	.30	.42
Eigenvalues	8.16	1.26
% of Variance	50.97	7.86
Cronbach Alpha (a)	.84a	.72

Note: Extraction method: maximum-likelihood
Rotation method: oblimin with Kaiser normalization
Rotation converged in five iterations
a, only including the three items with greatest loadings
S for shame items and G for guilt items

7.2.4 Individual fixed mindset

Participants' individual mindset beliefs were assessed using six items from the entity and incremental beliefs subscales in Dweck's (1991) Theories of Intelligence Scale (TIS). To reduce the overall number of items in the survey, two growth mindset items used in the online study were removed: "You can always substantially change how much talent you have" and "You can change

even your basic intelligence level considerably." The entity subscale (fixed mindset beliefs) consisted of four items, while the incremental subscale (growth mindset beliefs) included two items (reversed). These items assessed individuals' general beliefs about the fixedness versus malleability of their talent and intelligence. Participants rated the items on a scale from 1 (strongly disagree) to 6 (strongly agree). Consistent with the online study, I created a one-dimensional variable ranging from fixed to growth mindset, where high values indicate a fixed mindset and low values reflect a growth mindset. The subscales were aggregated into a single index named individual fixed (vs. growth) mindset ($\alpha = 0.83$). The index was computed by taking the average value of the combined items, accounting for the positive contributions of the entity subscale (fixed items) and the reversed ratings of the incremental subscale (growth items).

7.2.5 Self-compassion

In the current sample, I reused the same 12 items from the SCS-SF measure employed in the online study. The measure demonstrated an internal consistency of $\alpha = 0.84$. Participants rated their self-compassion on a scale from 1 (almost never) to 5 (almost always). In summary, the self-compassion measure was identical across both studies.

7.2.6 Organizational mindset

Organizational mindset was measured using six items, three of which were derived from previous organizational mindset research (Canning et al., 2020; Murphy & Dweck, 2010), while the other three were self-developed modifications based on the same theme. In this study, a fixed mindset item, "When it comes to being successful, this organizational unit seems to believe that people have a certain amount of intelligence, and they can´t really do much to change it," replaced the growth mindset item used in the online study, "When it comes to being successful, this organization seems to believe that peoples' talent is malleable and can be improved significantly." The adjustment aimed to align the organizational mindset measure's design with that of the individual mindset measure.

Both the individual and organizational mindset measures included four fixed mindset items and two growth mindset items, equally divided across

constructs involving "intelligence" and "talent." Additionally, the term "organization" utilized in the online study was replaced with "organizational unit" to reflect the terminology used in the researched company.

Participants rated the four fixed mindset and two growth mindset items on a scale from 1 (strongly disagree) to 6 (strongly agree). In line with previous applications (e.g. Canning et al., 2020; Murphy & Dweck, 2010) and the online study, organizational mindset was treated as a one-dimensional variable ranging from fixed to growth mindset, where high scores indicate a fixed mindset and low scores indicate a growth mindset.

The six items were aggregated into a single index termed organizational fixed (vs. growth) mindset. The index was computed by averaging the combined items, incorporating the positive contributions (organizational fixed mindset items) and the negative contributions (reversed ratings of organizational growth mindset items). The measure demonstrated a high level of internal consistency in the current sample, with a Cronbach's alpha of 0.88.

7.2.7 Psychological safety

Psychological safety was assessed using a 5-item version of the Psychological Safety Scale originally developed by Edmondson (1999) and adapted by Garvin et al. (Garvin et al., 2008). This version of the scale has undergone extensive validation and has consistently demonstrated strong content, criterion, and construct validity. It has also been shown to be reliable across diverse samples, with high levels of internal consistency reported (Newman, Donohue, & Eva, 2017). The five items included in the measure, as shown in Table 7.8, were rated on a scale from 1 (strongly disagree) to 6 (strongly agree). In the current sample, the scale demonstrated an internal consistency reliability of $\alpha = 0.82$, indicating strong reliability for the assessment of psychological safety.

Table 7.8. Items included in the psychological safety measure.

Item
In this unit, it is easy to speak up about what is on your mind.
If you make a mistake in this unit, it is often held against you. (R)
People in this unit are usually comfortable talking about problems and disagreements.
People in this unit are eager to share information about what doesn´t work and what does work
Keeping your cards close to your vest is the best way to get ahead in this unit." (R)

Note: Reversed items are marked with an "R."

7.2.8 Covariates

To account for potential confounding variables in the mediation model, two additional predictors (or covariates) of failure sharing were included and measured. Based on previous research, I incorporated self-efficacy and the Big Five factors of personality as two sets of personal dispositions that have been suggested to influence individuals' decisions regarding whether to share failures.

Self-efficacy

Previous research suggests that individuals' levels of self-efficacy are likely to influence their failure-sharing behavior. Self-efficacy refers to a person's belief in their ability to perform a specific task, including the self-perception of whether they are capable of executing a particular behavior (Bandura, 1977). In the context of failure, Kirkpatrick and Locke (1996) proposed that leaders with higher self-efficacy are more likely to disclose their errors and view them as learning opportunities rather than concealing them. Similarly, Lee et al. (2015) found that higher self-efficacy indirectly influenced error reporting by positively affecting nurses' perceived benefits of reporting errors.

Since people with stronger self-efficacy may be more inclined to share failures, this personal disposition is particularly relevant in contexts where professional self-concept is a significant concern, such as in knowledge-intensive business services. To measure participants' self-efficacy, the General Self-Efficacy Scale (Hobfoll & Walfisch, 1984) was used, comprising three

items: "I feel I can do anything I set my mind to," "I feel I am able to do things as well as most other people," and the reversed item, "I feel there is no way I can solve the problems I have." The General Self-Efficacy Scale has demonstrated test–retest reliability of 0.85 or higher and reasonable internal reliability levels ($\alpha = 0.75$; (Hobfoll & Walfisch, 1984). In the current study, the three items were assessed on a scale from 1 (strongly disagree) to 5 (strongly agree), yielding an internal reliability level of $\alpha = 0.68$.

Big Five factors of personality

The Big Five factors of personality have been suggested in various studies to influence individuals' attitudes toward and engagement with errors and failures. Research examining error orientation in German full-time employees and Dutch students has shown that individuals with higher levels of neuroticism (or negative affect) are more likely to appraise errors with strain and frustration and tend to hide or silence them when they occur (Rybowiak et al., 1999). Studies on error management training have indicated that participants with higher levels of openness display positive attitudes toward new experiences, making them more receptive to error management training (Loh, Andrews, Hesketh, & Griffin, 2013) and better able to learn from their mistakes (Mount & Barrick, 1995). Similarly, individuals who are higher in extraversion are argued to be more prone to excitement-seeking behaviors and less afraid of failing (Eysenck, 1973).

The present study used the widely recognized five-factor model of personality, often referred to as the Big Five (e.g., Ones, 2005). Participants' Big Five personality traits were assessed using the Mini-IPIP: a 20-item short form of the 50-item International Personality Item Pool—Five-Factor Model measure (Goldberg et al., 2006). The Mini-IPIP form includes four items for each personality trait (see John & Srivastava, 1999): extraversion (e.g., "Talk to a lot of different people at parties"), agreeableness (e.g., "Sympathize with others' feelings"), conscientiousness (e.g., "Like order"), neuroticism (e.g., "Get upset easily"), and imagination/openness (e.g., "Have a vivid imagination"). The Mini-IPIP has demonstrated consistent and acceptable internal consistency across studies (α at or above 0.60) and shows a comparable pattern of convergent, discriminant, and criterion-related validity to other Big Five measures (Donnellan, Oswald, Baird, & Lucas, 2006).

These findings indicate that the Mini-IPIP is a psychometrically sound and practical measure of the Big Five factors of personality. In the current study, the 20 items were measured on a 1 (strongly disagree) to 5 (strongly agree) scale.

7.2.9 Adequacy of measures

Common method bias and common method variance

To determine whether the survey was affected by excessive common method bias (CMB) or common method variance (CMV), Harman's one-factor test was conducted (Fuller et al., 2016). The test identifies problematic CMB and CMV if the first factor in an exploratory factor analysis accounts for more than 50% of the variance (Podsakoff & Organ, 1986). Using an explorative factor analysis with the maximum likelihood method and direct oblimin rotation on all survey items, the eigenvalues revealed that the first factor accounted for 13.86% of the variance, while eleven factors collectively explained 51.48% of the variance. These results indicate that the survey was not significantly affected by CMB or CMV.

7.3 Hypotheses testing

To further investigate the hypothesized relationships in the conceptual model, the statistical analysis procedure used in the online study was replicated. A bivariate correlation analysis was first conducted to examine the associations formulated in hypotheses H1, H4a, H4b, H5a, H5b, and H9. These hypotheses involved measures with more robust and reliable characteristics compared to those involving shame and guilt. The shame and guilt measures, which have struggled to distinctly capture the unique characteristics of these highly correlated emotions, were examined separately in the subsequent analysis steps. Hypotheses related to shame and guilt on failure sharing (H2a and H2b) and perceived net benefits of sharing (H3a and H3b) were therefore excluded from the initial bivariate correlation analysis. Similarly, hypotheses involving shame and guilt as outcome variables (H6–H8) were also omitted.

To better understand the unique contributions of shame and guilt, these relationships were analyzed using semipartial correlation analyses. By including both emotions simultaneously and controlling for the influence of each on the other, the semipartial analyses aimed to isolate their unique effects on the hypothesized relationships.

To explore indirect associations (H10–H14), simple and multiple OLS regression analyses were conducted. Given the lack of normality in some variables, bootstrapped confidence intervals were applied for greater robustness, as they are unaffected by score distributions (Field, 2018). Unless otherwise noted, the results of bivariate and covariate correlation analyses are based on 1,000 bootstrapped samples. The results of the statistical analyses are presented in the next section.

7.4 Results

7.4.1 Bivariate correlation analysis

To evaluate the correlations and effect sizes associated with hypotheses H1, H4a, H4b, H5a, H5b and H9, a bivariate correlation analysis was conducted. Assuming linearity and employing interval-level measures for both antecedent and outcome variables, Pearson's correlation coefficient was used to analyze the relationships among the modeled variables. The results, including Pearson's correlation coefficients for each variable and their internal reliability estimates, are detailed in the correlation matrix (see Table 7.9).

Table 7.9. Means, standard deviations, and effect sizes (Pearson's correlation coefficients; n = 385).

	M	SD	1	2	3	4	5	6
1 Failure Sharing (1-5)	1.08	.63	**.79**					
2 Net Benefits of Failure Sharing ((-5)-5)	0.93	.61	.58**	**.87**				
3 Individual Fixed Mindset (1-6)	2.94	1.01	-.17**	-.20**	**.83**			
4 Self-Compassion (1-5)	2.92	.64	.25**	.30**	-.15**	**.84**		
5 Organizational Fixed Mindset (1-6)	2.57	.96	-.16**	-.30**	.45**	-.09	**.88**	
6 Psychological Safety (1-6)	4.36	.99	.27**	.40**	-.04	.22**	-.40**	**.82**

Note:

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Cronbach's alpha coefficients are presented in bold on the diagonal

The correlation coefficients were calculated using bias-corrected and accelerated 95% confidence intervals (CIs), which are reported in square brackets. The results from the bivariate correlation analysis show that participants' perceived net benefits of sharing failures are positively related to their willingness to communicate about them ($r = 0.58$, [0.50, 0.64], $p < .001$), supporting H1 and confirming the findings of the online study.

As expected, on the individual level, having a fixed (vs. growth) mindset negatively correlates with participants' perceived net benefits of sharing ($r = –0.20$, [–0.30, –0.10], $p < 0.001$), supporting H4a. In contrast, being more self-compassionate positively correlates with participants' perceived net benefits of sharing ($r = 0.30$, [0.20, 0.40], $p < 0.001$), supporting H4b.

On the organizational level, when an organization is perceived to hold a fixed (vs. growth) mindset, it negatively correlates with participants' perceived net benefits of sharing ($r = –0.30$, [–0.39, –0.20], $p < 0.001$), supporting H5a. Conversely, psychological safety positively correlates with participants' perceived net benefits of sharing ($r = 0.40$, [0.32, 0.48], $p < 0.001$), supporting H5b.

Finally, as predicted, when an organization is perceived to embrace a more fixed (vs. growth) mindset, it positively correlates with participants' individual fixed (vs. growth) mindset ($r = 0.45$, [0.36, 0.54], $p < 0.001$), supporting H9.

7.4.2 Semipartial correlation analysis

To examine the hypothesized relationships between shame and guilt on failure sharing (H2a and H2b) and on the net benefits of sharing (H3a and H3b), as well as hypotheses that included shame and guilt as outcome variables (H6–H8), semipartial correlation analyses were conducted. This approach allowed for the simultaneous inclusion of both emotions, with each being controlled for the influence of the other, enabling an investigation into their unique contributions to the hypothesized relationships.

The results, including semipartial correlation coefficients for each variable and internal consistency reliability, are presented in the correlation matrix (see Table 7.10). Correlations and internal consistency values already presented in Table 7.9 are excluded from this table.

Table 7.10. Means, standard deviations, and effect sizes (semipartial correlation coefficients; n = 385).

	M	SD	1	2	3	4	5	6	7
1 Failure Sharing (1-5)	1.08	.63							
2 Net Benefits of Failure Sharing ((-5)-5)	0.93	.61							
3 Individual Fixed Mindset (1-6)	2.94	1.01							
4 Self-Compassion (1-5)	2.92	.64							
5 Psychological Safety (1-6)	2.57	.96							
6 Shame (1-5)	3.29	1.12	-.22**	-.31**	.13*	-.42**	-.11*	**.72**	
7 Guilt (1-5)	3.82	.85	.10*	.17**	-.04	-.01	.04	.52**[a]	**.87**

Note:
** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
a) Pearsons' correlation coefficient
Cronbach's alpha coefficients are presented in bold on the diagonal

The semipartial correlation coefficients were computed with bias-corrected and accelerated 95% confidence intervals (CIs), reported in square brackets. The results indicated that feelings of shame are negatively related to people's intentions to share failures (sr = –0.218 [–0.208, –0.079], $p < 0.001$), supporting H2a. Conversely, feelings of guilt were positively associated with individuals' intention to share failures (sr = 0.102 [0.02, 0.171], $p = 0.045$), supporting H2b, although it was only slightly above the threshold of significance. Further examining the matrix of semipartial correlations, feelings of shame were negatively associated with participants' perceived net benefits of sharing (sr = –0.31 [–0.257, –0.135], $p < 0.001$), supporting H3a. In contrast, feelings of guilt showed a positive association with perceived net benefits of sharing (sr = 0.17 [0.058, 0.217], $p < 0.001$), supporting H3b. Additionally, participants with a fixed (vs. growth) individual mindset experienced heightened feelings of shame when failing (sr = 0.13, [0.050, 0.238], $p = 0.003$), supporting H6a, whereas no significant relation to guilt was indicated (sr = –0.04, [–0.105, 0.042], $p = 0.395$), rejecting H6b. Self-compassion was

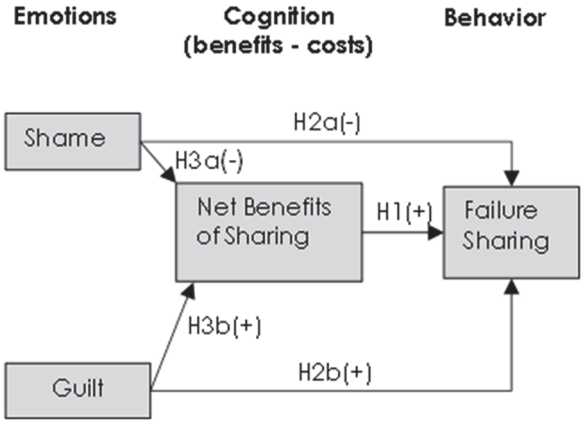
negatively related to feelings of shame (sr = –0.42, [–0.902, –0.631], $p < 0.01$), supporting H7a, while the relationship between self-compassion and guilt was not significant (sr = –0.01, [–0.153, 0.120], $p = 0.807$), rejecting H7b. Lastly, psychological safety was negatively associated with feelings of shame (sr = –0.11, [–0.220, –0.028], $p = 0.011$), supporting H8a, while no significant association with guilt was found (sr = 0.040, [–0.040, 0.108], $p = 0.362$), thereby rejecting H8b. All semipartial correlation analyses were evaluated for multicollinearity, given the high correlation between shame and guilt variables. Results indicated a Tolerance value of 0.731 (> 0.10) and a VIF of 1.368 (< 10), confirming no multicollinearity issues.

7.4.3 Analysis of indirect effects using OLS regression

To further examine the indirect associations, a series of mediation analyses were conducted using ordinary least squares path analysis, with confidence intervals based on 5,000 bootstrap samples. The level of confidence for all confidence intervals in the outputs was 95%. I employed PROCESS 4.2 Model 4 (Hayes, 2022) to perform both simple and multiple mediation analyses, which included models with one or more antecedent variables, one or more mediators, and one outcome variable. The statistical analysis procedure was consistent with that of the online study, starting with failure emotions and participants' perceived net benefits of sharing as antecedents to failure sharing. I then proceeded from right to left in the conceptual model, systematically analyzing all variables. In each case, the regression analyses conducted are presented.

Antecedents to failure sharing

Figure 7.3. Individual cognitive and emotional antecedents to failure sharing.



The study assessed the total, direct, and indirect effects (H10a and H10b) of the antecedents, shame and guilt, on the mediator (net benefits of sharing) and the outcome variable (failure sharing; see Figure 7.3). A multiple regression analysis was conducted, including both feelings of shame and guilt as parallel antecedents. As in the online study, the aim was to quantify the unique contributions of shame and guilt to the model's mediator (net benefits of sharing) and the outcome variable (failure sharing). The regression analysis indicated that both shame and guilt had significant direct associations with net benefits of sharing, but in opposite directions, supporting H3a and H3b, consistent with the semipartial correlation analysis.

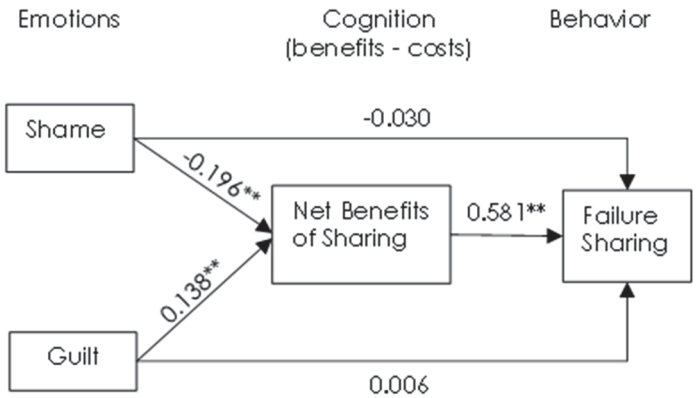
As shown in Table 7.11 and Figure 7.4, shame was negatively related to perceived net benefits of sharing ($b = –0.196$, $p < 0.001$), while guilt had a positive relationship ($b = 0.138$, $p < 0.001$). Further analysis revealed a negative indirect effect of shame on participants' willingness to share failures through their perceived net benefits of sharing ($b = –0.114$, 95% CI [–0.157, –0.073]), supporting H10a. In contrast, guilt exhibited a positive indirect effect on willingness to share failures through perceived net benefits ($b = 0.080$, 95% CI [0.032, 0.132]), supporting H10b. In the presence of the mediator, neither shame ($b = –0.030$, $p = 0.301$) nor guilt ($b = 0.006$, $p = 0.860$) had a significant direct association with failure-sharing, indicating full mediation.

Table 7.11. Mediation analyses of failure sharing with guilt and shame as parallel antecedents and net benefits of sharing as mediator (n = 385).

		Outcome						
		M (NetBen)				Y (Failure-Sharing)		
Antecedent		Coeff.	SE	p		Coeff.	SE	p
X Shame	a_1	-.196	.031	<.001	c_1'	-.030	.029	.301
X Guilt	a_2	.138	.041	<.001	c_2'	.006	.036	.860
M NetBen		-	-	-	b	.581	.045	<.001
constant	i_m	1.053	.138	<.001	i_y	.617	.131	<.001
			R^2 = .094 F(2, 384) = 20.039, p <.001				R^2 = .334 F(3, 383) = 64.148 , p<.001	

Path effects in the model are presented in Figure 7.4.

Figure 7.4. Unstandardized regressed path coefficients between shame, guilt, perceived net benefits of sharing, and failure sharing.



Total effect (shame), b = –0.144, p < 0.001,
Indirect effect (shame), b = –0.114, 95% CI [–0.157, –0.073]
Total effect (guilt), b = 0.086, p = 0.045,
Indirect effect (guilt), b = 0.080, 95% CI [0.032, 0.132]

Analyzing confounding variables

To statistically account for potential effects caused by confounding variables in the above regressed model, three additional antecedents (covariates) of failure sharing were included. Based on previous research (see Chapter 2), self-efficacy and the Big Five personality traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness/imagination) were identified as personal dispositions that could influence individuals' decisions to share failures. Additionally, a two-item index assessing dishonesty (lie; see Appendix 2) was included.

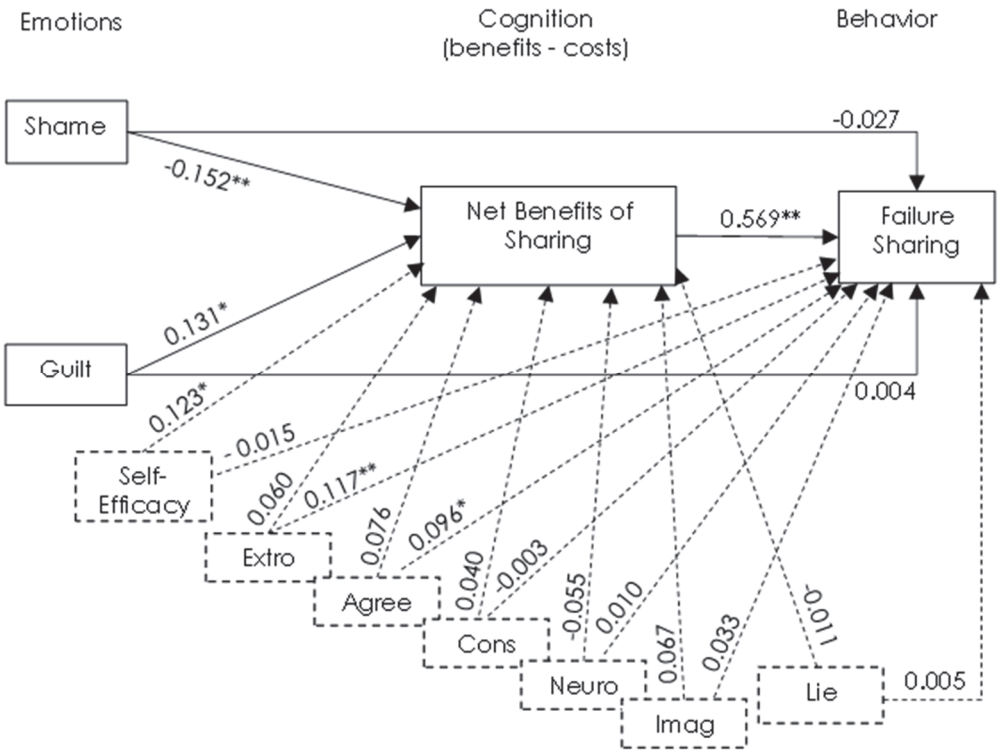
In a simple mediation analysis presented in Table 7.12 and Figure 7.5, these covariates were included alongside shame and guilt as parallel antecedents to failure sharing, with perceived net benefit of sharing as a potential mediator. The analysis indicated a significant negative indirect effect through shame (b = –0.087, 95% CI [–0.129, –0.049]) and a significant positive indirect effect through guilt (b = 0.069, 95% CI [0.025, 0.119]), which are comparable to the indirect effects (shame; b = –0.114, 95% CI [–0.157, –0.073]) and (guilt; b = 0.080, 95% CI [0.032, 0.132]) observed when these covariates were excluded, as shown in Figure 7.4. Despite the analysis indicating direct relationships between self-efficacy and net benefits of sharing, as well as between extraversion and agreeableness in relation to failure sharing, the minor reduction in the indirect effects suggests that participants' self-efficacy, Big Five personality traits, and potential dishonesty do not substantially alter the model. This indicates that the inclusion of these covariates does not invalidate the hypothesized mediation model.

Table 7.12. Mediation analyses of failure sharing with guilt and shame as parallel antecedents, net benefits of sharing as mediator, and self-efficacy, Big Five personality traits, and dishonesty as covariates (n = 385).

		Outcome						
		M (NetBen)				Y (Failure-Sharing)		
Antecedent		Coeff.	SE	p		Coeff.	SE	p
X Shame	a_1	-.152	.033	<.001	c_1'	-.027	.031	.378
X Guilt	a_2	.122	.039	.002	c_2'	.004	.036	.913
M NetBen		-	-	-	b	.569	.047	<.0001
C_1 SE	f_1	.123	.043	.004	g_1	-.015	.039	.705
C_2 Extro	f_2	.060	.035	.090	g_2	.117	.032	<.001
C_3 Agree	f_3	.076	.041	.066	g_3	.025	.038	.517
C_4 Cons	f_4	.040	.038	.300	g_4	-.003	.035	.927
C_5 Neuro	f_5	-.055	.041	.181	g_5	.010	.038	.785
C_6 Imag	f_6	.067	.036	.065	g_6	-.045	.033	.171
C_7 Lie	f_7	-.011	.006	.040	g_7	.005	.006	.422
Constant	i_m	-.208	.311	.504	i_y	.327	.282	<.001
			R^2 = .179 F(9, 376) = 9.092, p <.001				R^2 = .368 F(10, 375) = 21.831 , p<.001	

Path effects in the model are shown in Figure 7.5.

Figure 7.5. Unstandardized regressed path coefficients between the antecedents shame and guilt, the mediator net benefits of sharing, the covariates self-efficacy, Big Five factors of personality, and dishonesty (dashed) on failure sharing.



Indirect effect (shame), b = –0.087, 95% CI [–0.129, –0.049]
Indirect effect (guilt), b = 0.069, 95% CI [0.025, 0.119]

Antecedents to the cost-benefit evaluation

The next step in the statistical analysis involved examining the mediating role of failure emotions (shame and guilt) in the relationship between participants' individual fixed (vs. growth) mindset and their perceived net benefits of sharing failures (H11a and H11b). To execute the analysis, a parallel multiple mediator model was applied, similar to the approach used in the online study. This model included the antecedent variable of individual fixed (vs. growth) mindset, which directly affects the net benefits of sharing (outcome variable), as well as indirectly through both shame and guilt (multiple mediators). In

the parallel multiple mediator model, the two mediators are modeled to control for each other's effects (see Hayes, 2022).

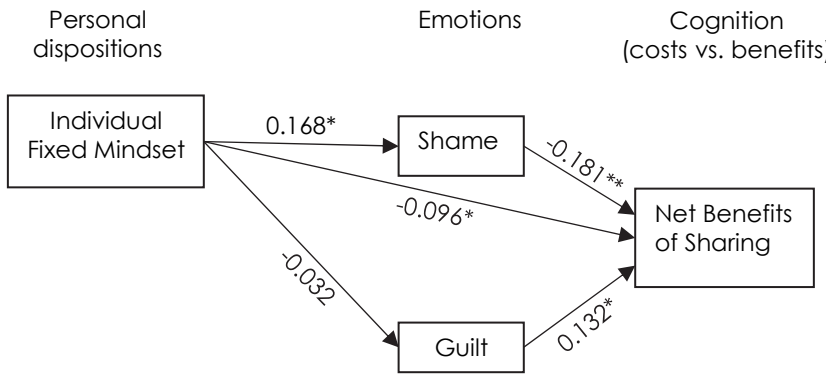
Table 7.13 and Figure 7.6 shows the analysis, which indicates a significant negative indirect effect of individual fixed (vs. growth) mindset on net benefits of sharing through shame (b = –0.030, 95% CI [–0.054, –0.010]). However, the indirect effect of fixed (vs. growth) individual mindset on net benefits of sharing through guilt was not significant (b = –0.042, 95% CI [–0.007, 0.019]). Moreover, the direct effect of individual fixed (vs. growth) mindset on net benefits of sharing, in the presence of shame and guilt as parallel mediators, was significant (b = –0.096, p = 0.001). This indicates that shame mediates the relationship between individual fixed (vs. growth) mindset and net benefits of sharing (supporting H11a), while no indirect effect is found when introducing guilt as a mediator (rejecting H11b)

Table 7.13. Regression coefficients, standard errors, and model summary information for the presumed mediating role of shame and guilt on the relationship between individual fixed (vs. growth) mindset and net benefits of sharing (n = 385).

			Outcome								
			M1(Shame)			M2 (Guilt)				Y (NetBen)	
Antecedent		Coeff.	SE	p		Coeff.	SE	p		Coeff.	SE	p
X (IFM)	a_1	.168	.056	.003	a_2	-.032	.037	.395	c´	-.096	.029	.001
M1 (Shame)		-	-	-		-	-	-	b_1	-.181	.031	<.001
M2 (Guilt)		-	-	-		-	-	-	b_2	.132	.040	.001
Constant	i_{M1}	2.798	.173	<.001	i_{M2}	2.600	.148	<.001	i_Y	1.307	.156	<.001
			R^2 = .023 F(1, 385) = 9.097 p =.003				R^2 = .271 F(2, 384) = 71.199 p <.001				R^2 = .119 F(3, 383) = 17.285 p<.001	

The unstandardized path effects in the regressed model are presented in Figure 7.6.

Figure 7.6. Unstandardized regressed path coefficients between individual fixed (vs. growth) mindset, failure emotions, and net benefits of sharing.



Indirect effect (shame), b = –0.030, 95% CI [–0.054, –0.010]
Indirect effect (guilt), b = –0.042, 95% CI [–0.007, 0.019]

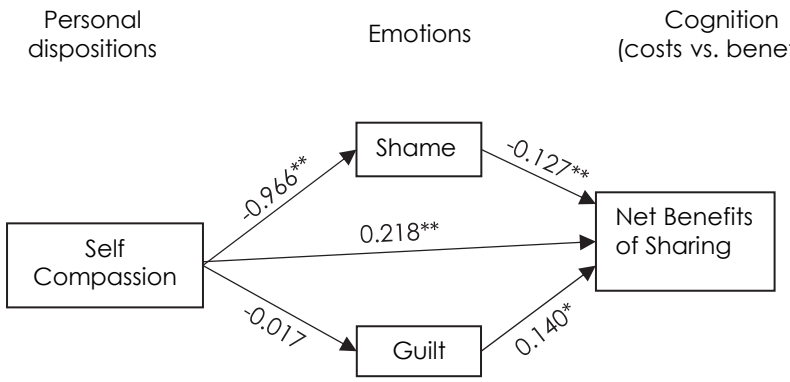
Next, the analysis examined the mediating role of feelings of shame and guilt in the relationship between self-compassion and perceived net benefits of sharing (H12a and H12b), again applying the parallel multiple mediator model. The analysis indicated a significant positive indirect effect of self-compassion on net benefits through shame (b = 0.122, 95% CI [0.061, 0.189]). However, the indirect effect of self-compassion on net benefits of sharing through guilt was not significant (b = –0.002, 95% CI [–0.022, 0.016]). Moreover, the direct effect of self-compassion on net benefits of sharing, with shame and guilt as mediators, was significant (b = 0.218, $p < 0.001$). These findings show that shame mediates the relationship between self-compassion and perceived net benefits of sharing (supporting H12a), while no indirect effect is found when introducing guilt as a mediator (rejecting H12b). The results of the parallel multiple mediation analysis are presented in Table 7.14 and Figure 7.7.

Table 7.14. Regression coefficients, standard errors, and model summary information for the presumed mediating role of shame and guilt on the relationship between self-compassion and perceived net benefits of sharing (n = 385).

		Outcome									
		M1 (Shame)			M2 (Guilt)			Y (NetBen)			
Antecedent		Coeff.	SE	p	Coeff.	SE	p		Coeff.	SE	p
X (SC)	a_1	-.966	.073	<.001	a_2 -.0170	.069	.807	c´	.218	.054	<.001
M1 (Shame)		-	-	-	-	-	-	b_1	-.127	.035	<.001
M2 (Guilt)		-	-	-	-	-	-	b_2	.140	.040	<.001
Constant	i_{M1}	6.166	.073	<.001	i_{M2} 4.975	.192	<.001	i_y	.180	.256	.482
			R^2 = .311 F(1, 385) = 173.829, p <.001			R^2 = .269 F(2, 384) = 70.745, p <.001				R^2 = .131 F(3, 383) = 19.278, p<.001	

The unstandardized path effects in the regressed model are presented in Figure 7.7.

Figure 7.7. Unstandardized regressed path coefficients between self-compassion, failure emotions, and perceived net benefits of sharing.



Indirect effect (shame), b = 0.122, 95% CI [0.061, 0.189]
Indirect effect (guilt), b = –0.002, 95% CI [–0.022, 0.016]

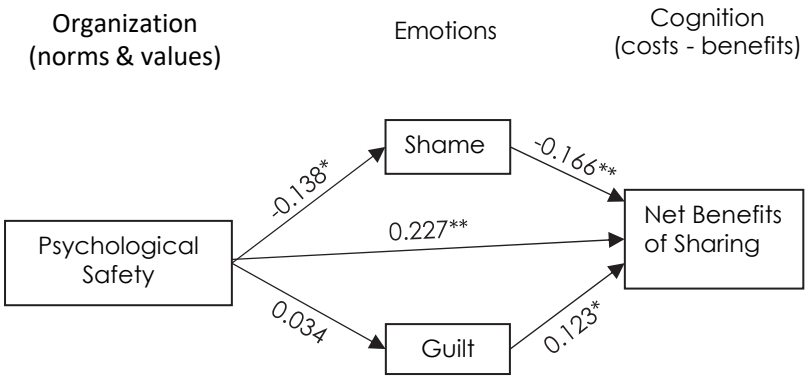
To further explore the variables in the conceptual model, the mediating role of shame and guilt in the relationship between psychological safety and the perceived net benefits of sharing (H13a and H13b) was assessed using the parallel multiple mediator model. The mediation analysis showed a positive indirect effect of psychological safety on the perceived net benefits of sharing through shame (b = 0.023, 95% CI [0.004, 0.044]) but no indirect effect through guilt (b = 0.004, 95% CI [–0.006, 0.016]). Additionally, the analysis showed a direct positive effect of psychological safety on the perceived net benefits of sharing in the presence of shame and guilt as mediators (b = 0.227, $p < 0.001$). In summary, psychological safety positively relates to the perceived net benefits of sharing indirectly through shame, supporting H13a. However, no indirect effect through guilt was found, which rejects H13b. The results of this mediation analysis are presented in Table 7.15 and Figure 7.8.

Table 7.15. Regression coefficients, standard errors, and model summary information for the presumed mediating role of shame and guilt on the relationship between psychological safety and net benefits of sharing (n = 385).

		Outcome									
		M1(Shame)			M2 (Guilt)				Y (NetBen)		
Antecedent		Coeff.	SE	p	Coeff.	SE	p		Coeff.	SE	p
X (PS)	a_1	-.138	.057	.016	a_2 .034	.038	.362	c´	.227	.028	<.001
M1 (Shame)		-	-	-	-	-	-	b_1	-.166	.029	<.001
M2 (Guilt)		-	-	-	-	-	-	b_2	.123	.038	.001
Constant	i_{M1}	3.894	.255	<.001	i_{M2} 2.359	.212	<.001	i_y	.019	.180	.916
		R^2 = .015 F(1, 385) = 5.866, p = .016			R^2 = .271 F(2, 384) = 71.274, p = <.001				R^2 = .229 F(3, 383) = 37.830, p<.001		

The unstandardized path effects in the regressed model are presented in Figure 7.8.

Figure 7.8. Unstandardized regression path coefficients between psychological safety, shame and guilt, and net benefits of sharing.



Indirect effect (shame), b = 0.023, 95% CI [0.004, 0.044]
Indirect effect (guilt), b = 0.004, 95% CI [–0.006, 0.016]

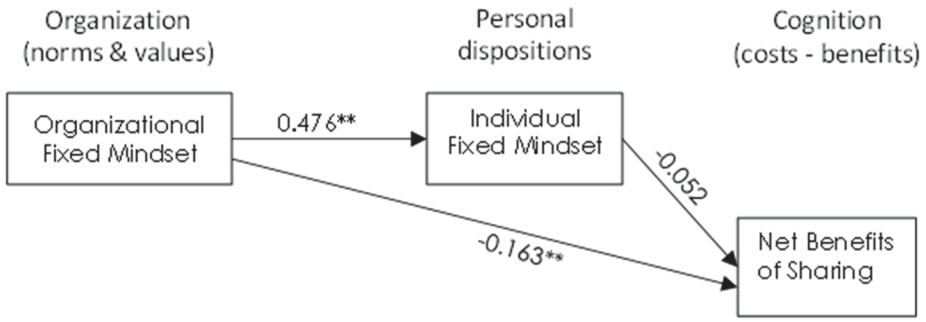
The final step in investigating the variables in the conceptual model involved analyzing the mediating role of individual fixed (vs. growth) mindset in the relationship between organizational fixed (vs. growth) mindset and perceived net benefits of sharing using a simple mediation model. The analysis showed no indirect effect (b = –0.025, 95% CI [–0.061, 0.010]), but organizational fixed (vs. growth) mindset related negatively (b = –0.163, $p < 0.001$) to net benefits of sharing in the presence of the presumed mediator, individual fixed (vs. growth) mindset. In summary, the analysis showed no indirect relationship between organizational fixed (vs. growth) mindset and net benefits of sharing through individual fixed (vs. growth) mindset, rejecting H14. This result aligns with the findings in the online study. The mediation analysis is presented in Table 7.16 and Figure 7.9.

Table 7.16. Regression coefficients, standard errors, and model summary information for the presumed mediating role of individual fixed (vs. growth) mindset in the relationship between organizational fixed (vs. growth) mindset and perceived net benefits of sharing (n = 385).

		Outcome						
		M (IFM)				Y (NetBen)		
Antecedent		Coeff.	SE	p		Coeff.	SE	p
X (OFM)	a	.476	.048	<.001	c´	-.163	.035	<.001
M (IFM)		-	-	-	b	-.052	.033	.116
constant	i_m	1.712	.132	<.001	i_y	1.506	.102	<.001
		R^2 = .204 F(1, 385) = 98.755, p <.001				R^2 = .093 F(2, 384) = 19.719, p<.001		

The unstandardized path effects in the model are presented in Figure 7.9.

Figure 7.9. Unstandardized regression path coefficients between organizational fixed (vs. growth) mindset, individual fixed (vs. growth) mindset, and perceived net benefits of sharing.



Indirect effect, b = –0.025, [–0.061, 0.010]

Table 7.17 provides an overview of the results for hypotheses H1–H14, as examined in both the online study ("2a") and the ecological replication study ("2b").

Table 7.17. Overview of hypotheses and indication of support in studies 2a and 2b.

	Hypothesis	Support	
		2a	2b
H1	Perceived net benefits of sharing failures positively relate to failure sharing.	Yes	Yes
H2a	Feelings of shame negatively relate to failure sharing.	Yes	Yes
H2b	Feelings of guilt positively relate to failure sharing.	Yes	Yes
H3a	Feelings of shame negatively relate to the perceived net benefits of failure sharing.	Yes	Yes
H3b	Feelings of guilt positively relate to the perceived net benefits of failure sharing.	No	Yes
H4a	A more fixed (vs. growth) individual mindset negatively relates to the perceived net benefits of sharing failures.	Yes	Yes
H4b	Self-compassion positively relates to the perceived net benefits of sharing failures.	Yes	Yes
H5a	A more fixed (vs. growth) organizational mindset negatively relates to perceived net benefits of sharing failures.	Yes	Yes
H5b	Psychological safety positively relates to the perceived net benefits of sharing failures.	N/A	Yes
H6a	A more fixed (vs. growth) individual mindset positively relates to feelings of shame.	No	Yes
H6b	A more fixed (vs. growth) individual mindset negatively relates to feelings of guilt.	No	No
H7a	Self-compassion negatively relates to feelings of shame when experiencing failures.	Yes	Yes
H7b	Self-compassion negatively relates to feelings of guilt when experiencing failures.	No	No
H8a	Psychological safety negatively relates to feelings of shame when experiencing failures.	N/A	Yes
H8b	Psychological safety negatively relates to feelings of guilt when experiencing failures.	N/A	No
H9	A more fixed (vs. growth) organizational mindset positively relates to a more fixed (vs. growth) individual mindset.	Yes	Yes
H10a	Feelings of shame negatively affect failure sharing indirectly through perceived net benefits of sharing.	Yes	Yes
H10b	Feelings of guilt positively affect failure sharing indirectly through perceived net benefits of sharing.	No	Yes
H11a	A more fixed (vs. growth) individual mindset negatively affects perceived net benefits of sharing indirectly through feelings of shame.	Yes	Yes

H11b	A more fixed (vs. growth) individual mindset negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	No	No
H12a	Self-compassion positively affects perceived net benefits of sharing indirectly through feelings of shame.	No	Yes
H12b	Self-compassion negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	No	No
H13a	Psychological safety positively affects perceived net benefits of sharing indirectly through feelings of shame.	N/A	Yes
H13b	Psychological safety negatively affects perceived net benefits of sharing indirectly through feelings of guilt.	N/A	No
H14	A more fixed organizational mindset (vs. growth) negatively affects perceived net benefits of sharing indirectly through a more fixed (vs. growth) individual mindset.	No	No

Chapter 8

Discussing the Dynamics of Failure Sharing: Findings from Online and Ecological Studies

The objective of this chapter is to compare the findings from the online study ("2a") and the subsequent ecological study ("2b") and discuss these findings in relation to prior research. Both studies largely supported the hypothesized conceptual model (see Table 7.17 for a summary of the hypotheses and their support). The two studies provide insight into the emotional dynamics involved in both professionals' cognitive cost-benefit analysis of sharing failures and their intention to act. Notably, the findings highlight the contrasting effects of shame and guilt on both the cognitive and behavioral dimensions of failure sharing. Shame tends to foster a negative view, increasing the perceived costs and decreasing the perceived benefits, thus inhibiting the intention to share. In contrast, guilt is linked to a more positive outlook, reducing perceived costs and enhancing perceived benefits, thereby encouraging failure-sharing intentions. This finding contributes to a deeper understanding of the emotional mechanisms influencing individuals' decisions and actions regarding failure sharing, an area that has remained empirically unexplored. Furthermore, the studies indicate the utility of the measures employed, including their supportive psychometric characteristics, suggesting that these measures could be valuable tools in future research on the emotional dynamics of failure sharing.

The chapter is structured as follows. First, I examine the findings related to the proposed cognitive antecedents of failure sharing. This section is followed by an exploration of key empirical findings regarding the emotional dynamics of failure sharing, with a specific focus on feelings of shame and guilt. Next, I explore the potential influence of individual dispositions, such as individual fixed mindset and self-compassion, on both the cost-benefit evaluation of failure sharing and the experience of shame and guilt. Subsequently, I discuss the findings concerning organizational-level antecedents, including organizational fixed mindset and psychological safety, and their impact on professionals' cost-benefit evaluation of failure sharing. Finally, the chapter concludes with a discussion of limitations and suggestions for future research.

8.1 Perceived net benefits of sharing positively relate to failure sharing

The hypothesized relationship between professionals' cognitive appraisal of their cost-benefit evaluation of sharing failures and the intention to share failures with peers (H1) received substantial empirical support in both studies. The results of the bivariate correlation analyses clearly show that when professionals perceive greater benefits than costs of sharing, they are motivated to share the failure, even if doing so might damage their personal image. This is because the potential learning for themselves, their team, or the organization is perceived as essential. This finding is consistent with previous research indicating that professionals may be less motivated to share failures and errors if the perceived costs outweigh the benefits of sharing the negative event (Morrison & Phelps, 1999) and vice versa. Moreover, it supports the connection between employees' rational cost-benefit evaluation of sharing and their open communication of errors and failures, as seen in the error reporting (Baker & Norton, 2001; Lee et al., 2015; Naveh & Katz-Navon, 2014; Russo et al., 2015; Uribe et al., 2002; Zhao & Olivera, 2006) and learning from failure literature (Cannon & Edmondson, 2001; Carmeli & Gittell, 2009; Edmondson, 1999; Tucker & Edmondson, 2003). Overall, the current

studies show that how professionals cognitively weigh the pros and cons of sharing failures is related to their inclination to share those failures.

8.2 Contrasting effects of shame and guilt on failure sharing

Two hypotheses predicted an association between negative self-conscious emotions and professionals' inclination to share failures, but in opposite directions. The hypothesis suggesting that shame inhibits failure sharing (H2a) garnered robust support across both studies. This finding aligns with prior research indicating that the experience of shame in the context of transgressions often leads individuals to withdraw and conceal their actions (Elison et al., 2006; Lewis, 2000; Tangney et al., 1992). Similarly, the hypothesis proposing that guilt positively affects failure sharing (H2b) was supported in both studies, although it was marginally significant. This finding supports earlier studies suggesting that, in contrast to shame, guilt tends to motivate individuals to take constructive actions for themselves and others (Bohns & Flynn, 2013; Tangney & Dearing, 2003). These actions may involve efforts to mitigate or rectify the consequences of failure (Tangney, 1996; Tangney et al., 1992), as well as a willingness to confess or offer apologies (Lewis, 2000).

8.3 Contrasting effects of shame and guilt on cost-benefit evaluations

Overall, the findings of the studies corroborate the assertions that the negative self-conscious emotions of shame and guilt are associated with the analytical cost-benefit evaluation professionals undertake when contemplating failure sharing, albeit in distinct ways. I will begin by discussing the association between shame and professionals' perceived net benefits of failure sharing, as well as the indirect effect of shame on failure sharing through these perceived net benefits. Subsequently, I will discuss these effects within the framework of guilt.

8.3.1 Shame negatively relates to cost-benefit evaluation of failure sharing

The semipartial correlation analysis and the multiple regression analysis, which included both shame and guilt in parallel to examine their unique contributions, supported the hypothesis that shame negatively relates to professionals' cost-benefit evaluation by reducing perceived benefits and increasing perceived costs of sharing failures (H3a). In addition, the multiple mediation analyses conducted in both studies supported the hypothesis that professionals' perceived cost-benefit evaluation of sharing failures constituted a mechanism through which shameful reactions to failing negatively affect failure-sharing willingness (H10a). This key empirical finding supports Zhao and Olivera's (2006) conceptual proposition that negative emotional reactions indirectly influence error and failure communication by shaping individuals' cognitive evaluations of the costs and benefits of reporting errors. Specifically, it aligns with their anticipation that individuals experiencing shame upon detecting an error are more likely to focus on the perceived costs rather than the benefits of reporting.

8.3.2 Guilt positively relates to the cost-benefit evaluation of failure sharing

The semipartial correlation analyses, along with the multiple regression analysis incorporating both shame and guilt simultaneously, investigated the proposed positive association of guilt with professionals' cost-benefit evaluation of sharing failures (H3b). The results indicated a positive relationship, supporting the hypothesis and the assertion that feelings of guilt may enhance the perceived net benefits of sharing. This result was consistent across both studies. Moreover, the multiple mediation analyses conducted in both studies, examining the potential indirect effect through professionals' perceived net benefits of sharing on the relationship between guilt and failure sharing (H10b), showed partial support. The online study did not establish an indirect effect; however, the ecological study indicated that professionals' perceived net benefits of sharing failures constituted a mechanism through which feelings of guilt positively motivated failure sharing. Although a definitive conclusion must be postponed, the inconsistency could potentially be

attributed to the improved measures of state shame and guilt and of the cost-benefits of sharing that were applied in the ecological study, as well as to the ecological study's enhanced statistical power.

The current finding that shame is linked to a more negative or "destructive" approach to failures and failure sharing (higher perceived costs, lower benefits, more hiding, and less sharing), and that guilt might be linked to a positive or "constructive" view (lower perceived costs, higher perceived benefits, less hiding, and more sharing), supports findings in prior research on these emotions (Bohns & Flynn, 2013; Cohen et al., 2011; Tangney & Dearing, 2003). Moreover, the mechanism by which professionals, as "analytic" decision-makers weighing the pros and cons before acting, are shaped by feelings of shame and guilt has only been explored conceptually in earlier error-reporting research (Zhao & Olivera, 2006) and indicated by Dahl and Werr (2021) in the exploratory study (see "Study 1," Chapter 4). The current findings substantially extend this limited research by providing data consistent with a model for how feelings of shame and guilt might influence this "analytical" cost-benefit evaluation in opposite ways within the mind of the professional.

Finally, the above empirical findings align with theoretical models emphasizing the pivotal role of negative emotions in influencing behavior through cognitive processes, particularly in risky decision-making contexts. Notable examples include Forgas's (1995) affect infusion model, Loewenstein et al.'s (2001) risk-as-feelings perspective, Anderson's (2003) rational–emotional model of decision avoidance, and Elfenbein's (2007) framework of integrated intrapersonal emotions in organizations. These models suggest that negative emotions can distort cognitive evaluations by altering perceptions of the costs and potential benefits associated with engaging in risky behaviors.

8.4 Fixed mindset and self-compassion: Opposing effects on cost-benefit evaluation

Two personal dispositions affecting professionals' approach to share failures were examined: individual fixed mindset and self-compassion. These

personal antecedents could potentially influence professionals' view of failures as predominantly either risks or opportunities, as well as their ability to mindfully cope with negative perceptions induced by failure experiences. Both studies support the propositions that a more fixed (versus growth) individual mindset negatively (H4a), and self-compassion positively (H4b), relates to professionals' perceived cost-benefit evaluation of sharing failures. These findings contribute to the error management, individual mindset, and self-compassion literature.

First, the potential influence of professionals' individual mindset beliefs on their cost-benefit analysis has, to my knowledge, not been empirically researched. However, the results align with previous research suggesting that when facing challenges and failures, people with a more fixed mindset tend to be more sensitive to negative performance feedback and preoccupied with maintaining their status or image (cf. Blackwell et al., 2007; Burnette et al., 2013; Hong et al., 1999). In contrast, those with a growth mindset view failures and setbacks as opportunities to develop their abilities and learn (Blackwell et al., 2007; Cron et al., 2005; Hong et al., 1999; Nussbaum & Dweck, 2008). The current studies demonstrate that professionals with a fixed mindset, as opposed to those with a growth mindset, are more likely to perceive higher costs and fewer benefits when deciding whether to share failures. This finding advances error management research by highlighting how different mindsets shape professionals' decision-making processes regarding the broader communication of errors and failures.

Second, the current studies underscore the potential positive influence of professionals' self-compassion on their perceived cost-benefit evaluation of failure sharing in a real work context. Existing research has either only conceptually argued about the positive effects of self-compassion on viewing failures as learning opportunities at work (Shepherd & Cardon, 2009) or only studied undergraduate students' views of failures as beneficial for learning and development.

In summary, the current findings indicate that a fixed versus growth mindset and high self-compassion are oppositely related to professionals' evaluations of the costs and benefits of sharing failures. While these outcomes hold potentially great significance, they align with theoretical expectations.

8.5 Fixed mindset positively relates to shame but not to guilt

Overall, the studies show inconsistencies regarding the assertion that a fixed individual mindset is associated with increased feelings of shame in the context of failure. However, there is consistency in the findings concerning the relationship between a fixed individual mindset and guilt—no association was found in either study. I will begin by discussing the potential association between a fixed individual mindset and feelings of shame. Subsequently, I will explore these effects within the context of guilt.

8.5.1 Fixed mindset positively relates to shame

The current studies partially support the hypothesis that a more fixed (vs. growth) individual mindset is positively related to feelings of shame when experiencing failures (H6a). While the online study did not support this hypothesis, the ecological study did. This inconsistency could be attributed to the improved state shame and guilt measure (modified short scale) used in the ecological study, as well as its enhanced statistical power (n = 385). This finding enriches the limited research (Zhao et al., 1998) on the relationship between fixed mindset beliefs and shameful reactions to failures. Specifically, professionals with a fixed mindset tend to view deficiencies and failings as integral parts of their identity (Dweck, 2013). This perspective can lead individuals to view themselves as inherently flawed or as failing to meet certain standards, thereby triggering feelings of shame (Dahl & Werr, 2021; Zhao et al., 1998).

Additionally, both studies support the hypothesis that a fixed individual mindset is negatively associated with professionals' perceived advantages and disadvantages of sharing failures indirectly through feelings of shame (H11a). This finding uncovers a potential emotional mechanism in which shame mediates the relationship between holding a fixed mindset and the tendency to overemphasize the costs (e.g., threats to personal image) over the benefits (e.g., learning opportunities) of failure.

8.5.2 Fixed mindset shows no relation to guilt

The current studies did not support the hypothesis that professionals with a more fixed (vs. growth) mindset would experience less guilt when failing (H6b). Additionally, they did not support the idea that a fixed mindset negatively relates to the cost-benefit evaluation of failure sharing indirectly through feelings of guilt (H11b). In other words, guilt does not appear to be an emotional mechanism linking a fixed mindset to how professionals assess the pros and cons of sharing failures.

One possible explanation for this discrepancy is that professionals' mindsets may be more closely tied to their self-concept than to their actions. When confronted with failures, professionals with a fixed mindset may focus more on perceived deficiencies in their character rather than on the specific actions or behaviors that contributed to the failure.

8.6 Self-compassion relates negatively to shame but not to guilt

As anticipated, both studies showed a negative relationship between self-compassion and shame (H7a), consistent with extensive research demonstrating that self-compassion is inversely related to shame (e.g., Johnson & O'Brien, 2013; Neff, 2023; Siwik et al., 2022). This finding also supports earlier management research, which suggests that professionals' levels of self-compassion during project failures can explain variations in the intensity of negative emotions elicited by the event, as well as why some project members recover more quickly than others (Shepherd & Cardon, 2009).

However, neither of the current studies indicated a relationship between self-compassion and guilt (H7b), which contradicts previous studies suggesting such a connection (Breines & Chen, 2012; Held & Owens, 2015; Mosewich et al., 2011). These studies have proposed that self-compassion enhances motivation to take personal responsibility for one's actions. One plausible explanation for the observed relationship between self-compassion and emotional responses in the current studies is that self-compassion is more closely related to individuals' overall self-evaluation rather than to their specific actions in the face of underachievement.

This distinction may clarify why self-compassion has a more pronounced buffering effect on shame than on guilt. During failures, individuals may become excessively identified with negative events, leading to rumination that narrows their focus and amplifies the impact on their self-worth (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). In this state, individuals might internalize their failures by thinking, "Not only did I make a mistake, but I am a mistake." Such overidentification often transforms transient events into permanent aspects of one's identity. In contrast, higher levels of self-compassion cultivate mindfulness, allowing individuals to perceive negative thoughts and feelings as temporary experiences rather than intrinsic flaws. This perspective reduces the extent to which individuals become absorbed in and identified with their failures, thereby mitigating feelings of shame.

The mediation analyses examining the mediating role of shame (H12a) on the relationship between professionals' self-compassion and their cost-benefit evaluation of sharing failures show inconsistent results. In the online study, no indirect effect was observed, while the ecological study indicated a positive effect of self-compassion on professionals' perceived net benefits of sharing, indirectly through shame. This finding might appear counterintuitive, but the proposed underlying mechanism is that when self-compassion reduces feelings of shame, it increases the perceived benefits of sharing, leading to a positive indirect effect. The inconsistent results could potentially be attributed to the improved shame and guilt (SSGS) scale and stronger statistical power in the ecological study. This indicates that shame positively mediates the relationship between self-compassion and the cost-benefit evaluation of sharing failures. However, no indirect effects were observed through guilt (H12b).

Overall, although a definitive conclusion must await further research, self-compassion may play a key role in maintaining individuals' ability to manage negative emotions and cognitions in work-related situations involving perceived failure and self-evaluation, particularly when feelings of shame are present.

8.7 Organizational-level antecedents to the cost-benefit evaluation of failure sharing

The conceptual model includes two types of organizational-level antecedents that aim to capture key contextual values and norms, which may shape professionals' core beliefs and cognitions in distinct ways: the fixed (versus growth) organizational mindset, examined in both studies, and perceived psychological safety, examined only in the ecological study.

8.7.1 Negative effect of organizational fixed mindset on cost-benefit evaluation and reinforcement of individual fixed mindset

Both studies support the hypotheses that an organizational fixed mindset—where talent, intelligence, and ability are viewed as largely unchangeable—leads professionals to perceive greater costs and fewer benefits in sharing failures (H5a). Additionally, this fixed organizational mindset is positively associated with reinforcing a fixed mindset at the individual level (H9). These findings corroborate prior research on organizational mindset (Canning et al., 2020; Murphy & Dweck, 2010), indicating that a fixed organizational mindset shapes professionals' self-concepts to align with the organization's values, causing them to adopt a more fixed individual mindset.

However, the current studies do not provide evidence to support the hypothesis (H14) that a more fixed organizational mindset (vs. growth) negatively affects perceived net benefits of sharing indirectly through a more fixed (vs. growth) individual mindset. In other words, no indirect effect was observed. This suggests that professionals influenced by an organizational fixed mindset tend to emphasize the potential costs of failure sharing over its benefits, regardless of their individual mindset. Previous research on organizational mindset indicates that in organizations characterized by a fixed mindset, employees are less likely to value and reward traits associated with improvement and learning from mistakes (Murphy & Dweck, 2010). Instead, they may feel compelled to conform to the organization's fixed mindset beliefs to receive positive evaluations and rewards, such as bonuses, recognition, and promotions (Murphy & Reeves, 2019). Consequently, they may prioritize perceived costs over benefits when contemplating sharing failures.

As the link between organizational mindset beliefs and individuals' appraisals, which forms the basis of their cost-benefit evaluation regarding failure sharing, remains empirically unexplored in real organizational contexts, these findings make a valuable contribution to the emerging field of organizational mindset literature (Canning et al., 2020; Murphy & Dweck, 2010; Murphy & Reeves, 2019), as well as to previous error management culture research (Gronewold et al., 2013; Keith & Frese, 2011; van Dyck et al., 2005). The latter stream of literature posits that values, norms, and practices play a crucial role as antecedents in shaping an organization's perception of errors and failures. These shared social conventions and agreements within the organizational culture can significantly affect people's cognitions and core beliefs regarding failure sharing. They may, thus, either inhibit or encourage failure sharing.

8.7.2 Shame meditates the relation between psychological safety and cost-benefit evaluation

The ecological study examined the relationship between professionals' perceived psychological safety within their work units and their cognitive assessment of the costs and benefits associated with sharing failures (H5b). The results indicated that higher levels of psychological safety were positively related to professionals' cost-benefit evaluations, thereby supporting the hypothesis. Additionally, the study found a direct negative relationship between psychological safety and feelings of shame (H8a), although the anticipated negative relationship with guilt (H8b) was not supported.

The proposed mediation of shame (positive) and guilt (negative) in the relationship between psychological safety and professionals' cost-benefit evaluation of failure sharing was partially confirmed: a significant positive indirect effect was observed through shame (H13a), but no significant effect was found through guilt (H13b). This critical finding uncovers an emotional mechanism where psychological safety tends to reduce feelings of shame, thereby positively influencing the cost-benefit evaluation of sharing failures. This finding adds a critical emotional dimension to the existing research on psychological safety (e.g., Edmondson, 1999; Edmondson & Lei, 2014), which has primarily highlighted how higher levels of psychological safety foster social norms that encourage team members to take personal risks.

Specifically, it supports the open disclosure of divergent ideas, the acknowledgment of negative emotions, and the sharing of mistakes and failures. In summary, environments with high psychological safety reduce the likelihood of professionals experiencing shame after failures, making them more likely to prioritize benefits (learning) over potential costs (losing the job) when deciding whether to share failures with peers. This shift in priorities increases their likelihood of engaging in failure sharing.

The absence of both a direct effect of psychological safety on guilt and an indirect effect through guilt on the relationship between psychological safety and the cost-benefit evaluation of sharing failures, however, defies expectations. Psychological safety is argued to foster an environment where professionals feel comfortable expressing themselves without fear of negative consequences. In contrast, guilt is often associated with personal accountability for actions perceived as controllable, object-specific (e.g., a particular action), and potentially harmful to others (Bohns & Flynn, 2013). Professionals may still experience guilt in psychologically safe environments if they perceive their actions, rather than their perceived self-concept, as violating group or societal norms, irrespective of the environment's acceptance or supportiveness. Separate effects on shame and guilt are especially likely when using measures that distinguish between the emotions better than in previous studies. The potential association between psychological safety and feelings of guilt warrants further investigation with more precise emotional measures.

8.8. Limitations and future research

The current studies serve as pioneering empirical investigations into the relationships among various organizational-level antecedents (organizational mindsets and psychological safety), individual dispositions (individual mindset and self-compassion), negative self-conscious emotions of shame and guilt, the cognitive cost-benefit evaluation of sharing failures, and failure-sharing behaviors. While they contribute to multiple research domains, several limitations point toward directions for future inquiry.

First, the data on participants' responses to failures were based on imagined reactions to hypothetical scenarios, albeit carefully pre-tested and

selected from multiple alternatives. Although scenario-based approaches are common in studying failure reactions (e.g., Cohen et al., 2011; Tracy et al., 2007), it is possible that responses to real failures may differ in intensity and nature. Future research should build on the current findings by either examining professionals about actual recent failures at work or exposing them to situations where they experience failure firsthand.

Second, due to the scenario setting, data were collected via verbal response items designed to capture the proposed key antecedents to failure sharing. Since some measures were either entirely new, such as the failure-sharing scale and the net benefits of failure-sharing scale (see Appendix 3), the modified state shame and guilt measure (SSGS, Marschall et al., 1994), and the expanded measure of organizational mindset (Canning et al., 2020), they initially introduced some uncertainty. These limitations notwithstanding, the supportive psychometric features and reliability of all the measures used in the current studies provide a solid foundation for further exploration of failure sharing and its underlying emotional mechanisms in organizational contexts, either in their current form or with modifications.

A third limitation of both studies is the cross-sectional design, which restricts the ability to establish causal relationships as outlined in the conceptual model. While the theory and rationale behind the hypotheses suggest that organizational-level factors, such as organizational mindset beliefs and psychological safety, influence individuals' feelings of shame and guilt—ultimately shaping their perceived cost-benefit evaluations of failure sharing—this cannot be conclusively determined. Sociocultural models suggest that these relationships may be circular and mutually reinforcing (Markus & Kitayama, 1991). Organizational mindsets likely shape employee norms, emotions, and behaviors, which then influence both new and existing employees' perceptions of the organization's mindset.

Moreover, when testing hypothesized relationships, caution must be taken in interpreting the results. The conceptual model is based on existing research, theory, and data gathered at a single point in time, conceptualizing failure sharing as the result of interactions among cognition, emotions, personal dispositions, and contextual factors. Even if hypotheses are supported, failure sharing may retrospectively influence perceptions of costs and benefits, emotional responses, and even organizational norms and values over

time. Additionally, motivation to share failures is likely influenced by past experiences and emotions.

To clarify the causal mechanisms within the model, one approach could involve a longitudinal study across multiple organizations, allowing researchers to examine the circular and mutually reinforcing relationships between organizational-level antecedents, such as organizational mindsets and psychological safety, and individual-level antecedents, including failure-related emotions, personal dispositions, and cognition. This approach would offer valuable insights into how these factors shape individuals' decision-making processes related to failure sharing. Additionally, it could shed light on the temporal dynamism (Lei et al., 2016) of failure sharing, capturing shifts that occur before, during, and after a failure experience.

Alternatively, an experimental design could be employed, in which key variables—such as organizational mindset, self-compassion, or feelings of shame and guilt—are selectively manipulated. This would allow for a more precise investigation into how these factors influence the cost-benefit evaluation and subsequent behaviors in failure-sharing contexts, offering clearer insights into the causal dynamics at play.

Finally, this thesis has employed an exploratory approach, drawing on prior research and an exploratory study that focused on individuals´ cognitive evaluation of the perceived costs and benefits of sharing failures, shame and guilt, mindset, and self-compassion. These were complemented by organizational-level antecedents, including psychological safety and organizational mindset. However, this thesis did not encompass all potential antecedents, leaving room for further exploration of the complex dynamics of failure sharing. Future research could investigate additional factors identified in previous studies, including psychological influences such as humility (Seckler et al., 2021), attribution (Ilgen & Davis, 2000; Sellen, 1994), perceived behavioral control (Ajzen, 2002), and negative emotions such as fear or sadness (Zhao & Olivera, 2006). Cultural factors, such as management's intolerance of failure (Edmondson, 2011; Perrow, 1999), or organizational compassion (e.g., Madden, Duchon, Madden, & Ashmos Plowman, 2012; Miller, Grimes, McMullen, & Vogus, 2012) also warrant deeper investigation to provide a more comprehensive understanding of the phenomenon.

Chapter 9

Conclusions and Implications

Failure is an inherent aspect of human experience, making it inevitable in the workplace. As discussed, failures play a crucial role in driving improvement and learning, as they compel us to reassess and refine our assumptions and perspectives. Despite their importance, failures are rarely discussed openly due to negative emotions like shame and guilt, leading to their frequent neglect. Because people prefer sharing successes over failures, often silencing failures or shifting blame, their reluctance hinders both individual and collective learning. Thus, sharing failures broadly within organizations is essential for fostering a culture of continuous improvement and learning (e.g., Dahlin et al., 2018; Edmondson, 1996; van Dyck et al., 2005).

This thesis aims to deepen understanding of the underlying mechanisms of failure sharing, focusing on the micro-dynamics among professionals and the broader norms and values that shape these dynamics. To fulfill this purpose, the thesis focused on the following research questions: How do individuals make decisions about failure sharing in knowledge-intensive business services? How are psychological factors, such as cognition, emotion, and individual dispositions, involved in this decision-making process? How are organizational-level antecedents, such as norms and values, involved in this decision-making process?

Existing research on error management and learning from failure has thus far largely assumed that individuals' hesitance to engage in error and failure communication can be explained through theories grounded in analytical and cognitive processes. Key frameworks include action regulation

theory (Frese & Zapf, 1994), decision-making theories (Dahlin et al., 2018), and the theory of planned behavior (Ajzen, 1991, 2011). These approaches offer valuable insights into how people view and regulate their behaviors in response to errors and failures. However, this thesis supports research suggesting that individuals' decision-making processes regarding error and failure communication cannot be fully understood without considering the emotional mechanisms that underlie these cognitive and behavioral factors (e.g., Carroll et al., 2021; Shepherd & Cardon, 2009; Zhao & Olivera, 2006).

Specifically, theories that explore the influence of negative emotional reactions, such as shame or guilt, on judgment and decision-making are essential, as these emotions could shape behavior directly, as well as indirectly by affecting cognition (cf. Anderson, 2003; Elfenbein, 2007; Forgas, 1995; Lerner & Keltner, 2001; Loewenstein et al., 2001). This thesis argues that the integration of emotional mechanisms provides a more comprehensive understanding of both the barriers and enablers individuals face when deciding whether to engage with errors and failures in the workplace.

The chapter is organized as follows. First, I outline the main theoretical implications for existing error management and error management culture research, emphasizing contributions derived from key findings regarding the emotional dynamics of failure sharing. Next, I conclude the chapter by presenting the practical implications of these findings.

9.1 Theoretical implications

Based on the literature review in Chapter 2, key challenges in existing research on error management were identified, to which this thesis makes theoretical contributions: (a) a limited understanding of the emotional dynamics involved; (b) insufficient exploration of the influence of organizational norms and values that underpin error management practices and procedures; (c) an overemphasis on formal error reporting; and (d) a narrow contextual focus. The corresponding main theoretical implications will be further developed in the following sections.

Drawing on research that underscores the emotional dimensions of failure and error communication (Zhao & Olivera, 2006; Zhao, 2011), as well as self-conscious emotions like shame and guilt (Tracy & Robins, 2004; Tracy

et al., 2007), and individual dispositions such as self-compassion (Neff, 2023) and mindsets (Dweck, 2013), I empirically explored how psychological factors, including personal dispositions, cognition, and emotion, are involved in individuals' decision-making about failure sharing. Key insights from the qualitative case study revealed a differential effect of shame and guilt on cognition and behavior in the context of failure. This study also showed how these emotional dynamics were affected by the broader organizational norms and values and their different versions of positivity and organizational mindsets. These findings were further validated in the hypothesis-testing phase through two subsequent quantitative scenario-based survey studies.

The current research complements the existing error management literature, traditionally dominated by a cognitive lens. By adopting an emotional perspective, I contribute to this literature by offering a more differentiated understanding of how distinct negative emotions, specifically shame and guilt, shape perceptions, behaviors, and, ultimately, the error and failure communication decision-making process. Unlike previous error management research that often treats negative emotions as a homogeneous category to be reduced (e.g., Frese & Keith, 2015), my research emphasizes their unique mechanisms. In doing so, it extends existing work by opening up a deeper examination of emotional dynamics, building on research that demonstrates how negative emotions influence judgment and decision-making in situations perceived as risky or threatening (cf. Anderson, 2003; Forgas, 1995; Loewenstein et al., 2001). I believe my research offers three important theoretical contributions to the existing literature on error management and error management culture.

9.1.1 Emotional dynamics in error detection

First, I contribute to research on error management strategies aimed at effectively addressing errors to enhance positive outcomes while minimizing negative consequences (Frese & Keith, 2015). The focus on emotions in the current thesis provides new insights into the mechanisms that influence error detection, considered the most critical part of the error management process (Frese & Keith, 2015). Timely error detection is essential for minimizing potential negative consequences. Error detection during action is often signaled by a feeling that something is wrong, prompting individuals to compare their

behavior against set goals. Existing error management research typically assumes that individuals provide accurate, truthful accounts of their errors and the conditions that led to them while also being motivated to share these experiences with others. While some studies support this assumption (e.g., Dahlin et al., 2018; Rybowiak et al., 1999), others suggest that individuals may present rationalized versions of their experiences (Rizzo, Bagnara, & Visciola, 1987), which risks obscuring or distorting the "true" nature of the experience, potentially leading it to be overlooked or forgotten entirely. When an individual recognizes an error, they often stop and think to "make sense" of the causes of the error, develop a mental model, and come up with an action plan (Frese & Zapf, 1994). Understanding how emotions, especially shame and guilt, differentially influence these cognitive and behavioral responses to error—shame often leads to concealment or blame, while guilt encourages acknowledgment, repair, and communication—can accelerate error detection and mitigate adverse outcomes. Such prompt damage control could also reduce the likelihood of error cascades, where one error leads to the next (Goodman et al., 2011). Future research should examine how shame and guilt may differently influence individuals' tendencies to delay situational assessments under time pressure, potentially leading to procrastination in error detection. Specifically, it would be valuable to understand how these emotions may cause individuals to postpone evaluating the costs and benefits of reporting the detected error until they have the opportunity to carefully reflect on the consequences.

9.1.2 The Influence of organizational norms and values on emotional dynamics

Second, my research contributes to the implementation of error management cultures (EMCs), which apply the concept of error management at the organizational level. In an EMC, members share a system of norms and values, as well as common practices and procedures (Keith & Frese, 2011) that acknowledge errors as inevitable, treat them as opportunities for learning, react to them quickly, and encourage open communication about errors. As demonstrated in this thesis, fostering a culture of open error and failure communication is particularly challenging, especially in organizations that provide complex business services. Although scholars have suggested that crucial

mechanisms for implementing and fostering such cultures include reducing blame and punishment while increasing empathy (van Dyck, 2005), prior research has predominantly focused on the "practice" dimension of EMCs—such as shared error-communication and error-handling practices (Frese & Keith, 2011; van Dyck et al., 2005. My research extends this literature by revealing how broader organizational norms and values, even when not explicitly focused on errors or error management, shape varied emotional dynamics within organizations. Specifically, I show how distinct values of positivity and organizational mindsets create environments predominantly characterized by either shame or guilt. This distinction offers a critical perspective for understanding the underlying mechanisms that drive the establishment and maintenance of an EMC. Thus, I propose that a combination of experience-based positivity (Fineman, 2006), which accepts the occurrence of errors, and an organizational growth mindset (Canning et al., 2020), which recognizes the learning potential in errors, fosters an EMC. This combination encourages feelings of guilt rather than shame when employees experience failure, promoting accountability and constructive responses rather than defensive behaviors. Conversely, values rooted in trait-based positivity, combined with an organizational fixed mindset, can intensify feelings of shame, inhibiting the development of an EMC. My findings suggest that emotional responses to errors are influenced not only by the organization's stance on errors but also by broader cultural expectations, such as an emphasis on positivity and success.

This dynamic is especially crucial in complex business services firms, where avoiding errors and failures is often paramount. To boost consultants' self-esteem and foster positive emotions, these firms frequently promote an elite identity, emphasizing exceptional and superior performance (George, 1991; Subramony & Pugh, 2015). My research highlights the emotional consequences of this approach, particularly the shame associated with failures. This raises new research questions about the emotional dynamics and learning capacity of elite organizations, such as how structural factors (e.g., performance-based management and incentive systems), cultural elements that may encourage competition (e.g., individual high-performance norms and values), and individual traits (e.g., performance-based identity) shape perceptions of errors and failures and the intention to share them.

9.1.3 Self-compassion and growth mindset in shaping error-management orientation

Third, this thesis lays the groundwork for further research on how individual differences affect error management and learning, particularly in relation to how individuals cope with errors and failures. Although there is growing recognition of the importance of understanding individual differences in attitudes and reactions to failures at work, particularly through research on error-management orientation (EMO)—which refers to having a positive attitude toward errors and using functional coping strategies (Farnese, 2020; Frese & Keith, 2015; Rybowiak et al., 1999)—the current body of research has yet to fully explain the mechanisms linking attitudes toward errors with individual differences. While previous research has emphasized the role of self-efficacy—one's belief in one's ability to perform a specific task (Bandura, 1977)—in explaining who adopts an EMO (Arenas, Tabernero, & Briones, 2006; Keith & Frese, 2008; Zhao & Olivera, 2006), recent findings challenge this predominant view. Seckler et al. (2021), in studies conducted within an auditing context, found that the individual trait of humility provided a more robust predictor of key EMO facets—such as error communication, error learning, and error risk-taking—than self-efficacy. Humility is defined as "an interpersonal characteristic that emerges in social contexts, connoting a manifested willingness to view oneself accurately, a displayed appreciation of others' strengths and contributions, and teachability" (Owens, Johnson, & Mitchell, 2013: 2). While this research provides valuable insights into how individual differences may influence attitudes toward and coping with errors, it would be further strengthened by incorporating individual dispositions that promote constructive coping with negative experiences and the emotions associated with them—particularly feelings of shame.

My discovery of the relationships between shame and the previously overlooked individual dispositions of self-compassion (Neff, 2023) and individual mindsets (Dweck, 2013) offers novel insights. These findings introduce additional antecedents that complement the existing understanding of how individual differences influence EMO facets. The emotional dynamics explored in this thesis highlight the pivotal role that negative social emotions play in influencing engagement with errors and failures. In particular, the findings underscore the potential role of self-compassion in cultivating more

constructive attitudes and emotional responses, thereby promoting a more adaptive approach to managing errors and failures.

Moreover, individuals with a fixed mindset—who perceive talent and abilities as static—tend to experience stronger feelings of shame when failing. As a result, they are more likely to perceive greater costs and fewer benefits when engaging with errors. This dynamic is crucial for understanding the barriers individuals face in developing a stronger EMO, which also highlights the need for a more inclusive approach to negative emotions in the error management literature. Rather than avoiding these negative emotions, as they are assumed to drain attentional resources (Frese & Keith, 2011) that could otherwise be directed toward solving problems and negative outcomes, they should be considered potential antecedents that influence cognition and behavior in distinct ways—specifically, shame as an inhibitor and guilt as a promoter of EMO.

In sum, this thesis emphasizes the importance of treating shame and guilt as distinct emotions, each exerting its own unique influence on workplace cognition and behaviors. By isolating their specific dynamics, this approach enables more accurate predictions of individuals' responses to error and failure experiences. The refined focus on these emotional dynamics not only advances theoretical understanding but also holds practical implications, potentially guiding more effective interventions for managing errors and failures in organizational contexts. These practical implications will be discussed next.

9.2. Practical implications

The conceptual model examined and largely supported in this thesis offers several approaches for targeted interventions aimed at enhancing failure sharing, both at the organizational and individual levels. In this section, I highlight the key variables from the conceptual model that are most relevant for supporting organizations, managers, and employees in promoting failure sharing. These variables include organizational mindset, psychological safety, self-compassion, individual mindset, and failure-related social emotions in the form of shame and guilt. First, I present interventions at the organizational level, emphasizing the creation of an emotional climate that

encourages failure sharing. Next, I discuss strategies for fostering a growth mindset within the organization and enhancing psychological safety. Finally, I introduce individual-level interventions focused on developing self-compassion and a growth mindset among employees, with the goal of strengthening their ability to engage with and manage errors and failures effectively.

9.2.1 Shaping workplace emotional climate: Guilt vs. shame

This thesis emphasizes the importance of distinguishing between guilt and shame in the context of failure sharing in the workplace. To the extent that the repeatedly observed patterns reflect causality, the findings suggest that emotional responses to failure play a pivotal role in shaping organizational members' willingness to openly share these experiences with peers. Professionals may react to failures with varying degrees of shame and guilt, leading to different inclinations to share their experiences. These findings imply that emotional reactions to failures are not a singular barrier to failure sharing. Instead, distinguishing between different emotions, particularly guilt and shame, can be beneficial. Guilt appears to be a more enabling emotion, motivating professionals to take corrective action or prevent future failures, whereas shame tends to silence or hide the detrimental effects of failure.

Normalizing failure in work environments committed to positivity

Based on these findings, organizations may consider guiding employees' emotional responses to failure toward guilt rather than shame. A fundamental distinction between guilt and shame lies in whether individuals attribute their transgression to a specific action (guilt) or to their broader sense of self (shame; e.g., Cohen et al., 2011; Tangney & Dearing, 2003). This attributional difference offers opportunities for managerial intervention. Managers can help employees who perceive themselves as having failed by fostering feelings of guilt, which are linked to actionable behaviors, rather than shame, which can be more deeply self-damaging.

This can be achieved by (a) providing a sense of control or autonomy over the specific failure or error event, (b) offering specific and actionable performance feedback, and (c) encouraging a sense of outcome interdependence (Bohns & Flynn, 2013). Autonomy refers to an individual's perceived

control over a situation and, consequently, over the negative outcome. For example, a manager might encourage the employee to reflect, "What could have happened if you had approached the task differently?" Specific performance feedback involves attributing a negative event to a particular behavior, such as, "What exactly did you do or decide that contributed to the failure?" Outcome interdependence refers to the extent to which an individual's performance affects significant outcomes for their peers. Establishing this interdependence involves providing environmental cues that indicate whether an employee's performance is valued for its impact on others (evoking guilt) or as a reflection of their status within the group (evoking shame). Outcome interdependence can be fostered through mechanisms such as structuring reward systems to prioritize collective over individual incentives, recognizing group accomplishments rather than individual achievements, and emphasizing group objectives over personal goals.

The shift toward guilt reactions rather than shame may also be encouraged by creating a culture that is open to discussing failures and learning from them. For example, recurring feedback and reflection on actions, such as debriefs and after-action reviews that encompass both cognitive and emotional aspects, should be integrated into regular work routines. In this way, as employees observe others visibly failing, failure becomes "normalized," and employees may be more likely to attribute their own failures to specific actions rather than their personality or ability.

Additionally, managers aiming to foster a positivity culture without inducing shame should focus on creating a cultural context that emphasizes positive experiences rather than only highlighting employees' positive traits. They should actively promote the idea that positivity involves cultivating and sharing positive experiences and emotions to enhance self-esteem, loyalty, and energy. At the same time, they must acknowledge that negative experiences, such as failures, are an inevitable part of organizational life, fostering an environment where failures can be openly discussed and learned from without the fear of shame.

In summary, by implementing structures and interventions to manage employees' negative emotional responses to failures, organizations can shift these reactions toward guilt rather than shame, fostering healthier and more constructive outcomes. While guilt can be adaptive, excessive guilt may

become maladaptive. Therefore, organizations should be cautious about the potential backlash of "guilt-tripping" tactics. Such manipulation can backfire, leading to diminished employee performance and engagement (Brockner et al., 1986). Managers should instead focus on interventions that create an environment supportive of adaptive emotional responses to failure—inducing guilt without overdoing it. This approach promotes a more productive and resilient organization while enhancing individual well-being.

9.2.2 Cultivating an organizational growth mindset and psychological safety

Cultivating an organizational growth mindset

Leaders play a crucial role in shaping and reinforcing employees' perceptions of organizational values (Berson, Oreg, & Dvir, 2008; Fu, Tsui, Liu, & Li, 2010). Growth mindset messages delivered by high-status leaders can be an especially efficient and effective means of conveying the organization's core beliefs through mission statements and policy documents. To avoid inducing shame through a fixed mindset, communication should focus on celebrating achievements with genuine joy and pride while also recognizing the grit, engagement, motivation, and perseverance that led to success. It is equally important to emphasize the value of failures, framing them as an integral part of growth and learning alongside positive experiences.

Another useful step in cultivating an organizational growth mindset is conducting a "mindset cues audit" (Murphy & Reeves, 2019: 15) to identify fixed mindset practices and replace them with growth mindset alternatives. These audits can also uncover microcultures within the organization that exemplify growth mindset behaviors, even in companies dominated by a fixed mindset. Identifying and showcasing these pockets of growth mindset through internal case studies can serve as models for the entire organization, inspiring broader cultural shifts. Once key areas for change are identified, it is essential to rigorously test the effectiveness of these interventions in shifting personal beliefs, organizational perceptions, motivation, and performance.

Moreover, managers should set learning goals alongside performance goals and reward effort, initiative, and learning—not just results and

achievements—through everyday feedback, performance reviews, and promotion decisions. Findings from the qualitative case study suggest that establishing forums for sharing failures, such as "hit and shit" meetings or an annual failure day, can effectively reinforce an organizational growth mindset. Conversely, celebrating the ideal consultant as perpetually successful and embodying positive traits, such as having a positive attitude or being exceptionally smart, in company documents and management communication should be avoided. While such celebrations aim to boost consultants' self-esteem and energy, they inadvertently deny the reality of failures and the negative emotions that accompany them. This creates a "double shame" effect, further silencing failure sharing.

Cultivating psychological safety

Systematically fostering norms that promote psychological safety in organizations is an area where managers can have significant influence (Zhang, Zhao, & Yin, 2024), although all members of the organization share the responsibility and can easily undermine it. In team settings, cultivating a strong sense of psychological safety is essential for facilitating open discussions about failures and learning from them (Edmondson, 1999; Edmondson & Lei, 2014), which may mitigate feelings of shame.

As with organizational mindset, an effective approach to building psychological safety involves shaping shared norms. These include framing work as a learning problem rather than an execution problem, such as explicitly acknowledging uncertainty and interdependence ("We have challenges ahead that we'll need to solve together"), admitting personal fallibility ("I may miss something, and I need your input"), and modeling curiosity ("I'd like to ask a lot of questions"; see Edmondson, 2018, for more interventions).

Psychological safety can also be fostered by encouraging reflection at both the team and individual levels. Teams can address questions such as:

- How safe or unsafe do you feel within the team, and what are the reasons for these feelings?

- When do you feel safe versus unsafe, and why?

- How do you personally contribute to the team's sense of safety or insecurity?

- What actions should be continued, started, or stopped to enhance or maintain psychological safety?

9.2.3 Individual-level interventions: Self-compassion and growth mindset

The findings highlight the significant role of self-compassion and mindset in shaping failure-sharing behaviors in professional settings. However, implementing self-compassion and mindset interventions requires careful consideration. While these interventions can lead to significant benefits—such as enhanced skills, increased motivation, and improved performance—they also carry risks.

Overemphasizing personal development may result in employee burnout, unrealistic expectations, or feelings of inadequacy, particularly if interventions are not tailored to individual needs and contexts. Additionally, introducing such initiatives without accounting for organizational culture and readiness for change can trigger resistance, reduce morale, and undermine motivation. Therefore, it is crucial to balance the potential benefits with a thoughtful approach that prioritizes employees' well-being, aligns with organizational values, and fosters a supportive environment. Regular feedback, tailored support, and clear communication about the goals and expectations of these interventions can help mitigate risks and enhance their positive impact on both employees and the organization.

Optimizing error management training outcomes

Recognizing the influence of self-compassion and individual mindsets provides valuable insights for advancing error management training practices (e.g., Heimbeck, Frese, Sonnentag, & Keith, 2003; Keith & Frese, 2005, 2008). From a self-regulatory perspective, a common approach in such training is to control or reduce negative emotions, often by instructing participants to suppress them (Frese & Keith, 2015). While well-intentioned, this

approach may miss the opportunity to explore how different negative emotions affect participants' attitudes and behaviors toward errors. Instead of silencing negative emotions, I propose leveraging them to cultivate participants' self-compassion, which may more effectively address "destructive" emotions, particularly shame.

By fostering self-compassion, participants can transition from a self-blaming mindset to a learning-oriented, growth mindset, aligning with the core principles of error management orientation (EMO). Adopting an EMO has been shown to improve the outcomes of error management training. For instance, interventions like "Errors inform you about what you still can learn!" (Keith & Frese, 2005: 681) encourage a growth mindset by framing skills and abilities as malleable rather than fixed.

To optimize error management training outcomes, integrating self-compassion and a growth mindset as essential individual factors could prove beneficial, alongside other traits such as humility (Seckler et al., 2021). These considerations offer valuable perspectives for enhancing the effectiveness of error management training.

Cultivating self-compassion and growth mindset

As demonstrated, individuals' dispositions or traits influence emotional reactions to negative events, with self-compassion playing a key role in explaining this variation. Self-compassion, or how individuals view and treat themselves during setbacks, fosters a less judgmental attitude toward failures and encourages a more mindful approach to the negative emotions they evoke, thereby facilitating reflection and learning (Shepherd & Cardon, 2009). Importantly, self-compassion "is not just a fixed personality trait, it is a skill that can be learned and practiced" (Neff, 2023: 205).

Organizations can train employees to channel negative emotions—particularly shame—into more productive, self-compassionate responses. This can be achieved by promoting self-kindness, common humanity, and mindfulness, which encourage individuals to address actions or decisions leading to negative outcomes constructively. These dimensions can be assessed through simple self-evaluations.

Indicators of lower self-compassion might include statements such as: "I feel overwhelmed by inadequacy when I fail at something important," "I criticize or dislike my own flaws and weaknesses," and "I feel alone in my failure when I don't succeed at something meaningful." Indicators of higher self-compassion include: "I show understanding and patience toward the parts of myself I find challenging," "I remind myself that feeling inadequate is a common human experience," and "I offer myself care and kindness during difficult times."

Organizations can reinforce these dimensions through self-reflection interventions on perceived failures or workplace incidents. Questions to guide reflection might include: "When you feel that you have failed or faced a setback, what happens to you?" "What emotions are triggered?" "What thoughts do you observe in yourself, and about yourself?" and "What actions do you take towards yourself and others?" These interventions can be integrated into routine activities, such as team meetings, or delivered through more structured programs, like eight-week training sessions (e.g., Germer & Neff, 2019; Neff, Knox, Long, & Gregory, 2020).

Self-compassion is closely linked to individuals' mindsets, which, as demonstrated in this research, play a pivotal role in professionals' decision-making regarding failure sharing. Cultivating a growth mindset in the workplace can create a workforce that views failures as opportunities for learning rather than threats. Beliefs about abilities and attitudes toward failure can be shaped through relatively straightforward interventions.

For example, workshops emphasizing the development of talent and abilities through effort, learning, and persistence can be highly effective. Additionally, implementing regular reflective practices enables employees to discuss their experiences, challenges, and learning outcomes, focusing on how they overcame setbacks and what they learned. A reflective approach to developing a growth mindset could follow these five steps:

1. Acknowledge your fixed mindset: Recognize and accept that you possess fixed mindset tendencies.

2. Identify trigger moments: Notice situations where your fixed mindset is activated.

3. Personify your fixed mindset: Assign your fixed mindset a name or identity to better understand its influence and patterns.

4. Guide and educate your fixed mindset: Challenge its beliefs by introducing growth-oriented perspectives.

5. Observe your inner dialogue: Monitor your self-talk and intentionally shift it toward a growth and learning-oriented perspective.

Implementing such interventions can help organizations foster a growth mindset among employees, encouraging more open and widespread sharing of failures across the organization.

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Appendices

Appendix 1: Online study ("2a") questionnaire

Variable	*Item*
Organizational Mindset	
OMFT1	When it comes to being successful, this organization seems to believe that people have a certain amount of talent, and they can't really do much to change it.
OMFT2	This organization seems to believe that people can't really change how talented they are.
OMFI3	This organization seems to believe that intelligence is something people can't change very much.
OMG4_R	When it comes to being successful, this organization seems to believe that peoples' talent is malleable and can be improved significantly. (R)
OMGT5_R	This organization seems to believe that no matter how much talent people have, they can always change it quite a bit. (R)
OMGI6_R	This organization seems to believe that people can substantially change how intelligent they are. (R)
Individual Mindset	
IMFI1	You have a certain amount of intelligence, and you can't really do much to change it.
IMFI2	Your intelligence is something about you that you can't change very much.
IMFT4	To be honest, you can't really change how much talent you have.
IMFT6	You can learn new things, but you can't really change your basic level of talent.
IMGT3_R	No matter who you are, you can significantly change your level of talent. (R)
IMGT5_R	You can always substantially change how much talent you have. (R)
IMGI7_R	No matter how much intelligence you have, you can always change it quite a bit. (R)
IMGI8_R	You can change even your basic intelligence level considerably. (R)
Self-Compassion	
SC1_R	When I fail at something important to me I become consumed by feelings of inadequacy. (R)
SC2	I try to be understanding and patient towards those aspects of my personality I don't like.

SC3	When something painful happens I try to take a balanced view of the situation.
SC4_R	When I'm feeling down, I tend to feel like most other people are probably happier than I am. (R)
SC5	I try to see my failings as part of the human condition.
SC6	When I'm going through a very hard time, I give myself the caring and tenderness I need.
SC7	When something upsets me, I try to keep my emotions in balance.
SC8_R	When I fail at something that's important to me, I tend to feel alone in my failure. (R)
SC9_R	When I'm feeling down I tend to obsess and fixate on everything that's wrong. (R)
SC10	When I feel adequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
SC11_R	I'm disapproving and judgmental about my own flaws and inadequacies. (R)
SC12_R	I'm intolerant and impatient towards those aspects of my personality that I don't like. (R)
State Shame	
SSGS1	I want to sink into the floor and disappear.
SSGS3	I feel small.
SSGS5	I feel like I am a bad person.
SSGS7	I feel humiliated, disgraced.
SSGS9	I feel worthless, powerless.
State Guilt	
SSGS2	I feel remorse, regret.
SSGS4	I feel tension, about something I have done.
SSGS6	I cannot stop thinking about something bad I have done.
SSGS8	I feel like apologizing, confessing.
SSGS10	I feel bad about something I have done.
Costs of Sharing	
Cost1	I do not know whether sharing this failure is helpful.
Cost2	Sharing could be detrimental to my professional reputation.
Cost3	Sharing is detrimental for my self-concept.
Cost4	Sharing would take too much time.
Cost5	I doubt my colleagues are interested.[a]
Cost6	I do not know how and where to share.
Cost7	Sharing would cause me extra work.
Cost8	I am not interested in sharing.

Cost9	My job or position could be at risk.
Cost10	Sharing is unnecessary because this failure is insignificant.
Cost11	It would be emotionally difficult to share.
Cost12	I fear the negative reactions of my colleagues.
Benefits of Sharing	
Ben1	Sharing is the ethical thing to do.
Ben2	Sharing would prevent my supervisor or colleagues from getting upset.[a]
Ben3	Sharing is beneficial to my professional reputation.
Ben4	Failure is human. There are a lot of failures occurring at work.
Ben5	Sharing is beneficial to my personal learning.
Ben6	Sharing helps us avoid more serious consequences.
Ben7	Sharing helps alleviate my feelings of guilt and shame.
Ben8	Sharing is beneficial to my self-concept.
Ben9	Sharing is important for the organization and its learning.
Ben10	Sharing helps avoid similar situations in the future.
Failure Silence	
Sil1	I will keep the situation to myself, no need to disturb my colleagues or boss about it.
Sil2	I will just move on and be silent about the situation and hope that nobody will bring it up.
Sil3	I will keep quiet and avoid the people who were involved.
Failure Share	
Private	
Share_Pr1	I will share the situation with a colleague who is also a friend—whom I trust.[b]
Share_Pr2	I will share the situation with someone outside work, like a partner or close friend.[b]
Share_Pr3	I will only discuss the situation with someone who I believe can keep quiet about it.[b]
Public regulated	
Share_R1	I will share this situation with those that may be affected by it.
Share_R2	I will discuss the situation with my manager.[c]
Share_R3	I will share this situation with those that have been involved in the process of producing the investigation.
Public wide	
Share_W1	I will share and discuss the situation in our next department meeting.
Share_W2	I will e-mail all in the department to share this experience.
Share_W3	I will call an open meeting to share and discuss the situation.

Social Desirability	
SD1	I sometimes tell lies if I have to.
SD2	I never cover up my mistakes.
SD3	There have been occasions when I have taken advantage of someone.
SD4	I sometimes try to get even rather than forgive and forget.
SD5	I have said something bad about a friend behind his or her back.
SD6	When I hear people talking privately, I avoid listening.
SD7	I never take things that don't belong to me.
SD8	I don't gossip about other people's business.

Note: a) Item deleted due to low item-total scale correlation (> 0.3) and/or low *KMO* values (Field, 2018), b) Item deleted due to mixed factor loadings combined with insufficient internal consistency, c) Item deleted due to low factor loadings
Items marked with (R) are reversed

Appendix 2: Ecological study ("2b") questionnaire

Variable	*Item*
Organizational Fixed Mindset	
OMFT1	When it comes to being successful, this organizational unit seems to believe that people have a certain amount of talent, and they can't really do much to change it.
OMFT2	This organizational unit seems to believe that people can't really change how talented they are.
OMFI3	This organizational unit seems to believe that intelligence is something people can't change very much.
OMFI4	When it comes to being successful, this organizational unit seems to believe that people have a certain amount of intelligence, and they can't really do much to change it.
OMGT5_R	This organization seems to believe that no matter how much talent people have, they can always change it quite a bit. (R)
OMGI6_R	This organization seems to believe that people can substantially change how intelligent they are. (R)
Psychological Safety	
PS1	In this organizational unit, it is easy to speak up about what is on your mind.
PS2R	If you make a mistake in this organizational unit, it is often held against you.
PS3	People in this organizational unit are usually comfortable talking about problems and disagreements.
PS4	People in this organizational unit are eager to share information about what doesn't work and what does work.
PS5R	Keeping your cards close to your vest is the best way to get ahead in this organizational unit.
Individual Fixed Mindset	
IMFI1	You have a certain amount of intelligence, and you can't really do much to change it
IMFI2	Your intelligence is something about you that you can't change very much.
IMFT3	You can learn new things, but you can't really change your basic level of talent
IMFT4	To be honest, you can't really change how much talent you have.

IMGI5_R	No matter how much intelligence you have, you can always change it a good amount. (R)
IMGT6_R	No matter who you are, you can change your level of talent a lot. (R)
Self-Compassion	
SC1R	When I fail at something important to me, I become consumed by feelings of inadequacy. (R)
SC2	I try to be understanding and patient towards those aspects of my personality I don't like.
SC3	When something painful happens I try to take a balanced view of the situation.
SC4R	When I'm feeling down, I tend to feel like most other people are probably happier than I am. (R)
SC5	I try to see my failings as part of the human condition.
SC6	When I'm going through a very hard time, I give myself the caring and tenderness I need.
SC7	When something upsets me, I try to keep my emotions in balance.
SC8R	When I fail at something that´s important to me, I tend to feel alone in my failure. (R)
SC9R	When I'm feeling down I tend to obsess and fixate on everything that's wrong. (R)
SC10	When I feel adequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
SC11R	I'm disapproving and judgmental about my own flaws and inadequacies. (R)
SC12R	I'm intolerant and impatient towards those aspects of my personality that I don't like. (R)
State Shame	
SShame1	I want to sink into the floor and disappear.
SShame3	I feel small.
SShame5	I feel like I am a bad person.
SShame7	I feel humiliated.[b]
SShame9	I feel worthless.[b]
SShame13	I feel powerless.[b]
SShame19	I feel like a complete failure.[b]
SShame23	I feel destroyed.[b]
State Guilt	
SGuilt2	I feel regret.[b]
SGuilt4	I feel tension about what I have done.[b]
SGuilt6	I cannot stop thinking about the bad thing I have done.[b]

SGuilt8	I feel like apologizing.[b]
SGuilt12	I feel bad about something I have done.
SGuilt16	I feel my action was regrettable.[b]
SGuilt20	I feel I have to step up to compensate for what I have done.[b]
SGuilt24	I feel I need to fix this.[b]
Costs of Sharing	
Cost2	Sharing could be detrimental to my professional reputation.
Cost3	Sharing is detrimental for my self-concept.
Cost7	Sharing would cause me extra work.[a]
Cost9	My job or position could be at risk.
Cost11	It would be emotionally difficult to share.
Cost12	If I share, I fear the negative reactions of my colleagues.
Cost13	If I share the experience, I risk being rejected by my coworkers/peers.[b]
Cost14	Sharing could be detrimental to my team´s reputation.[b]
Benefits of Sharing	
Ben3	Sharing is beneficial to my professional reputation.
Ben5	Sharing is beneficial to my personal learning.
Ben6	Sharing helps us avoid more serious consequences.
Ben7	Sharing helps alleviate my negative feelings.
Ben8	Sharing is beneficial to my self-concept.
Ben9	Sharing is important for the organization and its learning.
Ben10	Sharing helps avoid similar situations in the future.
Ben13	Sharing helps me understand what went wrong.[b]
Failure Silence	
FSilence1	I will keep the situation to myself, no need to disturb my colleagues or boss about it.
FSilence2	I will just move on and be silent about the situation and hope that nobody will bring it up.
FSilence3	I will keep quiet and avoid the people who were involved.
Failure-Sharing	
Public regulated	
FShare_Reg1	I will share this situation with those that may be affected by it.
FShare_Reg2	I will share the situation in one or more of my projects teams.[b]
FShare_Reg3	I will share this situation with those that have been involved in the process of producing the investigation.

Public wide	
FShare_Pub1	I will share and discuss the situation in our next organizational unit meeting.
FShare_Pub2	I will e-mail all in our organizational unit to share this experience.
FShare_Pub3	I will call an open meeting to share and discuss the situation.
Controls	
Self-Efficacy	
SE1	I feel I can do anything I set my mind to.
SE2	I feel I am able to do things as well as most other people.
SE3	I feel there is no way I can solve the problems I have. (R)
IPIP – Big Five Personality Traits	
Extroversion	
IPIP1E	Am the life of the party.
IPIP6E	Don't talk a lot. (R)
IPIP11E	Talk to a lot of different people at parties.
IPIP16E	Keep in the background. (R)
Agreeableness	
IPIP2A	Sympathize with others' feelings.
IPIP7A	Am not interested in other people´s problem. (R)
IPIP12A	Feel others' emotions.
IPIP17A	Am not really interested in others. (R)
Conscientiousness	
IPIP3C	Get chores done right away.
IPIP8C	Often forget to put things back in their proper place. (R)
IPIP13C	Like order.
IPIP18C	Make a mess of things. (R)
Neuroticism	
IPIP4N	Have frequent mood swings.
IPIP9N	Am relaxed most of the time. (R)
IPIP14N	Get upset easily.
IPIP19N	Seldom feel blue. (R)
Openness	
IPIP5I	Have a vivid imagination.
IPIP10I	Am not interested in abstract ideas. (R)
IPIP15I	Have difficulty understanding abstract ideas. (R)
IPIP20I	Do not have a good imagination. (R)

Dishonesty	
Lie1	I have never been late to a meeting or an appointment.
Lie2	I have never hurt another person's feelings.

Note: a) Item deleted due to low item-total scale correlation (> 0.3) and/or low KMO values (Field, 2018), b) New or modified item (not included in Study 2a). Items marked with (R) are reversed

Appendix 3: Developed and modified measures

The Failure-Sharing Scale (FSS)

Variable	*Item*
FSilence1	I will just move on and be silent about the situation and hope that nobody will bring it up.
FSilence2	I will keep the situation to myself, no need to disturb my colleagues or boss about it.
FSilence3	I will keep quiet and avoid the people who were involved.
FShare_Reg1	I will share this situation with those who have been involved in the process of producing the investigation.
FShare_Reg2	I will share this situation with those that may be affected by it.
FShare_Reg3	I will share this situation with colleagues in one or more of my project teams.
FShare_Pub1	I will share and discuss the situation in our next organizational unit meeting.
FShare_Pub2	I will call an open meeting to share and discuss the situation.
FShare_Pub3	I will share and discuss the situation in our next organizational unit meeting.

Note: The index was calculated by taking the average effect of the combined items, considering both the positive contributions (six public-sharing items) and the negative contributions (three reversed ratings of the silencing-of-failures items): MEAN (–FSilence1, –FSilence2, –FSilence3, FShare_Reg1, FShare_Reg2, FShare_Reg3, FShare_Pub1, FShare_Pub2, FShare_Pub3)
The failure-sharing items (a = .79) were assessed on a scale from 1 (very unlikely) to 5 (very likely) scale
See Section 7.2.1 for details on the psychometric properties

The Net Benefits of Failure-Sharing Scale (NBFSS)

Variable	Item
Cost2	Sharing could be detrimental to my professional reputation.
Cost3	Sharing is detrimental for my self-concept.
Cost9	My job or position could be at risk.
Cost11	It would be emotionally difficult to share.
Cost12	If I share, I fear the negative reactions of my colleagues.
Cost13	If I share the experience, I risk being rejected by my coworkers/peers.
Cost14	Sharing could be detrimental to my team´s reputation.
Ben3	Sharing is beneficial to my professional reputation.
Ben5	Sharing is beneficial to my personal learning.
Ben6	Sharing helps us avoid more serious consequences.
Ben7	Sharing helps alleviate my negative feelings.
Ben8	Sharing is beneficial to my self-concept.
Ben9	Sharing is important for the organization and its learning.
Ben10	Sharing helps avoid similar situations in the future.
Ben13	Sharing helps me understand what went wrong.

Note: The index was calculated by averaging the combined items, considering both the positive contributions (benefits of sharing) and the negative contributions (reversed ratings of the costs of sharing): MEAN (–Cost2, –Cost3, –Cost9, –Cost11, –Cost12, –Cost13, –Cost14, Ben3, Ben5, Ben6, Ben7, Ben8, Ben9, Ben10, Ben13)
The net benefits of sharing failures items (a = .87) were assessed on a 1 (strongly disagree) to 5 (strongly agree) scale
See Section 7.2.2 for details on the psychometric properties

The Modified SSGS Short Scale

Variable	*Item*
State Shame Subscale	
SShame3	I feel small.
SShame5	I feel like I am a bad person.
SShame9	I feel worthless.
State Guilt Subscale	
SGuilt16	I feel my action was regrettable.
SGuilt20	I feel I have to step up to compensate for what I have done.
SGuilt24	I feel I need to fix this.

Note: The scale includes two separate subscales: state shame (a = .84) and state guilt (a = .72)
Feelings of state shame and state guilt were assessed using a scale from 1 (not feeling this at all) to 5 (feeling this very strongly)
See Section 7.2.3 for details on the psychometric properties