1 The Underpinning

"Psychological safety was by far the most important of the five key dynamics we found. It's the underpinning of the other four."

—Julia Rozovsky,
"The five keys to a successful Google team."[1]

The tiny newborn twins seemed healthy enough, but their early arrival at only 27 weeks' gestation meant they were considered "high risk." Fortunately, the medical team at the busy urban hospital where the babies were delivered included staff from the Neonatal Intensive Care Unit (NICU): a young Neonatal Nurse Practitioner named Christina Price* and a silver-haired neonatologist named Dr. Drake. As Christina looked at the babies, she was concerned. Her recent training had included, as newly established best practice, administering a medicine that promoted lung development as soon as possible for a high-risk baby. Babies born very prematurely often arrive with lungs not quite ready for fully independent breathing

*Names in this story are pseudonyms.

outside the womb. But the neonatologist had not issued an order for the medicine, called a prophylactic surfactant. Christina stepped forward to remind Dr. Drake about the surfactant and then caught herself. Last week she'd overheard him publicly berate another nurse for questioning one of his orders. She told herself that the twins would probably be fine – after all, the doctor probably had a reason for avoiding the surfactant, still considered a judgment call – and she dismissed the idea of bringing it up. Besides, he'd already turned on his heel, off for his morning rounds, white coat billowing.

Unconscious Calculators

In hesitating and then choosing not to speak up, Christina was making a quick, not entirely conscious, risk calculation – the kind of micro-assessment most of us make numerous times a day. Most likely she was not even aware that she had weighed the risk of being belittled or berated against the risk that the babies might in fact need the medication to thrive. She told herself the doctor knew better than she did, and she was not confident he would welcome her input. Inadvertently, she had done something psychologists call discounting the future – underweighting the more important issue of the patients' health, which would take some time to play out, and *over*weighting the importance of the doctor's possible response, which would happen immediately. Our spontaneous tendency to discount the future explains the prevalence of many unhelpful or unhealthy behaviors – whether eating that extra piece of chocolate cake or procrastinating on a challenging assignment – and the failure to speak up at work is an important and often overlooked example of this problematic tendency.

Like most people, Christina was spontaneously managing her image at work. As noted sociologist Erving Goffman argued in his seminal 1957 book, *The Presentation of the Self in Everyday Life*, as humans, we are constantly attempting to influence others'

perceptions of us by regulating and controlling information in social interactions.[2] We do this both consciously and subconsciously.

Put another way, no one wakes up in the morning excited to go to work and look ignorant, incompetent, or disruptive. These are called interpersonal risks, and they are what nearly everyone seeks to avoid, not always consciously.[3] In fact, most of us want to look smart, capable, or helpful in the eyes of others. No matter what our line of work, status, or gender, all of us learn how to manage interpersonal risk relatively early in life. At some point during elementary school, children start to recognize that what others think of them matters, and they learn how to lower the risk of rejection or scorn. By the time we're adults, we're usually really good at it! So good, we do it without conscious thought. Don't want to look ignorant? Don't ask questions. Don't want to look incompetent? Don't admit to mistakes or weaknesses. Don't want to be called disruptive? Don't make suggestions. While it might be acceptable at a social event to privilege looking good over making a difference, at work this tendency can lead to significant problems – ranging from thwarted innovation to poor service to, at the extreme, loss of human life. Yet avoiding behaviors that might lead others to think less of us is pretty much second nature in most workplaces.

As influential management thinker Nilofer Merchant said about her early days as an administrator at Apple, "I used to go to meetings and see the problem so clearly, when others could not." But worrying about being "wrong," she "kept quiet and learned to sit on my hands lest they rise up and betray me. I would rather keep my job by staying within the lines than say something and risk looking stupid."[4] In one study investigating employee experiences with speaking up, 85% of respondents reported at least one occasion when they felt unable to raise a concern with their bosses, even though they believed the issue was important.[5]

If you think this behavior is limited to those lower in the organization, consider the chief financial officer recruited to join the senior team of a large electronics company. Despite grave reservations about

a planned acquisition of another company, the new executive said nothing. His colleagues seemed uniformly enthusiastic, and he went along with the decision. Later, when the takeover had clearly failed, the executives gathered with a consultant for a post-mortem. Each was asked to reflect on what he or she might have done to contribute to or avert the failure. The CFO, now less of an outsider, shared his earlier concerns, acknowledging that he had let the team down by not speaking up. Openly apologetic and emotional, he lamented that the others' enthusiasm had left him afraid to be "the skunk at the picnic."

The problem with sitting on our hands and staying within the lines rather than speaking up is that although these behaviors keep us personally safe, they can make us underperform and become dissatisfied. They can also put the organization at risk. In the case of Christina and the newborns, fortunately, no immediate damage was done, but as we will see in later chapters, the fear of speaking up can lead to accidents that were in fact avoidable. Remaining silent due to fear of interpersonal risk can make the difference between life and death. Airplanes have crashed, financial institutions have fallen, and hospital patients have died unnecessarily because individuals were, for reasons having to do with the climate in which they worked, afraid to speak up. Fortunately, it doesn't have to happen.

Envisioning the Psychologically Safe Workplace

Had Christina worked in a hospital unit where she felt psychologically safe, she would not have hesitated to ask the neonatologist whether or not he thought treating the newborns with prophylactic lung medicine was warranted. Here too, she might not even be aware of making a conscious decision to speak up; it would simply seem natural to check. She would take for granted that her voice was appreciated, even if what she said didn't lead to a change in the patient's care. In a climate characterized by psychological safety – which blends trust

and respect – the neonatologist might quickly agree with Christina and call the pharmacy to put in a request, or he might have explained why he thought it wasn't warranted in this case. Either way, the unit would be better off as a result. The patients would have received life-saving medication, or the team would have learned more about the subtleties of neonatal medicine. Before leaving the room, the doctor might thank Christina for her intervention. He'd be glad he could rely on her to speak up in case he slipped up, missed a detail, or was simply distracted.

Finally, as she gave the medicine to the babies, Christina might come up with the idea that the NICU could institute a protocol to make sure that that all babies who need a surfactant would get it. She might seek out her manager to make this suggestion during a break in the action. And because psychological safety exists in work groups, rather than between specific individuals (such as Christina and Dr. Drake), it's likely her nurse manager would be receptive to her suggestion.

Speaking up describes back-and-forth exchanges people have at work – from volunteering a concern in a meeting to giving feedback to a colleague. It also includes electronic communication (for example, sending an extra email to ask a coworker to clarify a particular point or seek help with a project). Valuable forms of speaking up include raising a different point of view in a conference call, asking a colleague for feedback on a report, admitting that a project is over budget or behind schedule, and so on – the myriad verbal interactions that make up the world of twenty-first century work.

There is, of course, a range of interpersonal riskiness involved in speaking up. Some cases of speaking up occur after significant trepidation; others feel reasonably straightforward and feasible. Still others simply don't occur – as in the case of Christina in the NICU – because one has weighed the risk (consciously or not) and come out on the side of silence. The free exchange of ideas, concerns or questions is routinely hindered by interpersonal fear far more often than most managers realize. This kind of fear cannot be directly seen. Silence – when voice was possible – rarely announces

itself! The moment passes, and no one is the wiser except the person who held back.

I have defined psychological safety as the belief that the work environment is safe for interpersonal risk taking.[6] The concept refers to the experience of feeling able to speak up with relevant ideas, questions, or concerns. Psychological safety is present when colleagues trust and respect each other and feel able – even obligated – to be candid.

In workplaces with psychological safety, the kinds of small and potentially consequential moments of silence experienced by Christina are far less likely. Speaking up occurs instead, facilitating the open and authentic communication that shines the light on problems, mistakes, and opportunities for improvement and increases the sharing of knowledge and ideas.

As you will see, our understanding of interpersonal risk management at work has advanced since Goffman studied the fascinating micro-dynamics of face-saving. We now know that psychological safety emerges as a property of a group, and that groups in organizations tend to have very interpersonal climates. Even in a company with a strong corporate culture, you will find pockets of both high and low psychological safety. Take, for instance, the hospital where Christina works. One patient care unit might be a place where nurses readily speak up to challenge or inquire about care decisions, while in another it feels downright impossible. These differences in workplace climate shape behavior in subtle but powerful ways.

An Accidental Discovery

As much as I'm passionate about the ideas in this book, I didn't set out to study psychological safety on purpose. As a first-year doctoral student in the process of clarifying my research interests for my eventual dissertation, I had been fortunate to join a large team studying medical error in several hospitals. This was a great way to gain research experience and to sharpen my general interest in how organizations can

learn and succeed in an increasingly challenging, fast-paced world. I had long been interested in the idea of learning from mistakes for achieving excellence.

My role in the research team was to examine the effects of teamwork on medical error rates. The team had numerous experts, including physicians who could judge whether human error had occurred and trained nurse investigators who would review medical charts and interview frontline caregivers in patient care units in two hospitals to obtain error rates for each of these teams. These experts were, in effect, getting the data for what would be the dependent variable in my study – the team-level error rates. This was a great arrangement for me, for at least two reasons. First, I lacked the medical expertise to identify medical errors on my own. Second, from a research methods perspective, it meant that my survey measures of team effectiveness would not be subject to experimenter bias – the cognitive tendency for a researcher to see what she wants to see rather than what is actually there. So the independence of our data collection activities was an important strength of the study.[7]

The nurse investigators collected error data over a six-month period. During the first month, I distributed a validated instrument called the *team diagnostic survey* to everyone working in the study units – doctors, nurses, and clerks – slightly altering the language of the survey items to make sure they would make sense to people working in a hospital, and adding a few new items to assess people's views about making mistakes. I also spent time on the floor (in the patient care units) observing how each of the teams worked.

Going into the study, I hypothesized, not surprisingly, that the most effective teams would make the fewest errors. Of course, I had to wait six months for the data on the dependent variable (the error rates) to be fully collected. And here is where the story took an unexpected turn.

First, the good news (from a research perspective anyway). There was variance! Error rates across teams were strikingly different; indeed, there was a 10-fold difference in the number of human errors per thousand patient days (a standard measure) from the best to the

worst unit on what I sincerely believed was an important performance measure. A wrong medicine dosage, for example, might be reported every three weeks on one ward but every other day on another. Likewise, the team survey data also showed significant variance. Some teams were much stronger – their members reported more mutual respect, more collaboration, more confidence in their ability to deliver great results, more satisfaction, and so on – than others.

When all of the error and survey data were compiled, I was at first thrilled. Running the statistical analysis, I immediately saw that there was a significant correlation between the independently collected error rates and the measures of team effectiveness from my survey. But then I looked closely and noticed something wrong. The direction of the correlation was exactly the opposite of what I had predicted. Better teams were apparently making *more* – not fewer – mistakes than less strong teams. Worse, the correlation was statistically significant. I briefly wondered how I could tell my dissertation chair the bad news. This was a problem.

No, it was a puzzle.

Did better teams *really* make more mistakes? I thought about the need for communication between doctors and nurses to produce safe, error-free care. The need to ask for help, to double-check each other's work to make sure, in this complex and customized work environment, that patients received the best care. I knew that great care meant that clinicians had to team up effectively. It just didn't make sense that good teamwork would lead to more errors. I wondered for a moment whether better teams got overconfident over time and then became sloppy. That might explain my perplexing result. But why *else* might better teams have higher error rates?

And then came the eureka moment. What if the better teams had a climate of openness that made it easier to report and discuss error? The good teams, I suddenly thought, don't *make* more mistakes; they *report* more. But having this insight was a far cry from proving it.

I decided to hire a research assistant to go out and study these patient care teams carefully, with no preconceptions. He didn't know which units had made more mistakes, or which ones scored better on

the team survey. He didn't even know my new hypothesis. In research terms, he was "blind" to both the hypothesis and the previously collected data.[8]

Here is what he found. Through quiet observation and open-ended interviews about all aspects of the work environment, he discovered that the teams varied wildly in whether people felt able to talk about mistakes. And these differences were almost perfectly correlated with the detected error rates. In short, people in the better teams (as measured by my survey, but unbeknownst to the research assistant) talked openly about the risks of errors, often trying to find new ways to catch and prevent them. It would take another couple of years before I labeled this climate difference psychological safety. But the accidental finding set me off on a new and fruitful research direction: to find out how interpersonal climate might vary across groups in other workplaces, and whether it might matter for learning and speaking up in other industries – not just in healthcare.

Over the years, in studies in companies, hospitals, and even government agencies, my doctoral students and I have found that psychological safety does indeed vary, and that it matters very much for predicting both learning behavior and objective measures of performance. Today, researchers like me have conducted dozens of studies showing greater learning, performance, and even lower mortality as a result of psychological safety. In Chapter 2, I will tell you about some of the studies.

In that initial study over two decades ago, I learned that psychological safety varies across groups *within* hospitals. Since that time, I have replicated this finding in many industry settings. The data are consistent in this simple but interesting finding: psychological safety seems to "live" at the level of the group. In other words, in the organization where you work, it's likely that different groups have different interpersonal experiences; in some, it may be easy to speak up and bring your full self to work. In others, speaking up might be experienced as a last resort – as it did in some of the patient-care teams I studied. That's because psychological safety is very much shaped by

local leaders. As I will elaborate later in this book, subsequent research has borne out my initial, accidental discovery.

Standing on Giants' Shoulders

I might have stumbled into psychological safety by accident, but understanding of its importance traces back to organizational change research in the early 1960s. Massachusetts Institute of Technology professors Edgar Schein and Warren Bennis wrote about the need for psychological safety to help people cope with the uncertainty and anxiety of organizational change in a 1965 book.[9] Schein later noted that psychological safety was vital for helping people overcome the defensiveness and "learning anxiety" they face at work, especially when something doesn't go as they'd hoped or expected.[10] Psychological safety, he argued, allows people to focus on achieving shared goals rather than on self-protection.

Later seminal work by Boston University professor William Kahn in 1990 showed how psychological safety fosters employee engagement.[11] Drawing from rich case studies of a summer camp and an architecture firm, Kahn explored the conditions in which people at work can engage and express themselves rather than disengage or defend themselves. Meaningfulness and psychological safety both mattered. But Kahn further noted that people are more likely to believe they'll be given the benefit of the doubt – a wonderful way to think about psychological safety – when they experience trust and respect at work.

Next, my dissertation introduced and tested the idea that psychological safety was a group-level phenomenon.[12] Building on the unexpected insights into interpersonal climate from the hospital error study, I studied 51 teams in a manufacturing company in the Midwest, measuring psychological safety on purpose this time. Published in 1999 in a leading academic journal, this research – which later influenced Google's celebrated Project Aristotle, discussed in Chapter 2 – showed that psychological safety differed substantially across teams

in the company and that it enabled both team learning behaviors and team performance.[13]

A key insight from this work was that psychological safety is not a personality difference but rather a feature of the workplace that leaders can and must help create. More specifically, in every company or organization I've since studied, even some with famously strong corporate cultures, psychological safety has been found to differ substantially across groups. Nor was psychological safety the result of a random or elusive group chemistry. What was clear was that leaders in some groups had been able to effectively create the conditions for psychological safety while other leaders had not. This is true whether you're looking across floors in a hospital, teams in a factory, branches in a retail bank, or restaurants in a chain.

The results of my dissertation research bolstered my confidence that all of us are subject to subtle interpersonal risks at work that can be mitigated. Whether explicitly or implicitly, when you're at work, you're being evaluated. In a formal sense, someone higher up in the hierarchy is probably tasked with assessing your performance. But informally, peers and subordinates are sizing you up all the time. Our image is perpetually at risk. At any moment, we might come across as ignorant, incompetent, or intrusive, if we do such things as ask questions, admit mistakes, offer ideas, or criticize a plan. Unwillingness to take these small, insubstantial risks can destroy value (and often does, as you will see in Chapters 3 and 4). But they can also be overcome. People at work do not need to be crippled by interpersonal fear. It is possible to build environments, such as those showcased in Chapters 5 and 6, where people are more afraid of failing the customer than of looking bad in front of their colleagues.

Why Fear Is Not an Effective Motivator

Fear may have once acted to motivate assembly line workers on the factory floor or farm workers in the field – jobs that reward individual speed and accuracy in completing repetitive tasks. Most of us have

been exposed to, and internalized, the figure of a villainous boss who rules by fear. Indeed, popular culture has exaggerated the stereotype to become comical, as in the animated Pixar film *Ratatouille,* where Remy the rat, the story's cartoon hero, must first overcome the tyrannical restaurant chef who rules the kitchen if he is to realize his dream of becoming a chef.

Worse, many managers – both consciously and not – still believe in the power of fear to motivate. They assume that people who are afraid (of management or of the consequences of underperforming) will work hard to avoid unpleasant consequences, and good things will happen. This might make sense if the work is straightforward and the worker is unlikely to run into any problems or have any ideas for improvement. But for jobs where learning or collaboration is required for success, fear is not an effective motivator.

Brain science has amply demonstrated that fear inhibits learning and cooperation. Early twentieth century behavioral scientist Ivan Pavlov, who housed dozens of dogs in his laboratory, found their ability to learn behavioral tasks was inhibited after they'd been frightened in the Leningrad flood of 1924. The lab workers who swam in to rescue the animals reported that water had filled the cage, with only the dogs' noses visible above water.[14] Since then, neuroscientists have discovered that fear activates the amygdala, the section of the brain that is responsible for detecting threats. If you've ever felt your heart pound your palms sweat before making an important presentation, that's due to the automatic responses of your amygdala.

Fear inhibits learning. Research in neuroscience shows that fear consumes physiologic resources, diverting them from parts of the brain that manage working memory and process new information. This impairs analytic thinking, creative insight, and problem solving.[15] This is why it's hard for people to do their best work when they are afraid. As a result, how psychologically safe a person feels strongly shapes the propensity to engage in learning behaviors, such as information sharing, asking for help, or experimenting. It also affects employee satisfaction. Hierarchy (or, more specifically, the fear it creates when not handled well) reduces psychological safety. Research

shows that lower-status team members generally feel less safe than higher-status members. Research also shows that we are constantly assessing our relative status, monitoring how we stack up against others, again mostly subconsciously. Further, those lower in the status hierarchy experience stress in the presence of those with higher status.[16]

Psychological safety describes a belief that neither the formal nor informal consequences of interpersonal risks, like asking for help or admitting a failure, will be punitive. In psychologically safe environments, people believe that if they make a mistake or ask for help, others will not react badly. Instead, candor is both allowed and expected. Psychological safety exists when people feel their workplace is an environment where they can speak up, offer ideas, and ask questions without fear of being punished or embarrassed. Is this a place where new ideas are welcomed and built upon? Or picked apart and ridiculed? Will your colleagues embarrass or punish you for offering a different point of view? Will they think less of you for admitting you don't understand something?

What Psychological Safety Is Not

As more and more consultants, managers, and other observers of organizational life are talking about psychological safety, the risk of misunderstanding what the concept is all about has intensified. Here are some common misconceptions, along with clarifications.

Psychological Safety Is Not About Being Nice

Working in a psychologically safe environment does not mean that people always agree with one another for the sake of being nice. It also does not mean that people offer unequivocal praise or unconditional support for everything you have to say. In fact, you could say it's the opposite. Psychological safety is about candor, about making

it possible for productive disagreement and free exchange of ideas. It goes without saying that these are vital to learning and innovation. Conflict inevitably arises in any workplace. Psychological safety enables people on different sides of a conflict to speak candidly about what's bothering them.

In many companies in which I've consulted or conducted research, I'll hear a variation of the following: "We have a problem with '[Company Name] Nice'." They go on to describe the common experience of being "polite" to one another in meetings, only to disagree later when people talk privately in the hallway, along with a tendency to not actually implement that which was discussed in the meeting. Nice, in short, is not synonymous with psychologically safe. In a related vein, psychological safety does not imply ease or comfort. In contrast, psychological safety is about candor and willingness to engage in productive conflict so as to learn from different points of view.

Psychological Safety Is Not a Personality Factor

Some have interpreted psychological safety as a synonym for extroversion. They might have previously concluded that people don't speak up at work because they're shy or lack confidence, or simply prefer to keep to themselves. However, research shows that the experience of psychological safety at work is not correlated with introversion and extroversion.[17] This is because psychological safety refers to the work climate, and climate affects people with different personality traits in roughly similar ways. In a psychologically safe climate, people will offer ideas and voice their concerns regardless of whether they tend toward introversion or extroversion.

Psychological Safety Is Not Just Another Word for Trust

Although trust and psychological safety have much in common, they are not interchangeable concepts. A key difference is that

psychological safety is experienced at a group level. People working together tend to have similar perceptions of whether or not the climate is psychologically safe. Trust, on the other hand, refers to interactions between two individuals or parties; trust exists in the mind of an individual and pertains to a specific target individual or organization. For instance, you might trust one colleague but not another. Or, to illustrate trust in an organization, you might trust a particular company to uphold high standards.

Further, psychological safety describes a temporally immediate experience. Whereas trust describes an expectation about whether another person or organization can be counted on to do what it promises to do in some future moment, the psychological experience of safety pertains to expectations about immediate interpersonal consequences. For example, when Christina fails to ask a physician about a medication she believes might be warranted, she is worried about the immediate consequence of asking her question – the risk of being berated or humiliated. Trust pertains instead to whether Christina believes the doctor can and will do the right thing for patients. One way to put this is that trust is about giving others the benefit of the doubt, and psychological safety relates to whether others will give you the benefit of the doubt when, for instance, you have asked for help or admitted a mistake.

Psychological Safety Is Not About Lowering Performance Standards

Psychological safety is not an "anything goes" environment where people are not expected to adhere to high standards or meet deadlines. It is not about becoming "comfortable" at work. This is particularly important to understand because many managers appreciate the appeal of error-reporting, help-seeking, and other proactive behavior to help their organizations learn. At the same time, they implicitly equate psychological safety with relaxing performance standards – that is, with an inability to, in their words, "hold people accountable." This conveys a misunderstanding of the nature of the

	Low Standards	High Standards
High Psychological Safety	*Comfort Zone*	*Learning & High Performance Zone*
Low Psychological Safety	*Apathy Zone*	*Anxiety Zone*

Figure 1.1 How Psychological Safety Relates to Performance Standards.[18]

phenomenon. Psychological safety enables candor and openness and, as such, thrives in an environment of mutual respect. It means that people believe they can – and must – be forthcoming at work. In fact, psychological safety is conducive to setting ambitious goals and working toward them together. Psychological safety sets the stage for a more honest, more challenging, more collaborative, and thus also more effective work environment. As Chapter 2 will explain, researchers around the world have found that psychological safety promotes high performance in a wide range of work environments and industries. In short, as depicted in Figure 1.1, psychological safety and performance standards are two separate, equally important dimensions – both of which affect team and organizational performance in a complex interdependent environment.

When both psychological safety and performance standards are low (lower left), the workplace becomes a kind of "apathy zone." People show up at work, but their hearts and minds are elsewhere. They choose self-protection over exertion every time. Discretionary effort might be spent perusing social media or on making each other's lives miserable.

Next, in workplaces with high psychological safety but low performance standards (upper left), people generally enjoy working with one another; they are open and collegial but not challenged by the work. Let's call this the "comfort zone." Today, fewer workplaces around the world than ever fall into this quadrant, and it's just as well. When employees are comfortable being themselves but don't see a compelling reason to seek additional challenge, there won't be

much learning or innovation – nor will there be much engagement or fulfillment.

But it's not the comfort or apathy zones that worry me most. What keeps me up at night is the lower right-hand quadrant. When performance standards are high but psychological safety is low – a situation far too common in today's workplace – employees are anxious about speaking up, and both work quality and workplace safety suffer. In Chapters 3 and 4, you will see many such workplaces. Managers in these organizations have unfortunately confused setting high standards with good management. High standards in a context where there is uncertainty or interdependence (or both) combined with a lack of psychological safety comprise a recipe for suboptimal performance. And sometimes, as you will see in the chapters ahead, it's a recipe for disaster. I call this the "anxiety zone." Here I'm not referring to anxiety about being able to accomplish a demanding goal or about the competitive business environment but rather to interpersonal anxiety. The experience of having a question or an idea but not feeling able to share it can be deeply unsatisfying at work. And it is a serious risk factor in any company facing volatility, uncertainty, complexity, and ambiguity, or VUCA – the acronym introduced by the U.S. Army War College and widely used in the business world today.[19]

Finally, when standards and psychological safety are both high (upper right in Figure 1.1), I call this the learning zone. If the work is uncertain, interdependent, or both, this is also the high-performance zone. Here, people can collaborate, learn from each other, and get complex, innovative work done. In a VUCA world, high performance occurs when people are actively learning as they go.

Measuring Psychological Safety

Researchers and managers have useful tools at their disposal to measure psychological safety, and these are in the public domain. Surveys are certainly the most popular of these, and Figure 1.2 presents seven survey items, introduced in my dissertation and widely used in

1. If you make a mistake on this team, it is often held against you. (R)
2. Members of this team are able to bring up problems and tough issues.
3. People on this team sometimes reject others for being different. (R)
4. It is safe to take a risk on this team.
5. It is difficult to ask other members of this team for help. (R)
6. No one on this team would deliberately act in a way that undermines my efforts.
7. Working with members of this team, my unique skills and talents are valued and utilized.

Figure 1.2 A Survey Measure of Psychological Safety.[20]

the research community ever since. I use a seven-point Likert scale (from strongly agree to strongly disagree) to obtain responses, but a five-point scale works as well. Note that three of the seven items are expressed positively, such that agreement indicates greater psychological safety, and three are expressed negatively (represented in Figure 1.2 with an "R" for reverse), such that disagreement is consistent with higher psychological safety. In analyzing the data, therefore, it is important to "reverse score" data from the negatively worded items, where a 1 in the data set is converted to a 7, a 7 to a 1, a 2 to a 6, and so on.

Fortunately, the psychological safety measure has proven to be robust despite variations in both the number and the wording of the items used. By robust, I mean that the collected data demonstrate the necessary statistical properties, such as inter-item reliability as measured by Chronbach's alpha and predictive validity, as measured by correlations with other variables of interest. The appendix at the back of the book shows some of the survey item variations of which I am aware. The measure has also been translated into numerous other languages, including German, Spanish, Russian, Japanese, Chinese, and Korean, all of which have yielded robust research findings.

In purely qualitative case-study research, interview data can be coded to detect the presence or absence of psychological safety.

Several examples of research where this approach has been taken are found in Chapter 2. Another fruitful approach is to provide interviewees with hypothetical scenarios that fall into gray areas at work and ask them what they or their colleagues might do in that situation. When people trust that their answers will be kept confidential, they will be quite open in reporting that they would hold back unless they were extremely confident that what they want to say will be well received. Well-designed vignettes, with questions asking about how people would respond, can also be used to collect data from a larger number of employees than individual interviews will allow. I will mention examples of both approaches in Chapter 2.

Psychological Safety Is Not Enough

I do not mean to imply that psychological safety is all you need for high performance. Not even close. I like to say that psychological safety takes off the brakes that keep people from achieving what's possible. But it's not the fuel that powers the car. In any challenging industry setting, leaders have two vital tasks. One, they must build psychological safety to spur learning and avoid preventable failures; two, they must set high standards and inspire and enable people to reach them. Setting high standards remains a crucial management task. So does sharing, sharpening, and continually emphasizing a worthy purpose.

The key insight to take away from this chapter is that in most workplaces today it's simply not possible to ensure excellence by inspecting proverbial widgets. In knowledge work, excellence cannot be measured easily and simply along the way. More to the point, it's almost impossible to determine whether people have failed to hit the highest possible standards. It takes time for the results of uncertain programs to become clear, and reliably measuring good process is difficult. In other words, today's leaders must motivate people to do their very best work by inspiring them, coaching them,

providing feedback, and making excellence a rewarding experience. Motivating and coaching both receive substantial attention already. What I hope you will take away from this chapter is that making the environment safe for open communication about challenges, concerns, and opportunities is one of the most important leadership responsibilities in the twenty-first century.

Chapter 1 Takeaways

- People constantly manage interpersonal risk at work, consciously and not, inhibiting the open sharing of ideas, questions, and concerns.
- When people don't speak up, the organization's ability to innovate and grow is threatened.
- Psychological safety describes a climate where people feel safe enough to take interpersonal risks by speaking up and sharing concerns, questions, or ideas.
- Leaders of teams, departments, branches, or other groups within companies play an important role in shaping psychological safety.

Endnotes

1. Rozovsky, J. "The five keys to a successful Google team." *re:Work Blog*. November 17, 2015. https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team/ Accessed June 13, 2018.
2. Goffman, E. *The Presentation of Self in Everyday Life*. Overlook Press, 1973. Print.
3. Edmondson, A.C. "Managing the risk of learning: Psychological safety in work teams." *International Handbook of Organizational Teamwork and Cooperative Working*. Ed. M. West. London: Blackwell, 2003, 255–276.
4. Merchant, N. "Your Silence is Hurting Your Company." *Harvard Business Review*. September 7, 2011. https://hbr.org/2011/09/your-silence-is-hurting-your-company Accessed June 13, 2018.

5. Milliken, F.J., Morrison, E.W., & Hewlin, P.F. "An Exploratory Study of Employee Silence: Issues that Employees Don't Communicate Upward and Why." *Journal of Management Studies* 40.6 (2003): 1453–1476.
6. Edmondson, A.C. "Psychological Safety and Learning Behavior in Work Teams." *Administrative Science Quarterly* 44.2 (1999): 350–83.
7. Edmondson, A.C. "Learning from Mistakes Is Easier Said Than Done: Group and Organizational Influences on the Detection and Correction of Human Error." *The Journal of Applied Behavioral Science* 32.1 (1996): 5–28.
8. The research assistant, Andy Molinsky, is now an accomplished scholar and Professor of International Management and Organizational Behavior at Brandeis University.
9. Schein, E.H. & Bennis, W.G. *Personal and Organizational Change through Group Methods: The Laboratory Approach*. Wiley, 1965. Print.
10. Schein, E.H. "How Can Organizations Learn Faster? The Challenge of Entering the Green Room." *Sloan Management Review* 34.2 (1993): 85–92. Print.
11. Kahn, W.A. "Psychological Conditions of Personal Engagement and Disengagement at Work." *Academy of Management Journal* 33.4 (1990): 692–724.
12. Edmondson, A.C. "Learning from Mistakes Is Easier Said Than Done: Group and Organizational Influences on the Detection and Correction of Human Error." *The Journal of Applied Behavioral Science* 32.1 (1996): 5–28.
13. Edmondson, A.C. (1999), op cit.
14. Todes, D.P. *Ivan Pavlov: A Russian Life in Science*. Oxford University Press, 2014. Print.
15. Rock, D. "Managing with the Brain in Mind." *strategy+business*. August 27, 2009. https://www.strategy-business.com/article/09306?gko=5df7f Accessed June 13, 2018.
16. Zink, C.F., Tong, Y., Chen, Q., Bassett, D.S., Stein, J.L., & Meyer-Lindenberg, A. "Know Your Place: Neural Processing of Social Hierarchy in Humans." *Neuron* 58.2 (2008): 273–83.
17. Edmondson, A.C. & Mogelof, J.P. "Explaining Psychological Safety in Innovation Teams: Organizational Culture, Team Dynamics, or Personality?" *Creativity and Innovation in Organizational Teams*. Ed. L. Thompson & H. Choi. Mahwah, NJ: Lawrence Erlbaum Associates Press, 2005: 109–36.
18. This is a modified version of the framework first published by Edmondson, A.C. "The Competitive Imperative of Learning." *Harvard Business*

Review. July–August, 2008. Print. It was later published in Edmondson, A.C. *Teaming: How Organizations Learn, Innovate, and Compete in the Knowledge Economy*. San Francisco: Jossey-Bass, 2012. Print.

19. Stiehm, J.H. & Townsend, N.W. *The U.S. Army War College: Military Education in a Democracy*. Temple University Press, 2002. Print.
20. See Edmondson, A.C. "Psychological Safety and Learning Behavior in Work Teams." *Administrative Science Quarterly* 44.2 (1999): 350–83.

3 | Avoidable Failure

"I feel misused by my own company."
—Oliver Schmidt, Volkswagen engineer[1]

"Until I know what my boss thinks, I don't want to tell you."
—Regulator, Federal Reserve Bank of New York (FRBNY)[2]

In May 2015, the Volkswagen Group had every reason to feel proud.[3] It had sold over 10 million vehicles the previous year, thereby laying claim to the title of world's largest automaker. One of the largest employers in Germany, the company was credited with helping the country recover from the global financial crisis of 2008. Ironically, as it would turn out, its Jetta TDI Clean Diesel won the Green Car of the Year at the 2008 Los Angeles Auto Show. A firm with a 78-year history in Germany, made famous by the iconic Beetle of the 1960s, and with a pristine reputation for engineering prowess, Volkswagen's star shone bright enough to be blinding.

As the saying goes, pride cometh before the fall. Merely months later, Volkswagen (VW), the world's largest automotive company,

was facing unimaginable scandal. The clean diesel engines that had anchored its impressive US sales were discovered to have been – essentially – a hoax. German officials raided the company headquarters in Wolfsburg, searching for incriminating evidence. Criminal investigations were opened by the United States and the European Union to figure out who knew what, when, and how. The company halted sales, reported its first quarterly loss in 15 years, and witnessed a third of its market value vanish. CEO Martin Winterkorn resigned in September of 2015, taking "full responsibility" while denying "wrongdoing," and at least nine senior managers were suspended or put on leave.[4]

In the following years, prosecutors in the United States and Germany would identify more than 40 people, "spread out across at least four cities and working for three VW brands" involved an elaborate scheme to defraud government regulators.[5] "Dieselgate," as the scandal was dubbed, referred to VW's deceptiveness in complying with the regulations required by the US Environmental Protection Agency (EPA) to sell automobiles in the United States.

Exacting Standards

How could this have happened? When Winterkorn had taken the helm in 2007, he'd set a goal that was both precise and ambitious: to triple the company's US sales within 10 years, thereby surpassing rivals Toyota and General Motors to become the world's largest automobile maker. The company's so-called clean diesel vehicles, touted for their high performance and excellent fuel economy, were essential to this strategy. There was only one problem: diesels produced more nitrous oxide (NOx) than gasoline engines and would not pass the United States environmental regulations. As VW manager-engineer Wolfgang Hatz admitted in 2007 about the challenge to create clean diesel for the US market, "The CARB [California Air Resources Board] is not realistic. We can do quite a bit, and we will do quite a bit. But impossible we cannot do."[6]

Hatz and his engineering colleagues then went to work. Somewhere in the millions of lines of software code they wrote for what became the "clean diesel" vehicles, they embedded instructions that would enable the cars to pass the strict US emissions tests. Conceptually, the trick was simple enough. The engineers designed and implemented software that could determine when a vehicle was undergoing standard emissions testing in a lab, in which case only two wheels rotated, as opposed to four wheels when the vehicle was driven on the road. When tested in a lab, the diesel engines complied with acceptable NOx levels. However, that compliance sacrificed performance and fuel economy, which made the cars unacceptable to consumers. That's why the software directed the exhaust control equipment to stop working once the vehicle was off the regulators' test beds. On the road, the so-called clean diesel engines spewed into the atmosphere as much as 40 times the level of NOx permitted by regulations.[7]

For nearly 10 years, all appeared to be going well. The defeat devices, as they were later called, enabled VW to reach its ambitious sales goals four years ahead of its target date.[8] In 2013, an international nonprofit group, partnering with engineers at West Virginia University's Center for Alternative Fuels, Engines, and Emissions, along with California environmental regulators, became interested in how diesel engines performed. They decided to compare in-lab and on-road emissions and mileage performances on several types of diesel vehicles, including those of Volkswagen. Soon enough, the defeat device came to light. For the next two years, the US environmental agencies presented their findings, VW denied, covered up, and finally confessed. Winterkorn then resigned, saying, "I am not aware of any wrongdoing on my part."[9] Across VW's brands, about 11 million of the diesel vehicles worldwide would be discovered to have the cheating device installed.

How could this failure have been avoided? It's natural to want to point a finger at someone, or at a small group, to hold responsible for, at the very least, the 59 unnecessary deaths and 30 cases of chronic bronchitis that researchers estimated are the result of VW's deceptive emissions practices.

Martin Winterkorn is certainly a good candidate to be cast as the villain. He had a reputation as an arrogant, perfectionistic martinet with an obsessive attention to detail. As one executive at VW told reporters, "There was always a distance, a fear and a respect . . . If he [Winterkorn] would come and visit or you had to go to him, your pulse would go up. If you presented bad news, those were the moments that it could become quite unpleasant and loud and quite demeaning." Other managers cited instances when Winterkorn blamed engineers for paint that exceeded regulations by less than a millimeter, or for not offering a specific shade of red that was selling well on competitors' models.[10] A video shot at the Frankfurt motor show in 2011 and widely viewed on YouTube shows Winterkorn's irritation at discovering that Hyundai, a so-called lesser automotive brand, had managed to engineer a steering wheel that was silent when adjusted from the driver's seat – a feat VW had been unable to master.[11] "Bischoff!" barks Winterkorn, as if to lay the blame on his design chief, Klaus Bischoff, and voices displeasure that a rival company managed to get rid of the "clonking sound."

Yet, there are reasons to question this temptingly simple explanation with its singular villain. First, many organizational leaders genuinely believe that "no news" means that things are going well. They assume that if people were struggling to implement some directive or another, they would speak up and push back. They take for granted that their own voices are welcome and fail to appreciate that others might feel unable to bring bad news up the chain of command. For sure, this kind of blindness does not constitute effective leadership, but it also cannot be called villainous. Second, and more specific to this case, Winterkorn's leadership was not born in a vacuum. He was the protégé of the immensely powerful Ferdinand Piech, VW's former chairman, CEO, and top shareholder. A brilliant and visionary automotive engineer, Piech had been convinced that terrorizing subordinates was the way to achieve profitable design. Chrysler executive Bob Lutz recounted a conversation he had with Piesch at an industry dinner in the 1990s. When Lutz expressed admiration for the exterior design of Volkswagen's new model Golf and wished for similar

success at Chrysler, Piech offered up an explanation that might serve as a textbook example of how to create a psychologically unsafe environment while seeking to motivate:

> I'll give you the recipe. I called all the body engineers, stamping people, manufacturing, and executives into my conference room. And I said, "I am tired of all these lousy body fits. You have six weeks to achieve world-class body fits. I have all your names. If we do not have good body fits in six weeks, I will replace all of you. Thank you for your time today.[12]

Writing soon after VW's fall, Lutz speculated that Piech was "more than likely the root cause of the VW diesel-emissions scandal" because he instigated "a reign of terror and a culture where performance was driven by fear and intimidation."[13] Although perhaps an extreme case, the fact is that many managers are sympathetic to the use of power to insist that people achieve certain goals – offering clear metrics and deadlines. The belief that people may not push themselves hard enough without a clear understanding of the negative consequences of failing to do so is widespread and even taken for granted by many in management roles, along with just as many casual onlookers contemplating human motivation at work. What many people do not realize is that motivation by fear is indeed highly effective – effective at creating the *illusion* that goals are being achieved. It is not effective in ensuring that people bring the creativity, good process, and passion needed to accomplish challenging goals in knowledge-intensive workplaces.

But even Piech was not, as Lutz remarked, the "root cause" of Dieselgate. Just as CEO Martin Winterkorn's beliefs about how best to motivate people were learned from his mentor, Ferdinand Piech, Piech's management beliefs were learned from his mentor – his grandfather, Ferdinand Porsche, who had been the brilliant lead engineer for the Beetle. Nor was Herr Porsche the root cause. Porsche, for his part, was hugely inspired in his efforts by Henry Ford and in the mid-1930s traveled to Detroit to study Ford's River Rouge factory complex, eventually using what he'd learned to build the first automotive assembly line in Germany.[14] This was

still the golden age for the manufacturing industry, when fear and intimidation were, arguably, a proven managerial technique to motivate speed and accuracy in factory workers. When authoritative demands, combined with process improvements, could reduce an automobile's assembly line production time from 12 hours to 3, as Ford's factory did, the company's profits were real.

The root cause of VW's Dieselgate scandal in 2015 cannot be located in the personality or leadership of any single person or small group. Perhaps one could say the failure was caused by holding fast to an outdated belief about what motivates workers. A scene in Charlie Chaplin's classic film *Modern Times* parodies what such old-fashioned motivation-by-fear can look like. Chaplin plays an assembly line worker who fails to keep pace tightening the widgets as they appear before him on the moving belt, only to be kicked by a coworker, chastised and hit by a manager, and ordered to increase speed by an executive.[15] Today, when simple tasks have increasingly become automated and knowledge workers do not tighten widgets but rather collaborate, synthesize, make decisions, and continually learn, such methods seem especially comedic.

Interestingly, Bischoff, the designer who was chastised by Winterkorn for the clonking steering shaft, defended this management style, telling a reporter, "Of course [Winterkorn] went through the roof when something went wrong . . . " and excused the behavior by pointing out that his boss could also be "extremely human with a soft spot for people's personal fates."[16] What's at stake here isn't whether or not a CEO is extremely human or not. Winterkorn's kindness and "soft spots" were likely within a normal range when measured against other human beings. What's at stake is what he believed was the best way to motivate employees – and the relevance of these beliefs for today's work. Given what we now know about the relationship between psychological safety and learning, a leader who threatens to fire managers and engineers if they do not come up with world-class body fits in six weeks seems best cast in a silent film.

Like the noxious fumes the faulty VW diesel engines emitted, low psychological safety affects everyone who breathes it in. As Professor

Ferdinand Dudenhoffer, an automotive expert of at the University of Duisburg-Essen, put it " . . . there is a special pressure at VW."[17] The company's governance dynamics contributed to that special pressure. According to Dudenhoffer, unlike at other German automobile manufacturers, where the supervisory board ultimately controlled the CEO, at VW the board held "no such authority."[18] That may be because relatives of the founding Porsche family held a quarter of the 20 board seats; two seats were held by regional politicians, eager to do whatever it took to keep jobs in the region, and two were held by representatives of Qatar's sovereign wealth fund.

Given this insidious culture of fear, it's unsurprising that when faced with a seemingly insurmountable technical obstacle – to produce a diesel engine that could pass US environmental testing – and pressed for a solution that could meet the company's target goals, engineers and regulatory officials at VW decided to find a way. However clever and lucrative the idea may have seemed at the time, and however much VW's sales and reputation soared, history has shown us that it was not, in the long run, a viable solution.

At least one member of the supervisory board was unafraid to speak up. Bernd Osterloh, 1 of the 10 elected members who represented employees (comparable to union representatives in the US), sent a telling letter to the VW staff on September 24, 2015, shortly after the US regulators revealed the cheating. As if citing central tenets of psychological safety, Osterloh wrote, "we need in the future a climate in which problems aren't hidden but can be openly communicated to superiors. We need a culture in which it's possible and permissible to argue with your superior about the best way to go."[19]

After the emissions scandal broke, Winterkorn claimed the company needed stricter rules to make sure this kind of deceit did not happen again. But it's unclear how stricter rules would have engineered an environmentally safe diesel engine or enabled the company to reach its goal to become the world's largest car company. In retrospect, the goal itself seems suspect. Could failure have been avoided if the engineers, working in a psychologically safer environment, could

report back the "bad news" that attaining a clean diesel engine under the terms demanded was simply not feasible?

Perhaps most stunning thing about the VW emissions debacle is that it's by no means a singular event. The same script – unreachable target goals, a command-and-control hierarchy that motivates by fear, and people afraid to lose their jobs if they fail – has been repeated again and again. In part that's because it's a script that was useful in the past, when goals were reachable, progress directly observable, and tasks largely individually executed. Under those conditions, people could be compelled to reach them simply by fear and intimidation. The problem is that, in today's volatile, uncertain, complex, and ambiguous (VUCA) world, this is no longer a script that's good for business. Rather than success, it's a playbook that invites avoidable, and often painfully public, failure.

In the rest of this chapter, we will see a similar script play out in three other organizations: Wells Fargo, Nokia, and the Federal Reserve Bank of New York. In each of these cases, a psychologically unsafe culture appeared to be working *for some period of time,* but, like a ticking bomb, it eventually exploded from within, decimating reputations of once-venerated companies.

Stretching the Stretch Goal

A year before its notorious fall, Wells Fargo could still call itself the most valuable bank, ranking first in market value among all US banks and serving roughly one in three American households.[20] Rated by *Barron's* as one of the "world's most respected companies," the lion's share of Wells Fargo's success stemmed from its Community Banking division; in 2015, with over 6000 local branches across the US, the division accounted for over half the company's revenue.[21] Community Banking provided a range of financial services, including checking and savings accounts, loans, and credit cards, to households and small businesses.

Community Banking relied heavily on cross-selling, the practice of selling existing customers additional products, for its growth strategy. Wells Fargo believed it could gain a competitive advantage in the banking industry by becoming a one-stop shop for all of its customers' financial needs. The bank took pride in its ability to sell its customers additional products. In fact, in his 2010 letter to shareholders, CEO John Stumpf boasted that the company was "the king of cross-sell."[22] By 2015, Wells Fargo's claim to that title seemed strong: it was averaging 6.11 products per customer, compared to the industry average of 2.71.[23]

Yet superior cross-selling was to Wells Fargo what clean diesel was to the Volkswagen Group: involving an ultimately unattainable target goal that was nonetheless demanded of employees by the company's top leaders upon penalty of job loss.

By September 8, 2016, it was all over. The ticking time bomb had exploded from within, shattering the king of cross-sell's illusory one-stop shop. After having been found guilty of widespread misconduct in sales practices in its Community Banking division, Wells Fargo announced a $185 million settlement with the Consumer Financial Protection Bureau (CFPB) and two other US regulatory agencies. John Stumpf resigned the following month.[24]

What happened at Wells Fargo was both predictable and avoidable. And it could not have persisted as long as it did without a psychologically unsafe culture. Let's look more closely at how events unfolded.

In the early 2000s, Wells Fargo had adopted a cross-selling campaign called "Going for Gr-Eight," meant to motivate Community Banking employees to sell, on average, a previously unheard of eight products per customer. To accomplish this, incentive schemes were put in place up and down the hierarchy: personal bankers and tellers were given a percentage commission for each sale, district managers were required to hit specific sales numbers to earn bonuses, and cross-selling success was factored into top executives' annual bonuses.[25]

Metrics tracking was strict and unforgiving. Branch personnel were assigned ambitious sales numbers and their progress was tracked closely in a daily "Motivator Report."[26] Each branch was required to report daily sales four times per day: at 11 a.m., 1 p.m., 3 p.m., and 5 p.m.[27] One area president told employees to "do whatever it takes" to sell.[28] At some branches, employees reportedly could not leave until they reached their daily sales goal.[29]

Bank personnel who did not meet sales goals were coached to increase their numbers, including "objection-handling" training to coerce people into buying more products. If they could still not hit their numbers, they were terminated from the company. Managers who did not do well enough were publicly criticized or fired.[30]

Beginning in 2013, reports began to surface that Wells Fargo employees had engaged in, and were still currently engaging in, questionable practices to hit their sales numbers. A former employee reported that members of his Los Angeles branch opened accounts or credit cards for customers without their consent, saying a computer glitch had occurred if customers complained. He also reported that employees lied to customers-saying that certain products could only be purchased together-to hit their numbers.[31] Other tactics to meet sales goals included encouraging customers to open unnecessary multiple checking accounts – one for groceries, one for travel, one for emergencies, and so on[32] – and creating fake email addressees to enroll customers in online banking.[33]

Before the scandal went public, Wells Fargo made a number of changes that seemed to try to address its problems. The company fired over 5300 employees for ethics violations between 2011 and 2016,[34] rolled out a "Quality of Sale" Report Card that set limits on the terms of a sale,[35] expanded ethics training, and explicitly told employees not to create fake accounts.[36] There was, however, one glaring omission: no changes were made to "Going for Gr-Eight." Just as VW engineers were unable to design a clean diesel engine in ways that were "permissible," Wells Fargo employees were unable to meet sales goals without engaging in shady practices. There was simply a limit to how many products any one customer's wallet could

allow. As one former banker put it, "They [the higher ups] warned us about this [unethical] type of behavior . . . but the reality was that people had to meet their goals. They needed a paycheck."[37]

Eventually, federal and state regulators opened an investigation into the bank's practices. Their report found that from 2011 to 2016, employees in the Community Banking division, in order to boost sales figures, opened two million unauthorized customer accounts and credit cards and sold products and services to customers under false pretenses.[38] The investigation also found that several employees who witnessed the unethical behavior had reported it to their supervisors or to the ethics hotline. One even claimed to have emailed Stumpf about it. Some employees were later terminated for blowing the whistle.[39]

Like Volkswagen, Wells Fargo's avoidable failure was not the result of one bad apple but of a system that demanded hitting targets so ambitious they could only be met by deceit. Employees operated in a culture of fear that brooked no dissent. Rather than manifesting interest in salespeople's experiences while executing the cross-selling strategy and using what was being learned in the field to shift or sharpen the company's strategy,[40] managers sent a clear message: produce – or else.

Fearing the Truth

A similar script to that of VW and Wells Fargo was followed years earlier – across the ocean and in another industry. Nokia, which traces its origins as a company to an 1865 paper mill in the town of Nokia, Finland,[41] had become, by the 1980s, a pioneering telecom company in the world's burgeoning cellular networks. Led by CEO Kari Kairamo, by the late 1990s Nokia was the world's leading mobile phone manufacturer, with a 23% market share.[42] By the early 2000s, as a developer of the Symbian operating system, the company seemed well poised to ride what would become the smartphone's exponential rise.

Instead, Nokia became another casualty of avoidable failure. By June 2011, the company's share of the smartphone market had fallen far, and by 2012, its market value had dropped by over 75%.[43] The company had lost its innovative edge, its lead as a handset manufacturer, and over two billion euros. In September 2013, the company, conceding defeat, announced the sale of its Device and Services business to Microsoft.[44]

Although it was not a tangled web of deceit that destroyed Nokia, as at Volkswagen and Wells Fargo, all three companies were handicapped by a culture of fear. For instance, an in-depth investigation of Nokia's rise and fall in the smartphone industry between 2005 and 2010, which included interviews with 76 managers and engineers at Nokia, concluded that the company lost the smartphone battle not as a result of poor vision or a few bad managers but at least partly due to a "fearful emotional climate" that created company-wide inertia, especially in response to threats from powerful competitors.[45] Such fear, said the study's authors, was "grounded in a culture of temperamental leaders and frightened middle managers, scared of telling the truth."[46]

The truth was that beginning in the first decades of the twenty-first century, the mobile phone industry had become increasingly competitive. Having staked its claim on the featurephone, Nokia was unwilling or unable to recognize the potential of the complex and expensive-to-develop software platform that became today's smartphone. In contrast Apple and Google, following the Canadian company RIM's introduction of the Blackberry, spent billions developing the proprietary platforms IOS and Android, both of which overshadowed Nokia's Symbian platform and effectively launched the smartphone revolution. In other words, Nokia found itself in a rapidly changing, knowledge-intensive industry, where collaboration, innovation, and communication were quickly becoming vital to future success.

Lacking a psychologically safe climate where candor was expected, Nokia's top managers and middle managers engaged in a subtle dance of mutual fear. When middle managers asked critical

questions about the company's direction, they were told to "focus on implementation."[47] People who could not comply with top managers' unreasonable requests were "labeled a loser" or "put their reputations on the line."[48] One executive president was said to have "pounded the table so hard that pieces of fruit went flying."[49] Olli-Pekka Kallasvuo, former chairman and CEO of Nokia, was described as "extremely temperamental."[50] Managers reported that they regularly saw him "shouting at people at the top of his lungs" and "it was very difficult to tell him things he didn't want to hear."[51]

For their part, executives, fearful of the external market threats the company was facing, particularly from software developers at Apple and Google, did not communicate the severity of those threats to middle managers. One top manager, confessing to the fear that higher ups felt and the way that influenced management practice, said, "it was clear that we feared the iPhone. So we told the middle managers that they had to deliver touch-phones quickly."[52] Middle managers, afraid to deliver bad news, led their superiors to develop an overly optimistic perception of Nokia's technological capabilities in featurephones and to neglect long-term investments in developing more complex innovation. As one manager put it, "In Nokia's R&D, the culture was such that they wanted to please the upper levels. They wanted to give them good news . . . not a reality check."[53]

A reality check would have required that managers (both the temperamental and the frightened) put aside their fears and speak candidly to one another. Yet such candor seemed impossible, and the window for innovation and redirection passed. In 2007, as the industry became ever more software-reliant, the Finnish telecom company sank still lower. More and more mobile phone companies turned to Google's open source Android operating system. By 2008, when Apple launched the iPhone 3G and the App Store, it was too late to catch up. Although Nokia continued to develop software and launch new products, it would underperform and undersell compared to its more agile competitors.

Clearly, it is not possible to say that psychological safety would have ensured Nokia's success in an increasingly competitive industry.

Success required constant innovation, fueled by expertise, ingenuity, and teamwork. But without psychological safety, it is difficult for expertise and ingenuity to be put to good use. And with Nokia's senior executives in the dark about where the company and its technology really stood, the company simply could not learn fast enough to survive. A decade later, Nokia was able to make a comeback. As you will learn in Chapter 7, members of senior management would later realize that they had to change how they spoke and interacted to develop a better strategy.

Who Regulates the Regulators?

In the Nokia, Wells Fargo, and VW cases, we saw the pernicious effects of a culture of fear inside companies with ambitious dreams. What about when one company provides services to, or reviews the activities of, another? When relationships *between* companies are hampered by a culture of fear, the risks intensify, both for the organizations and for society.

Following the 2008–2009 global financial crisis, the Federal Reserve Bank of New York (FRBNY) received ample condemnation and criticism from the American public and Congress for its failure to effectively regulate the excessive financial risk-taking of several of the big US banks.[54] In response, the FRBNY commissioned a report to study itself. Bill Dudley, President of FRBNY, asked Columbia Business School Professor David Beim to investigate and assess the FRBNY's "organization and practices, with a particular focus on Bank Supervision."[55] The intention was to reveal lessons learned that could be used to improve the Feds' ability to supervise banks and monitor systemic risk going forward.

Beim and a small team interviewed approximately two dozen people who worked at the FRBNY, mostly senior officers, about things the Fed did well and didn't do well leading up to the crisis. The result of the examination was the *2009 Report of Systemic Risk and Bank Supervision*. The report allocated considerable attention to the FRBNY's culture and communication. In it, Beim described a

workplace suffused with low psychological safety in which regulatory officers tasked with monitoring individual banks like Goldman Sachs felt "intimidated and passive," and thus were not "effective in communicating with other areas, forming their own views and signaling when something important seems to be wrong." As a result, the regulators "just followed orders."[56]

As part of their jobs, regulatory supervisors were involved in discussions about individual bank processes and policies, often focusing on specific and large-scale transactions a bank had made or was considering making. Every large bank was assigned a FRBNY regulatory team, tasked with the job of deciding whether a particular transaction was kosher. Here, Beim found that real decision-making was stymied by groupthink or "striving for consensus" – issues were discussed at length without moving to constructive action. The discussions were notably devoid of frank debate and cooperation, where people spoke up about problems and offered solutions, as warranted in any organization where highly complex processes are constantly unfolding at a furious pace. The report emphasized fear of speaking up as a frequent theme that characterized FRBNY meetings and employee experiences in all aspects of their job. It presented stark quotes from interviewees, such as "grow up in this culture and you'll find that small mistakes are not tolerated," and "[you] don't want to be too far outside where management is thinking."[57]

The relationship between the regulators and the bank managers was singled out as especially fraught. For one, an information asymmetry existed between the two groups that put the regulators at a disadvantage. Because the regulators had to request information from the banks, the banks could act as gatekeepers, in turn making the regulators feel dependent on the bank's willingness and good grace for timely and useful information. This led, as Beim argued, regulators to adopt a nonconfrontational and often overly deferential style to smooth their attempts to obtain information.[58] Most critically, Beim reported that within three weeks of his investigation he saw signs of *regulatory capture*, a phenomenon that journalist Ira Glass later described as like "a watchdog who licks the face of an intruder and plays catch with the intruder instead of barking at him."[59] The

regulators were, in a sense, disabled from effectively carrying out their regulatory duties by a culture of fear and deference.

What makes this dynamic especially frustrating is that the banks were required by law to hand over whatever information the Feds asked for. Carmen Segarra, who worked as a regulator after the Beim investigation, said, "The Fed has both the power to get the information and the power to punish a bank if it chooses to withhold it." When asked why she thought the regulators chose deference even though they possessed this power, her answer was succinct: "they are coming from a place of fear."[60]

Could the colossal collapse of a financial system the likes of which the world had not seen since the 1930s have been prevented had the banks and regulators worked in a climate of psychological safety? That may be a stretch. Lax regulations, greed, and faulty incentives were certainly important contributing factors. However, we can say that the culture of fear silenced or inhibited anyone who wanted to ask questions or criticize, thereby squandering many opportunities to catch and correct excessive risk-taking and other sources of economic failure.

Avoiding Avoidable Failure

Volkswagen, Wells Fargo, Nokia, and the New York Federal Reserve serve as vivid examples of organizations that boasted deep reservoirs of expertise, driven, intelligent leaders, and clearly articulated goals. None lacked capable employees in any of the relevant fields required for the organization to succeed in its industry. In short, they had the talent. What they lacked was the leadership needed to ensure that a climate of psychological safety permeated the workplace, allowing people to speak truth to power inside the company – and, in the case of the Fed, to their industry partners. Chapter 7 will focus on what leaders need to do to create and recover psychological safety; here, I simply note that the kinds of large-scale business failures described in this chapter are preventable.

None of these failures occurred overnight or out of the blue. Quite the opposite. The seeds of failure were taking root for months or years while senior management remained blissfully unaware. In many organizations, like those discussed in this chapter, countless small problems routinely occur, presenting early warning signs that the company's strategy may be falling short and needs to be revisited. Yet these signals are often squandered. Preventing avoidable failure thus starts with encouraging people throughout a company to push back, share data, and actively report on what is really happening in the lab or in the market so as to create a continuous loop of learning and agile execution.

Each of the stories in this chapter can be seen as a case of strategic failure. What started as small gaps in execution spiraled into dramatic, headline-making failures when new information created by actual experience – whether of engineers or salespeople – was not captured and put to good use in rethinking and redirecting company efforts.[61] For instance, Wells Fargo's cross-selling strategy bumped up against customers' real spending power, planting a seed of strategic failure. But what cemented the failure was the salespeople's belief that senior managers would not tolerate underperformance. That they found it easier to fabricate false accounts than to report what they were learning in the field is as powerful a signal of low psychological safety as you can find.

In focusing our attention on psychological safety, I do not mean to dismiss the ethical dimensions of any of these cases. Wells Fargo, for instance. Yet to view the customer-accounts fraud as the result of individually-corrupt salespeople does not square with the widespread nature of the behavior in the company, which points to a system set up to fail. Set up to fail by the pernicious combination of a top-down strategy and insufficient psychological safety to encourage sharing bad news up the hierarchy. A similar point can be made about the VW and Fed cases. As argued earlier in this chapter, any explanation that looks only for a corrupt or foolish individual or individuals will be incomplete, given the complex dynamics at play. What is interesting to consider, however, is the extent to which having information about

shortcomings come to light earlier rather than later can nearly always mitigate the size and impact of failures and sometimes prevent them altogether.

Adopting an Agile Approach to Strategy

Taken together, these four cases suggest the necessity of adopting alternate perspectives on strategy that are more in tune with the nature of value creation in today's VUCA world. Solvay Business School Professor Paul Verdin and I developed a perspective that frames an organization's strategy as a hypothesis rather than a plan.[62] Like all hypotheses, it starts with situation assessment and analysis – strategy's classic tools. Also, like all hypotheses, it must be *tested* through action. When strategy is seen as a hypothesis to be continually tested, encounters with customers provide valuable data of ongoing interest to senior executives. Imagine if Wells Fargo had adopted an agile approach to strategy: the company's top management would then have taken repeated instances of missed targets or false accounts as useful data to help it assess the efficacy of the original cross-selling strategy. This learning would then have triggered much-needed strategic adaptation.

Of course, sometimes, poor performance is simply poor performance. People underperforming. Not trying hard enough. Sometimes, companies do in fact need to find ways to better motivate and manage employees to help them reach desired performance standards. However, in a VUCA world, this is not the only explanation for missing a desired target; it is not even the most likely explanation. Early signs of gaps between results and plans must be viewed *first* as data – triggering analysis – before concluding that the gaps are clear and obvious evidence of employee underperformance.

Cheating and covering up are natural by-products of a top-down culture that does not accept "no" or "it can't be done" for an answer. But combining this culture with a belief that a brilliant strategy formulated in the past will hold indefinitely into the future becomes a

certain recipe for failure. At both VW and Wells Fargo, signs that corners were being cut were repeatedly ignored. Thus, the illusion that the top-down strategies were working persisted – for a while. Particularly poignant is that disconfirming data were available for a surprisingly long time, but they were not put to good use.

Success in a VUCA world requires senior executives to engage thoughtfully and frequently with company operations across all levels and departments. The people on the front line who create and deliver products and services are privy to the most important strategic data the company has available. They know what customers want, what competitors are doing, and what the latest technology allows. Organizational learning – championed by company leaders but enacted by everyone – requires actively seeking deviations that challenge the assumptions underpinning a current strategy. Then, of course, these deviations must be welcomed because of their informative value for adapting the original strategy. Ironically, pushing harder on "execution" in response to early signals of underperformance may only aggravate the problem if shortcomings reveal that prior market intelligence or assumptions about the business model were flawed.

Finally, as unfortunate as the business failures in this chapter may have been, in many ways they pale in comparison to the human costs of low psychological safety explored in Chapter 4. Here we will see the even more vital role of speaking up to avoid preventable harm.

Chapter 3 Takeaways

- Leaders who welcome only good news create fear that blocks them from hearing the truth.
- Many managers confuse setting high standards with good management.
- A lack of psychological safety can create an illusion of success that eventually turns into serious business failures.
- Early information about shortcomings can nearly always mitigate the size and impact of future, large-scale failure.

Endnotes

1. Vlasic, B. "Volkswagen Official Gets 7-Year Term in Diesel-Emissions Cheating." *The New York Times*. December 6, 2017. https://www.nytimes.com/2017/12/06/business/oliver-schmidt-volkswagen.html Accessed June 13, 2018.
2. Kwak, J. "How Not to Regulate." *The Atlantic*. September 30, 2014. https://www.theatlantic.com/business/archive/2014/09/how-not-to-regulate/380919/ Accessed June 13, 2018.
3. The Volkswagen story in this chapter draws from new sources cited individually and from the following academic case studies:
   - Giolito, V., Verdin, P., Hamwi, M., & Oualadj, Y. Volkswagen: A Global Champion in the Making? Case Study. Solvay Brussels School Economics & Management, 2017; Lynch, L.J., Cutro, C., & Bird, E.
   - The Volkswagen Emissions Scandal. Case Study. UVA No. 7245. Charlottesville, VA. University of Virginia, Darden Business Publishing, 2016; and
   - Schuetz, M. Dieselgate – Heavy Fumes Exhausting the Volkswagen Group. Case Study. HK No. 1089. Hong Kong. The University of Hong Kong Asia Case Research Center, 2016.
4. Ewing, J. "Volkswagen C.E.O. Martin Winterkorn Resigns Amid Emissions Scandal." *The New York Times*. September 23, 2015. https://www.nytimes.com/2015/09/24/business/international/volkswagen-chief-martin-winterkorn-resigns-amid-emissions-scandal.html Accessed June 13, 2018.
5. Parloff, R. "How VW Paid $25 Billion for 'Dieselgate' – and Got Off Easy." *Fortune Magazine*. February 6, 2018. http://fortune.com/2018/02/06/volkswagen-vw-emissions-scandal-penalties/ Accessed June 13, 2018.
6. *Ibid*.
7. Sorokanich, B. "Report: Bosch Warned VW About Diesel Emissions Cheating in 2007." *Car and Driver*. September 28, 2015. https://blog.caranddriver.com/report-bosch-warned-vw-about-diesel-emissions-cheating-in-2007/ Accessed June 13, 2018.
8. Hakim, D., Kessler A.M., & Ewing, J. "As Volkswagen Pushed to Be No. 1, Ambitions Fueled a Scandal." *The New York Times*, September 26, 2015. https://www.nytimes.com/2015/09/27/business/as-vw-pushed-to-be-no-1-ambitions-fueled-a-scandal.html Accessed June 13, 2018.

9. Ewing, J. 2015, op cit.
10. Cremer, A. & Bergin, T. "Fear and Respect: VW's culture under Winterkorn." *Reuters*. October 10, 2015. https://www.reuters.com/article/us-volkswagen-emissions-culture/fear-and-respect-vws-culture-under-winterkorn-idUSKCN0S40MT20151010 Accessed June 13, 2018.
11. https://www.youtube.com/watch?v=YpPNVSQmR5c
12. Lutz, B. "One Man Established the Culture that Led to VW's Emission Scandal." *Road and Track*. November 4, 2015. https://www.roadandtrack.com/car-culture/a27197/bob-lutz-vw-diesel-fiasco/ Accessed June 13, 2018.
13. *Ibid*.
14. Kiley, D. *Getting the Bugs Out: The Rise, Fall, and Comeback of Volkswagen in America*. John Wiley & Sons, 2002. 38–49. Print.
15. https://www.youtube.com/watch?v=DfGs2Y5WJ14.
16. Cremer, A. & Bergin, T, 2015, op cit.
17. *Ibid*.
18. *Ibid*.
19. *Ibid*.
20. Details on the Wells Fargo story come from Lynch, L.J., Coleman, A.R., & Cutro, C. The Wells Fargo Banking Scandal. Case Study. UVA No. 7267. Charlottesville, VA. University of Virginia, Darden Business Publishing, 2017.
21. Wells Fargo, 2015 annual report
22. Wells Fargo, 2010 annual report
23. Wells Fargo, 2015 annual report
24. Gonzales, R. "Wells Fargo CEO John Stumpf Resigns Amid Scandal." *NPR*, October 12, 2016. https://www.npr.org/sections/thetwo-way/2016/10/12/497729371/wells-fargo-ceo-john-stumpf-resigns-amid-scandal Accessed June 13, 2018.
25. Reckard, E.S. "Wells Fargo's Pressure-Cooker Sales Culture Comes at a Cost." *The Los Angeles Times*, December 21, 2013. http://www.latimes.com/business/la-fi-wells-fargo-sale-pressure-20131222-story.html Accessed June 13, 2018.
26. Keller, L.J., Campbell, D., & Mehrotra, K. "While 5,000 Wells Fargo Employees Got Fired, Their Bosses Thrived." *Bloomberg*. November 3, 2016. https://www.bloomberg.com/news/articles/2016-11-03/wells-fargo-s-stars-climbed-while-abuses-flourished-beneath-them Accessed June 13, 2018.
27. Cao, A. "Lawsuit Alleges Exactly How Wells Fargo Pushed Employees to Abuse Customers." *TIME*. September 29, 2016. http://time.com/

money/4510482/wells-fargo-fake-accounts-class-action-lawsuit/ Accessed June 13, 2018.
28. Mehrotra, K. "Wells Fargo Ex-Managers' Suit Puts Scandal Blame Higher Up Chain." *Bloomberg*. December 8, 2016. https://www.bloomberg.com/news/articles/2016-12-08/wells-fargo-ex-managers-suit-puts-scandal-blame-higher-up-chain Accessed June 13, 2018.
29. Reckard, E.S. December 21, 2013, op cit.
30. Cowley, S. "Voices From Wells Fargo: 'I Thought I Was Having a Heart Attack.'" *The New York Times*. October 20, 2016. https://www.nytimes.com/2016/10/21/business/dealbook/voices-from-wells-fargo-i-thought-i-was-having-a-heart-attack.html Accessed June 13, 2018.
31. Cao, A. September 29, 2016, op cit.
32. Cowley, S. October 20, 2016, op cit.
33. Glazer, E. & Rexrode, C. "Wells Fargo CEO Defends Bank Culture, Lays Blame With Bad Employees." *The Wall Street Journal*. September 13, 2016. https://www.wsj.com/articles/wells-fargo-ceo-defends-bank-culture-lays-blame-with-bad-employees-1473784452 Accessed June 13, 2018.
34. Egan, M. September 8, 2016, op cit.
35. Freed, D. & Reckhard, E.S. "Wells Fargo Faces Costly Overhaul of Bankrupt Sales Culture." *Reuters*, October 12, 2016.
36. Corkery, M. & Cowley, S. "Wells Fargo Warned Workers Against Sham Accounts, but 'They Needed a Paycheck.'" *The New York Times*, September 16, 2016. https://www.nytimes.com/2016/09/17/business/dealbook/wells-fargo-warned-workers-against-fake-accounts-but-they-needed-a-paycheck.html Accessed June 13, 2018.
37. *Ibid*.
38. Consumer Financial Protection Bureau press release. "Consumer Financial Protection Bureau Fines Wells Fargo $100 Million for Widespread Illegal Practice of Secretly Opening Unauthorized Accounts." *ConsumerFinance.gov*, September 8, 2016. https://www.consumerfinance.gov/about-us/newsroom/consumer-financial-protection-bureau-fines-wells-fargo-100-million-widespread-illegal-practice-secretly-opening-unauthorized-accounts/ Accessed June 13, 2018.
39. Egan, M. "Wells Fargo Admits to Signs of Worker Retaliation." *CNN Money*. January 23, 2017. http://money.cnn.com/2017/01/23/investing/wells-fargo-retaliation-ethics-line/index.html Accessed June 13, 2018.

40. Edmondson, A.C. & Verdin, P.J. "Your Strategy Should Be a Hypothesis You Constantly Adjust." *Harvard Business Review*. November 9, 2017. https://hbr.org/2017/11/your-strategy-should-be-a-hypothesis-you-constantly-adjust Accessed June 13, 2018.
41. "Our History." Nokia. https://www.nokia.com/en_int/about-us/who-we-are/our-history Accessed June 7, 2018.
42. Nokia Corporation, 1998 annual report.
43. Huy, Q. & Vuori, T. "Who Killed Nokia? Nokia Did." *INSEAD Knowledge*. September 22, 2015. https://knowledge.insead.edu/strategy/who-killed-nokia-nokia-did-4268 Accessed June 13, 2018.
44. Bass, D., Heiskanen, V., & Fickling, D. "Microsoft to Buy Nokia's Devices Unit for $7.2 Billion." *Bloomberg*. September 3, 2013. https://www.bloomberg.com/news/articles/2013-09-03/microsoft-to-buy-nokia-s-devices-business-for-5-44-billion-euros Accessed June 13, 2018.
45. Huy, Q. & Vuori, T. September 22, 2015, op cit.
46. *Ibid*.
47. Vuori, T. & Huy, Q. "Distributed Attention and Shared Emotions in the Innovation Process: How Nokia Lost the Smartphone Battle." *Administrative Science Quarterly* 61.1 (2016): 23.
48. *Ibid*.
49. *Ibid*.
50. *Ibid*.
51. *Ibid*.
52. Vuori, T. & Huy, Q. (2016): 30.
53. Vuori, T. & Huy, Q. (2016): 32.
54. Protess, B. & Craig, S. "Harsh Words for Regulators in Crisis Commission Report." *The New York Times*. January 27, 2011. https://dealbook.nytimes.com/2011/01/27/harsh-words-for-regulators-in-crisis-commission-report/?mtrref=www.google.com&gwh=54322022775D2A4C1766CE843F23C604&gwt=pay Accessed June 13, 2018.
55. Beim, D. & McCurdy, C. "Report on Systemic Risk and Bank Supervision" *Federal Reserve Bank of New York Report*. 2009. 1. https://info.publicintelligence.net/FRBNY-BankSupervisionReport.pdf. Accessed June 1, 2018.
56. Beim, D. & McCurdy, C. 2009: 9.
57. *Ibid*.
58. Beim, D. & McCurdy, C. 2009: 19.

59. "The Secret Recordings of Carmen Segarra." *This American Life*. September 26, 2014. https://www.thisamericanlife.org/536/the-secret-recordings-of-carmen-segarra. Accessed June 1, 2018.
60. *Ibid*.
61. Edmondson, A.C. & Verdin, P.J. "The strategic imperative of psychological safety and organizational error management." *How could this happen? Managing errors in organizations*. Ed. J. Hagen. Palgrave/MacMillan: in press.
62. Edmondson, A.C. & Verdin, P.J. November 9, 2017, op cit.

4 Dangerous Silence

"Regret for the things we did can be tempered by time; it is regret for the things we did not do that is inconsolable."

—Sydney Harris[1]

More than just business failure is at stake when psychological safety is low. In many workplaces, people see something physically unsafe or wrong and fear reporting it. Or they feel bullied and intimidated by someone but don't mention it to supervisors or counselors. This reticence unfortunately can lead to widespread frustration, anxiety, depression, and even physical harm. In short, we live and work in communities, cultures, and organizations in which *not* speaking up can be hazardous to human health.

This chapter explores how silence at work leads to harm that could have been prevented. You will read stories that come predominantly, but not exclusively, from high-risk industries. In these cases, employees find themselves unable to speak up; the ensuing silence then creates conditions for physical and emotional harm. Although

never easy, in some workplaces, as we will see in Chapter 5 and Chapter 6, people do feel both safe and compelled to speak up. This gives everyone the chance to develop constructive solutions and avoid harmful outcomes.

We'll start with stories of silence that gave rise to major accidents in high-risk settings where risk and routine often exist in an uneasy balance. The first two accidents take place in the air. From there, we'll move to a hospital bed, tsunami waves, and finally the volatile setting of public opinion.

Failing to Speak Up

On February 1, 2003, NASA's Space Shuttle *Columbia* experienced a catastrophic reentry into the Earth's atmosphere.[2] All seven astronauts perished. Although space travel is obviously risky and fatal accidents seem part of the territory, this particular accident did not come "out of the blue." Two weeks earlier, a NASA engineer named Rodney Rocha had watched launch-day video footage, a day after what had seemed to be a picture-perfect launch on a sunny Florida morning. But something seemed amiss. Rocha played the tape over and over. He thought a chunk of insulating foam might have fallen off the shuttle's external tank and struck the left wing of the craft. The video images were grainy, shot from a great distance, and it was impossible to really tell whether or not the foam had caused damage, but Rocha could not help worrying about the size and position of that grainy moving dot he saw on the screen. To resolve the ambiguity, Rocha wanted to get satellite photos of the Shuttle's wing. But this would require NASA higher ups to ask the Department of Defense for help.

Rocha emailed his boss to see if he could get help authorizing a request for satellite images. His boss thought it unnecessary and said so. Discouraged, Rocha sent an emotional email to his fellow engineers, later explaining that "engineers were . . . not to send messages much higher than their own rung in the ladder."[3] Working with an

ad hoc team of engineers to assess the damage, he was unable to resolve his concern about possible damage without obtaining images. A week later, when the foam strike possibility was briefly discussed by senior managers in the formal mission management team meeting, Rocha, sitting on the periphery, observed silently.

A formal investigation by experts would later conclude that a large hole in the shuttle wing occurred when a briefcase-sized piece of foam hit the leading edge of the wing, causing the accident.[4] They also identified two, albeit difficult and highly-uncertain, rescue options that might have prevented the tragic deaths. Reporting on the investigation, ABC News anchor Charlie Gibson asked Rocha why he hadn't spoken up in the meeting. The engineer replied, "I just couldn't do it. I'm too low down [in the organization] . . . and she [meaning Mission Management Team Leader Linda Ham] is way up here," gesturing with his hand held above his head.[5]

Rocha's statement captures a subtle but crucial aspect of the psychology of speaking up at work. Consider his words carefully. He did not say, "I chose not to speak," or "I felt it was not right to speak." He said that he "couldn't" speak. Oddly, this description is apt. The psychological experience of having something to say yet feeling literally unable to do so is painfully real for many employees and very common in organizational hierarchies, like that of NASA in 2003. We can all recognize this phenomenon. We understand why his hands spontaneously depicted that poignant vertical ladder. When probed, as Rocha was by Gibson, many people report a similar experience of feeling un*able* to speak up when hierarchy is made salient. Meanwhile, the higher ups in a position to listen and learn are often blind to the silencing effects of their presence.

What Was Not Said

Twenty-six years earlier, workplace silence played a major role in the collision of two Boeing 747 jets on an island runway in the Canary Islands in March 1977.[6] The crash ignited two jumbo jets

into flames, and 583 people died. Subsequent investigations into what has been called the Tenerife disaster, still considered the worst accident in the history of civil aviation, were among the first to study the roles played by human factors in airline fatalities. The resulting changes made to aviation procedures and cockpit training laid the groundwork for some of today's most crucial psychological safety measures.

Let's look at what went wrong on that afternoon in late March at the small Los Rodeos Airport on the island of Tenerife. The runway was covered in heavy fog and the airport was small, which made it difficult for the pilots of both aircrafts to see the runway and one another. An unexpected landing at Tenerife due to a bomb scare earlier that day at nearby Las Palamas airport put extra stress on the crew, intent on keeping to their scheduled flight arrival times. Air control personnel may have been watching a sports game, distracting their attention. However, these relatively common, if unfavorable, conditions need not have resulted in tragedy. If we look more closely into what was said in the aircraft cockpit – and more importantly, *what was not said, and why not* – we can better understand the outsized role played by psychological safety.

Captain Jacob Veldhuyzen van Zanten, one of the company's most senior pilots, chief flight trainer of most of the company's 747 pilots, and head of flight safety for Royal Dutch Airlines (KLM), piloted the flight.[7] Nicknamed "Mr. KLM," van Zanten held the power to issue pilots' licenses and oversaw pilots' six-month flight checks to determine whether licenses would be extended. His photograph, which had just appeared in a KLM advertising spread, depicted a smiling and confident man in a white shirt sitting in front of a control panel. He looked like a man who was comfortable being in charge.

Flying with van Zanten that day were two other top-notch and highly-experienced pilots: First Officer Klaas Meurs, age 32, and Flight Engineer Willem Schreuder, age 48. Importantly, two months earlier, van Zanten had been Meur's "check pilot," testing his ability to fly the Boeing 747.

The crucial moments came as the KLM and the Pan Am flights were preparing for takeoff. Immediately after lining up on the runway, Captain van Zanten impatiently advanced the throttles and the aircraft started to move forward. First Officer Meurs, implying that van Zanten was moving too soon, then advised that air traffic control (ATC) had not yet given them clearance.

Van Zanten, sounding irritated, responded: "No, I know that. Go ahead, ask."[8]

Following his captain's request, Meurs then radioed the tower that they were "ready for takeoff" and "waiting for our ATC clearance." The ATC then specified the route that the aircraft was to follow after takeoff. Although the ATC used the word "takeoff," their communication did not include an explicit statement that KLM was cleared for takeoff. Meurs began reading the flight clearance back to the controller, but van Zanten interrupted with an imperative: "We're going."

Given the captain's authority, it was in this moment that Meurs apparently did not feel safe enough to speak up. Meurs, in that split second, did *not* open his mouth to say, "wait for clearance!"

Meanwhile, after the KLM plane had started its takeoff roll, the tower instructed the Pan Am crew to "report when runway clear." To which the Pan Am crew replied, "OK, will report when we're clear." On hearing this, Flight Engineer Schreuder expressed his concern that Pan Am was not clear of the runway by asking, "is he not clear, that Pan American?"

Van Zanten emphatically replied, "oh, yes," and continued with the takeoff.

And in this moment Schreuder did not say a thing. Although he had correctly surmised that the Pan Am jet might be blocking their way, Schreuder did not challenge Van Zanten's confident retort. He did not ask ATC to clarify or confirm by asking, for example, "is Pan American on the runway?" His reticence indicates a lack of the psychological safety that would make such a query all but second nature.

By then it was too late. The KLM Boeing was going too fast to stop when van Zanten, Meurs, and Schreuder finally could see the Pan Am jet blocking their way. The KLM's left-side engines, lower fuselage, and main landing gear struck the upper right side of the Pan Am's fuselage, ripping apart the center. The KLM plane remained briefly airborne before going into a stall, rolling sharply, hitting the ground, and igniting into a fireball.

Such is the inexorably psychological pull of hierarchy that even when their own lives were at risk, not to mention the lives of others, the first officer and the flight engineer did not push back on their captain's authority. In those moments where speaking up might make sense, we all go through an implicit decision-making process, weighing the benefits and costs of speaking up. The problem, as explained in Chapter 2, is that the benefits are often unclear and delayed (e.g. avoiding a possible collision) while the costs are tangible and immediate (van Zanten's irritation and potential anger). As a result, we consistently underweight the benefits and overweight the costs. In the case of Tenerife, this biased process led to disastrous outcomes.

Many who analyze events leading up to tragic accidents such as this one-which could have been avoided had the junior officer spoken up-cannot help pointing out that people should demonstrate a bit more backbone. Courage. It is impossible to disagree with this assertion. Nonetheless, agreeing doesn't make it effective. Exhorting people to speak up because it's the right thing to do relies on an ethical argument but is not a strategy for ensuring good outcomes. Insisting on acts of courage puts the onus on individuals without creating the conditions where the expectation is likely to be met.

For speaking up to become routine, psychological safety – and expectations about speaking up – must become institutionalized and systematized. After Tenerife, cockpit training was changed to place more emphasis on crew decision-making, encourage pilots to assert their opinion when they believed something was wrong, and help captains listen to concerns from co-pilots and crews.[9] These measures were a precursor to the official crew resource management (CRM) training that all pilots must now undergo.

Excessive Confidence in Authority

Medicine, like commercial aviation, is another profession where authority is well understood and tightly linked to one's place in a strict hierarchy. A direct line of command, where everyone knows his or her place, has its benefits. However, deference to others, especially in the face of ambiguity, can become the default mode of operation, leading everyone to believe that the person-on-top always knows best. In some cases, an implicit belief that the person with the highest place on the hierarchy must also be the authority can lead to fatal consequences. In other cases, an implicit belief in the authority of the medical system itself can be fatal.

On December 3, 1994, Betsy Lehman, a 39-year-old mother of two and a healthcare columnist at *The Boston Globe*, died at the Dana-Farber Cancer Institute while undergoing a third round of high-dose chemotherapy for breast cancer.[10] In part because of her profession as a journalist, Lehman's death was well publicized in the media, especially once it was linked to a medical error.[11]

The Dana-Farber Cancer Institute where Lehman sought treatment was renowned for its cancer research and its success in treating complex and difficult cases. With only 57 inpatient beds, its patient care was a kind of boutique unit that enabled informal information sharing among physicians, nurses, and pharmacy staff rather than the formal communications mechanisms that exist in a traditional hospital setting. As Senior Oncologist Stephen Sallan noted, "our confidence was based on the assumption that if we were all wonderful then our pharmacy safety would be wonderful."[12] Unfortunately, this assumption did not leave much room for questioning or routine checking. The absence of a Director of Nursing at the time of Lehman's admittance, a post that had been vacant for over a year, also signals that the medical and clinical teams did not adequately appreciate the interdependence and complexity of their work.

Lehman was admitted to the Dana-Farber for the planned chemotherapy on November 14, 1994. Although the chemotherapy agent was the commonly used cyclophosphamide, the dose

was especially high because Lehman's treatment plan involved a cutting-edge stem-cell transplant. The protocol called for the chemotherapy to be infused over four days, with the amount given during each 24-hour period to be "barely shy of lethal."[13] As part of the clinical trial, Lehman was also given another drug, cimetidine, which was supposed to boost the effect of the first drug.[14]

In routine cancer treatments, courses of chemotherapy doses are typically standardized; however, in a research trial such as Lehman was undergoing, upper limits could be ambiguous. At Dana-Farber, where 30% of patients might be enrolled in a clinical trial at any one time, staff members who administered chemotherapy were accustomed to seeing unusual drug combinations and dosages.[15] That may partly explain why no alarm bells went off even though the prescription – written by a clinical research fellow in oncology, copied into Lehman's records by a nurse, and filled by three different pharmacists – had mistakenly ordered the entire four-day dosage for each day, providing Lehman with four times the dosage she was supposed to receive.

The treatment was expected to produce severe nausea and vomiting. However, over the next three weeks in the hospital, Lehman's symptoms were extraordinary. She had not been as sick during the first two high-dose treatments. Now she was "grossly swollen" and had abnormal blood and EKG tests.[16] High-dose cyclophosphamide was known to be toxic to the heart. Lehman's husband reported that she was "vomiting sheets of tissue. [The doctors] said this was the worst they had ever seen. But the doctors said this was all normal with bone marrow transplant."[17] At one point, Lehman asked a nurse, "Am I going to die from vomiting?"[18] Meanwhile, another patient, admitted shortly before Lehman, given the same incorrect chemotherapy dose, had suddenly collapsed and was rushed to the intensive care unit.

The day before Lehman's discharge, her symptoms seemed to be abating. And there were signs that the experimental stem cell transplant was proceeding successfully. An EKG, however, was abnormal. On December 3, the day of her discharge and the day she died of

heart failure, the last people she spoke to – a friend, a social worker, and a nurse – confirmed that she was very upset, frightened, and felt that something "was wrong."[19] We do not know whether or not she had voiced this concern as distinctly or coherently in the previous weeks. Surely, she must have wondered. Of course, an extremely ill patient is usually not in a position to assertively question her treatment plan, especially one that is experimental.

The medical error was not discovered until three months later – by a routine data check rather than by a clinical inquiry. As part of its corrective actions, Dana-Farber instituted automated medication checks into its chemotherapy procedures. Ultimately, Lehman's death became a catalyst for hospital and healthcare institutions in the US to craft policy to help reduce medical errors, including more systemic checking of routine procedures throughout a patient's treatment process and more reporting provisions for caregivers, regardless of their professional status.

From the perspective of psychological safety, however, the bigger question that remains is why, given Lehman's extreme physical distress, did no one deeply and persistently question whether something had gone profoundly wrong? Did Lehman and her husband place too much trust in the highly regarded medical institution? Similarly, why did pharmacists not question the extraordinary fourfold dosage of the already high-dose chemotherapy agent? The same can be asked about the nurses. Perhaps their implicit trust in the expertise of the physician-researchers left them incurious. Or, they may have been reluctant to speak up to inquire into rationale for the treatment plan only to be put down by their higher-status colleagues. We don't know whether the nurses and physicians who observed Lehman's symptoms assigned too little significance to the type of side effects the high-dose chemotherapy was supposed to induce. No one involved seemed to accurately assess the gravity of her condition. Ultimately, Betsy Lehman's mother, Mildred K. Lehman, was the one who concisely summed up the problem: "Betsy's life might have been saved if staff had stepped forward to attend to the multiple signs that her treatment was far off course."[20]

What is important to take away from this story, and what most hospitals today work hard to avoid, is that a climate in which people err on the side of silence – implicitly favoring self-protection and embarrassment avoidance over the possibility that one's input may be desperately needed in that moment – is a serious risk factor. It is clearly far better for people to ask questions or raise concerns and be wrong than it is for them to hold back, but most people don't consciously recognize that fact. Raising concerns that turn out to be unfounded presents a learning opportunity for the person speaking up and for those listening who thereby glean crucial information about what others understand or don't understand about the situation or the task.

A Culture of Silence

Cassandra, one of the most tragic characters in classical Greek mythology, was given the gift of prophecy along with the curse that she would never be believed. Low levels of psychological safety can create a culture of silence. They can also create a Cassandra culture – an environment in which speaking up is belittled and warnings go unheeded. Especially when speaking up entails drawing attention to unpleasant outcomes, as was the case for Cassandra in her prediction of war, it's easy for others not to listen or believe. A culture of silence is thus not only one that inhibits speaking up but one in which people fail to listen thoughtfully to those who do speak up – especially when they are bringing unpleasant news.

Consider the *Challenger* shuttle explosion back in 1986. Unlike Rodney Rocha's silence in a crucial workplace moment, Roger Boisjoly, an engineer at NASA contractor Morton-Thiokol, did speak up. The night before the disastrous launch, Boisjoly raised his concern that unusually cold temperatures might cause the O-rings that connected segments of the shuttle to malfunction. His data were incomplete and his argument vague, but the assembled group could have readily resolved the ambiguity with some simple analyses and

experiments had they listened intensely and respectfully. In short, for voice to be effective requires a culture of listening.

Let's take a look at a more recent example of what can happen when the listening culture is weak.

Dismissing Warnings

On March 11, 2011, a 9.0 magnitude earthquake occurred off the northeastern coast of Japan. The quake, later dubbed the "Great East Japanese Earthquake," created tsunami waves up to 45 feet high that struck the Fukushima Daiichi Nuclear Power Plant.[21] Waves of mythic proportions leapt easily over the plant's undersized sea walls, flooding the site and completely destroying emergency generators, seawater cooling pumps, and the electric wiring system. Without power to cool down the nuclear reactors, three of the reactors overheated, resulting in multiple explosions that injured workers on the ground. Most alarmingly, nuclear fuel was released into the ocean, and radionuclides were released from the plant into the atmosphere. As a result of the nuclear meltdown, hundreds of thousands of Japanese were forced to flee their homes to avoid radiation exposure. Most will be unlikely to ever return home, as it's estimated the cleanup will take between 30 and 40 years.[22]

Although the earthquake itself, the most powerful ever recorded in Japan's history, wreaked unpreventable catastrophic damage that killed an estimated 15,000 people,[23] it's now universally accepted that the corollary disaster at the nuclear power plant was in fact preventable. By the summer of 2012, an independent investigation, released after having conducted 900 hours of hearings, interviews with over a thousand people, 9 plant tours, 19 committee meetings, and 3 town halls, concluded that "the accident was clearly man-made" and the "direct causes of the accident were all foreseeable."[24] Examining the evidence, it becomes clear that in the years leading up to the disaster at the Daiichi Nuclear Power Plant, more than one Cassandra-like figure spoke up more than once to warn of such

an accident. Recommendations were made for reasonable safety measures that would likely have prevented or mitigated the plant's destruction. But each time, the warnings were dismissed or not believed. The question is, why?

In 2006, Katsuhiko Ishibashi, a professor at the Research Center for Urban Safety and Security at Kobe University, was appointed to a Japanese subcommittee tasked with revising the national guidelines on the earthquake-resistance of the country's nuclear power plants. Ishibashi proposed that the group review the standards for surveying active fault lines and criticized the government's record of allowing the construction of power plants, like Fukushima Daiichi, in areas with the potential for such high seismic activity. But the rest of the committee, the majority of which consisted of advisors with ties to the power companies, rejected his proposal and downplayed his concerns.[25]

The following year, Ishibashi spoke up again, publishing a prescient article titled *Why Worry? Japan's Nuclear Plants at Grave Risk from Quake Damage,* with the claim that Japan had been lulled into a false sense of confidence after many years of relatively quiet seismic activity. An expert on seismicity and plate tectonics in and around the Japanese islands, he believed that tectonic plates followed regular schedules and that the area in question was overdue for an earthquake. His warning was explicit: "unless radical steps are taken now to reduce the vulnerability of nuclear power plants to earthquakes, Japan could experience a true nuclear catastrophe in the near future," including one caused by tsunamis.[26] Unfortunately, others dismissed Ishibashi's warnings. For instance, Haruki Madarame, a nuclear regulator and chairman of Japan's Nuclear Safety Commission during the Fukushima disaster, told the Japanese legislature not to worry, as Ishibashi was a "nobody."[27]

If Madarame was harsh in his condemnation of Ishibashi as a "nobody," it's true that, as an academic rather than an industry or government official, he was an outsider. He was, perhaps, not as tightly bound to the dominant post–World War II push for Japan to become independent from its historical dependence on energy imports. Since

the mid-fifties, the island, which has few fossil fuels in the ground, had invested heavily in nuclear energy to diversify its energy supply from oil and achieve greater energy security.[28] For the next 40 years, following the 1970s "oil shocks," and despite the highly publicized 1979 Three Mile Island and 1986 Chernobyl accidents, Japan had worked doggedly and ferociously to develop its own domestic nuclear power production capacity.[29] For instance, the government had provided subsidies and other incentives for rural towns to build plants. It even conducted public relations campaigns to convince citizens that nuclear power was safe.[30] Even so, public opinion surrounding nuclear power remained mixed to negative, with several anti-nuclear demonstrations and the abandonment of several plans to build more plants.[31] Given this political context, Ishibashi's safety concerns may have been perceived as unpatriotic or meddlesome.

A 2000 in-house study by Tokyo Electric Power Company (TEPCO), the country's biggest electric company and the owner of the Fukushima Daiichi plant, did acknowledge the possibility that Japan could experience a tsunami of as high as 50 feet. In fact, the report recommended that measures be taken to provide better protection from the risks of flooding. However, nothing was ever done because TEPCO thought the risk of such a low probability event was unrealistic.[32] Japanese regulators like the Nuclear and Industrial Safety Agency (NISA) also may have hesitated from policing the utilities because, by then, nuclear energy had become even more of a strategic priority for Japan, and increased nuclear power generation was required to reach the greenhouse gas emission goals laid out by the Kyoto protocol. A dozen new plants were slated to be built by 2011.[33] Prior to the Fukushima disaster, Japan was generating 30% of its electricity via nuclear reactors, and the government planned to increase that percentage to 40% in the years to come.[34]

Although safety issues were ostensibly part of the nuclear power expansion plans, retrospective investigations demonstrate that the government and industry culture had not given due credence or consideration to the gravity of existing threats. For example, in a

June 2009 meeting held by NISA specifically to discuss the readiness of Fukushima Daiichi to withstand a natural disaster, tsunamis were not even on the agenda. The agency simply did not see them as likely enough in the Fukushima region to warrant consideration. In creating safety guidelines for Fukushima, the panel thus used data from the biggest earthquake on record in the area, a 1938 earthquake that measured only 7.9 in magnitude and caused only a small tsunami. Because the reactors at Fukushima Daiichi were located near the sea, TEPCO constructed a seawall – one just tall enough to stop a tsunami similar to the one in 1938 from hitting it. The panel assumed that the wall was tall enough to stop any future tsunami and thus focused mainly on preparing the plant for earthquakes.

Another Cassandra-like figure spoke up at that June meeting. Dr. Yukinobi Okamura, the director of Japan's Active Fault and Earthquake Research Center, told the panel he disagreed with TEPCO's decision.[35] He did not think the 1938 quake was big enough to serve as the basis for the Daiichi guidelines and instead brought up a much earlier example, the Jogan tsunami, which occurred in AD 869 after a massive earthquake. TEPCO representatives, wishing to discredit Okamura, minimize his concern, or both, claimed the Jogan earthquake "did not cause much damage." Okamura insisted otherwise. The Jogan tsunami had destroyed castles and killed at least a thousand people. Historical writings compared the tsunami's fury to waves that "raged like nightmares and immediately reached the city center." Okamura told the panel that he was worried that a tsunami like Jogan could overwhelm the Fukushima region and was confused that the panel was not using all of the available data.

Instead of listening and taking Okamura's concerns seriously, as might occur in a culture where psychological safety was high, a TEPCO executive countered that it didn't make sense to base the safety recommendations on a legendary earthquake that wasn't measured by contemporary tools and techniques. Besides, this meeting was to discuss the risks from earthquakes, rather than tsunamis. The meeting moved on, with TEPCO executives saying they would try to learn more. The next meeting, Okamura again tried to convince

the panel of the severity of the threat. He described the predictive models his institute had created to show that the current seawall would not be high enough for anything above an 8.4 magnitude earthquake, and the detailed surveys they'd performed on the sand left behind by the Jogan tsunami. In the end, however, the panel did not listen.

Going Along to Get Along

A culture of silence can thus be understood as a culture in which the prevailing winds favor going along rather than offering one's concerns. It is based on the assumption that most people's voices do not offer value and thus will not be valued. Perhaps the most cogent indictment of how a culture of silence perpetuated a set of attitudes that enabled the Daiichi plant disaster was articulated by Kiyoshi Kurokawa, the Chairman of the NAIIC, who wrote at the beginning of the English version of the report that

> For all the extensive detail it provides, what this report cannot fully convey – especially to a global audience – is the mindset that supported the negligence behind this disaster. What must be admitted – very painfully – is that this was a disaster "Made in Japan." Its fundamental causes are to be found in the ingrained conventions of Japanese culture: our reflexive obedience; our reluctance to question authority; our devotion to "sticking with the program"; our groupism; and our insularity.[36]

Japanese culture does not have a monopoly on any of the ingrained conventions that Kurokawa lists. Each one is endemic of a culture with low levels of psychological safety where the internal reluctance to speak up or push back combines with a very strong desire to look good to the outside world. Concern with reputation can silence employees' voices internally as well as externally. Resistance to warnings about the safety about the Fukushima Daiichi plant – and what it would take to install better safety measures – were bound up in national aspirations for nuclear energy.

Similar to what we learned about the FRBNY in Chapter 3, where another powerful set of institutional bodies tacitly colluded to silence the few who dared to speak up, push back, or disagree, Japan's nuclear power industry suffered regulatory capture. According to Kurokawa, Japan's long-held policy goal to achieve national energy security via nuclear energy became "such a powerful mandate, [that] nuclear power became an unstoppable force, immune to scrutiny by civil society. Its regulation was entrusted to the same government bureaucracy responsible for its promotion."[37] This blinding need and ambition helped create a culture where "it became accepted practice to resist regulatory pressure and cover up small-scale accidents . . . that led to the disaster at the Fukushima Daiichi Nuclear Plant."[38]

In 2013, a Stanford study concluded that a mere $50 million could have financed a wall high enough to prevent the disaster.[39] Yet, the case shows how very challenging it can be to be heard – to have voice welcomed, explored, and sometimes acted upon – when the dominant culture does not want to hear the message.

Silence in the Noisy Age of Social Media

On October 15, 2017, actress Alyssa Milano tapped fewer than 140 characters into her personal device: "If you've been sexually harassed or assaulted write 'me too' as a reply to this tweet." Within 24 hours, the hashtag #MeToo had been tweeted nearly half a million times.[40] Although the MeToo movement had been created 10 years earlier by Tarana Burke,[41] Milano's tweet, posted in the context of a slew of recent and highly publicized sexual harassment accusations leveled against celebrities, ignited a social media activism campaign. The goal: the simple act of speaking up. Women and men from all walks of life who had suffered myriad types of unwanted sexual attention, often egregious and persistent, the majority afraid to tell even their closest relations, were emboldened to tweet, post, and message about their experiences in what became a public forum.

Milano's tweet was hardly the first act of speaking up. Nine months earlier, on February 19, 2017, the social media landscape was emblazoned by a 3000-word blog post written by a young software engineer.[42] Susan Fowler, who had recently left her job as a site-reliability engineer at the ride-sharing company Uber, was exercising her right to candor on her personal website. The specificity and honesty with which she described her experience, which she called "a strange, fascinating, and slightly horrifying story," reveals much about how mechanisms of power and silence can perpetuate a psychologically unsafe culture. Fowler's voice, echoed by some of her colleagues, amplified by social media, and made louder still by mainstream press, tells us how an unsafe culture can ultimately become unsustainable.

On her first day at the company, Fowler's manager sent her a series of inappropriate messages over the company's chat system. The manager told her "he was looking for women to have sex with." Fowler said, "It was clear that he was trying to get me to have sex with him . . . " She took screenshots of the messages and reported the manager to HR. But things didn't go as she expected. Both HR and upper management informed Fowler that it was "this man's first offense, and that they wouldn't feel comfortable giving him anything other than a warning and a stern talking-to" because he "was a high performer." Fowler was given the choice of either finding another team to work on or remaining on her present team with the understanding that her manager would "most likely give [her] a poor performance review when review time came around, and there was nothing they could do about that." Fowler tried to protest this "choice," but got nowhere, and ultimately ended up switching teams.

Over the next few months, Fowler met other women engineers who had similar experiences of sexual harassment at Uber. They had also reported these to HR and gotten nowhere. Some of the women even reported having similar interactions with the same manager as Fowler. All were told it was his first offense. In each case, nothing was done. Fowler and her colleagues, feeling unheard, fell silent – for a while.

Ironically, as reported in her blog post, Fowler had been initially excited about joining Uber back in November 2015, citing that she had "the rare opportunity to choose whichever team was working on something that I wanted to be part of."

Promoted and Protected

Uber Technologies, Inc., founded in 2009 by serial entrepreneurs and friends Garrett Camp and Travis Kalanick, had launched in San Francisco in 2011 with funding from prominent Silicon Valley venture capital firms.[43] As Uber grew, so did its reputation as an aggressive, fast-moving, in-your-face company, not inconsistent with its overt intention to disrupt the long-established taxicab industry, replacing it with a ride-sharing economy.[44] Top employees were "promoted and protected" – as long as they could hit or exceed their numbers, they were rewarded.[45] After Fowler's post broke, current and former employees came forward to describe Uber's culture as "unrestrained," a "Hobbesian environment . . . in which workers are sometimes pitted against one another and where a blind eye is turned to infractions from top performers."[46] Fowler's manager had merely been a case in point.

Fowler, like other new Uber hires, had been advised of the company's core values.[47] Several of those values were likely to have contributed to a psychologically unsafe environment. For example, "super-pumpedness," especially central to the company, involved a can-do attitude and doing whatever it took to move the company forward. This often meant working long hours, not in itself a hallmark of a psychologically unsafe environment; Fowler seems to have relished the intellectual challenges and makes a point to say that she is "proud" of the engineering work she and her team did. But super-pumpedness, with its allusions to the sports arena and male hormones, seems to have been a harbinger of the bad times to come.

Another core value was to "make bold bets," which was interpreted as asking for forgiveness rather than permission. In other words, it was better to cross a line, be found out wrong, and ask for forgiveness than it was to ask permission to transgress in the first place. Another value, "meritocracy and toe-stepping," meant that employees were incented to work autonomously, rather than in teams, and cause pain to others to get things done and move forward, even if it meant damaging some relationships along the way.[48]

You may ask, so what? The same company that silenced, hurt, and eventually lost hardworking and talented engineers such as Susan Fowler was still tremendously successful in getting millions of people to speak with a new vocabulary word – "to uber." The company's growth was exponential and as of early 2018 is valued at north of $70 billion.[49] Maybe a bit of super-pumpedness and a little toe-stepping is just what it takes today to get ahead?

One problem is that social media enables a new kind of speaking up that makes it that much harder for companies to actively and shamelessly advocate for a psychologically unsafe culture. Fowler's exposé sent reporters running to investigate. *The New York Times* interviewed over 30 current and former Uber employees and reported on numerous incidents of harassment, some as egregious as an Uber manager who "groped female co-workers' breasts at a company retreat in Las Vegas" and "a director [who] shouted a homophobic slur at a subordinate during a heated confrontation in a meeting."[50] According to Fowler, when she joined Uber, the engineering site reliability organization was over 25% women, but before she left it had dropped to 6%. In the aftermath and reckoning that followed Fowler's blog, multiple lawsuits ensued, massive numbers of employees at all levels were either fired or left of their own accord, and the company's valuation and reputation fell far and fast.[51] A second problem is that people suffer unnecessary harm.

On June 21, 2017, Travis Kalanick stepped down as Uber's CEO after five of its major shareholders demanded his resignation.[52]

Although Fowler petitioned the United States Supreme Court to consider her experience at Uber in its decision on whether employees can forfeit rights to collective litigation in their employment contracts, the proposal was later voted down.[53] That year, she was featured on the cover of *TIME Magazine* as one of its "Person(s) of the Year" as one of five "Silence Breakers" who spoke out about sexual harassment in 2017.[54] She was also named *The Financial Times* "Person of the Year 2017,"[55] one of Vanity Fair's "New Establishments,"[56] and No. 2 on Recode's Top 100, behind only Jeff Bezos.[57]

Susan Fowler at Uber is just one example of how social media has enabled the speaking of truth to power in the workplace. In 2017, thousands of women spoke up to say, "Me Too," to workplace harassment, and hundreds of men in high-profile positions suffered the consequences of behavior that had, in many cases, worked for awhile – decades, or even entire careers. Communication technology gave social media movements such as MeToo and Black Lives Matter the power to ignite and move with rapidity into mainstream media, public opinion, and in some cases, into the legal courts. Such movements raise the sense of urgency to create and maintain organizations where psychological safety supports people to do their best work.

When Uber's new CEO, Dara Khosrowshahi, first came on board in August 2017, one of his priorities was to meet with women engineers. Alert to the damage done to the company's culture, he began by laying the groundwork for a psychologically safe workplace. As Jessica Bryndza, Uber's Global Director of People Experience, commented, "He [Khosrowshahi] didn't come in guns blazing. He came in listening."[58]

The operative word here is "listening." In the Chapters 5 and 6, you will read about eight flourishing organizations where leaders have created the conditions to make listening and speaking up the norm, not the exception. In these fearless workplaces, it's far less likely that employees will refrain from sharing valuable information, insights, or questions and far more likely that leaders will listen to rather than dismiss bad news or early warnings.

Chapter 4 Takeaways

- When people fail to speak up with their concerns or questions, the physical safety of customers or employees is at risk, sometimes leading to tragic loss of life.
- Excessive confidence in authority is a risk factor in psychological and physical safety.
- A culture of silence is a dangerous culture.

Endnotes

1. Harris. S.J. "Syd Cannot Stand Christmas Neckties." *The Akron Beacon Journal*. January 5, 1951, pp. 6. https://www.newspapers.com/newspage/147433987/ Accessed July 23, 2018
2. Roberto, M.A, Edmondson, A.C., &. Bohmer, R.J., *Columbia's* Final Mission. Case Study. HBS No. 304-090. Boston, MA: Harvard Business School Publishing, 2004.
3. Whitcraft, D., Katz, D., & Day, T. (Producers). "Columbia: Final Mission," *ABC Primetime*. New York: ABC News, 2003.
4. National Aeronautics and Space Administration. *Columbia Accident Investigation Board: Report Volume 1*. Washington, D.C.: U.S. Government Printing Office, 2003.
5. Whitcraft, D. *et al*. 2003, op cit.
6. The story of the disaster on Tenerife in this chapter draws on a number of sources produced by Jan Hagen and his colleagues, including:
   - Schafer, U., Hagen, J., & Burger, C. Mr. KLM (A): Jacob Veldhuyzen. Case Study. ESMT No. 411-0117. Berlin, Germany: European School of Management and Technology, 2011.
   - Schafer, U., Hagen, J., & Burger, C. Mr. KLM (B): Captain van Zanten. Case Study. ESMT No. 411-0118. Berlin, Germany: European School of Management and Technology, 2011.
   - Schafer, U., Hagen, J., & Burger, C. Mr. KLM (C): Jaap. Case Study. ESMT No. 411-0119. Berlin, Germany: European School of Management and Technology, 2011.
   - Hagen, J.U. *Confronting Mistakes: Lessons From The Aviation Industry When Dealing with Error*. United Kingdom: Palgrave Macmillan UK, 2013. Print.

7. Royal Dutch Airlines is Koninklijke Luchtvaart Maatschappij in Dutch, abbreviated as KLM.
8. The dialogue reported in this story was captured by the cockpit voice recorders of both planes involved in the collision and reported in Appendix 6 of the following investigation report: Air Line Pilots Association. *Aircraft accident report: Human factors report on the Tenerife accident, Tenerife, Canary Islands, March 27, 1977*. Washington D.C.: Engineering and Air Safety, 1977.
9. For history and background on CRM, refer to Alan Diehl's book on air safety: Diehl, A.E. *Air Safety Investigators: Using Science to Save Lives – One Crash at a Time*. United States: XLIBRIS, 2013. Print.
10. The story of Betsy Lehman's death at the Dana-Farber Cancer Institute in this chapter draws on information from a case study by my colleague Richard Bohmer: Bohmer, R. & Winslow, A. The Dana-Farber Cancer Institute. Case Study. HBS Case No. 699-025. Boston, MA: Harvard Business School Publishing, 1999.
11. *The Boston Globe* broke the Lehman story and continued to follow it closely in the months and years that followed. Richard Knox, who was later sued for his coverage of the incident, wrote the first article about the error: Knox, R.A. "Doctor's Orders Killed Cancer Patient." *The Boston Globe*, March 23, 1995.
12. Bohmer, R. & Winslow, A. 1999: 8.
13. Gorman, C. & Mondi, L. "The disturbing case of the cure that killed the patient." *TIME Magazine*. April 3, 1995: 60. http://content.time.com/time/magazine/article/0,9171,982768,00.html Accessed June 14, 2018.
14. Bohmer, R. & Winslow, A. 1999, op cit.
15. *Ibid*.
16. Knox, March 23, 1995, op cit.
17. *Ibid*.
18. *Ibid*.
19. *Ibid*.
20. Knox, R.A. "Dana-Farber puts focus on mistakes in overdoses." *The Boston Globe*. October 31, 1995. https://www.highbeam.com/doc/1P2-8310418.html Accessed June 12, 2018.
21. Details on the disaster at Fukushima Daiichi come from multiple reports:
    - Fukushima Nuclear Accident Independent Investigation Commission (NAIIC). "Official Report of the Fukushima Nuclear Accident

Independent Investigation Commission: Executive Summary." *National Diet of Japan*. 2012. https://www.nirs.org/wp-content/uploads/fukushima/naiic_report.pdf Accessed June 12, 2018.

- Amano, Y. "The Fukushima Daiichi Accident: Report by the Director General." *International Atomic Energy Agency Report*. 2015. https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1710-ReportByTheDG-Web.pdf Accessed June 12, 2018.

22. Amano, Y. 2015, op cit.
23. *Ibid*.
24. Fukushima NAIIC. 2012: 16.
25. Clenfield, J. & Sato, S. "Japan Nuclear Energy Drive Compromised by Conflicts of Interest." *Bloomberg*. December 12, 2007. http://www.bloomberg.com/apps/news?pid=newsarchive&sid=awR8KsLlAcSo Accessed June 12, 2018.
26. Ishibashi, K. "Why Worry? Japan's Nuclear Plants at Grave Risk From Quake Damage." *The Asia-Pacific Journal*. August 1, 2007. https://apjjf.org/-Ishibashi-Katsuhiko/2495/article.html Accessed June 12, 2018.
27. Clenfield, J. "Nuclear Regulator Dismissed Seismologist on Japan Quake Threat." *Bloomberg.com*. November 21, 2011. https://www.bloomberg.com/news/articles/2011-11-21/nuclear-regulator-dismissed-seismologist-on-japan-quake-threat Accessed June 12, 2018.
28. World Nuclear Association. "Nuclear Power in Japan." *World-Nuclear.org* www.world-nuclear.org/information-library/country-profiles/countries-g-n/japan-nuclear-power.aspx. Accessed June 4, 2018.
29. *Ibid*.
30. Aldrich, D.P. "With a Mighty Hand." *The New Republic*. March 19, 2011. https://newrepublic.com/article/85463/japan-nuclear-power-regulation Accessed June 11, 2018.
31. See, for instance: BBC News. "Japan cancels nuclear power plant." *BBC News*. February 22, 2000. http://news.bbc.co.uk/2/hi/asia-pacific/652169.stm Accessed June 10, 2018.
32. Tokyo Electric Power Company. "Fukushima Nuclear Accident Summary & Nuclear Safety Reform Plan" *Tokyo Electric Power Company, Inc*. March 29, 2013: 19. As the company wrote in this report after the Fukushima disaster: "in June and July of [2000], the cost of constructing flooding embankment to protect against tsunami and the impact on surrounding areas were evaluated. The reliability

of the computational result was also discussed." But they ultimately concluded that the "technological validity" of such a model could not be verified, and did nothing more.

33. World Nuclear Association. "Nuclear Power in Japan," op cit.
34. *Ibid*.
35. All information from the Okamura story is from Clarke, R. & Eddy, R.P. *Warnings: Finding Cassandras to Stop Catastrophes*. HarperCollins Publishing, 2017, Chapter 5, pp. 75-98.
36. Fukushima NAIIC. 2012: 9
37. *Ibid*.
38. *Ibid*.
39. Lipscy, P.Y., Kushida, K.E., & Incerti, T. "The Fukushima Disaster and Japan's Nuclear Plant Vulnerability in Comparative Perspective." *American Chemical Society: Environmental Science & Technology*, (2013): 47, 6082–6088.
40. Gilbert, S. "The Movement of #MeToo: How a Hashtag Got Its Power." *The Atlantic*. October 16, 2017. https://www.theatlantic.com/entertainment/archive/2017/10/the-movement-of-metoo/542979/ Accessed June 14, 2018.
41. Garcia, S.E. "The Woman Who Created #MeToo Long Before Hashtags." *The New York Times*. October 20, 2017. https://www.nytimes.com/2017/10/20/us/me-too-movement-tarana-burke.html Accessed June 13, 2018.
42. Fowler, S. "Reflecting on One Very, Very Strange Year at Uber." Susan Fowler personal site. February 19, 2017. https://www.susanjfowler.com/blog/2017/2/19/reflecting-on-one-very-strange-year-at-uber Accessed June 5, 2018
43. Several details on Uber were taken from a case written by my friend Jay Lorsch and colleagues: Srinivasan, S., Lorsch, J.W., & Pitcher, Q. Uber in 2017: One Bumpy Ride. Case Study. HBS No. 117-070. Boston, MA: Harvard Business School Publishing, 2017.
44. Isaac, M. "Inside Uber's Aggressive, Unrestrained Workplace Culture." *The New York Times*. February 22, 2017. https://www.nytimes.com/2017/02/22/technology/uber-workplace-culture.html Accessed June 13, 2018.
45. Isaac, M. "Uber's C.E.O. Plays With Fire." *The New York Times*. April 23, 2017. https://www.nytimes.com/2017/04/23/technology/travis-kalanick-pushes-uber-and-himself-to-the-precipice.html Accessed June 13, 2018.
46. Isaac, M. February 22, 2017, op cit.

47. Quora. "What Are Uber's 14 Cultural Values?" *Quora*, https://www.quora.com/What-are-Ubers-14-core-cultural-values
48. *Ibid*.
49. Schleifer, T. "Uber's latest valuation: $72 billion." *Recode*. February 9, 2018. https://www.recode.net/2018/2/9/16996834/uber-latest-valuation-72-billion-waymo-lawsuit-settlement Accessed June 13, 2018.
50. Isaac, M. February 22, 2017, op cit.
51. Srinivasan, S., Lorsch, J.W., & Pitcher, Q. Uber in 2017: One Bumpy Ride. Case Study. HBS No. 117-070. Boston, MA: Harvard Business School Publishing, 2017.
52. Isaac, M. "Uber Founder Travis Kalanick Resigns as C.E.O." *The New York Times*. June 21, 2017. https://www.nytimes.com/2017/06/21/technology/uber-ceo-travis-kalanick.html Accessed June 13, 2018.
53. Blumberg, P. "Ex-Uber Engineer Asks Supreme Court to Learn From Her Ordeal." *Bloomberg.Com*. August 24, 2017; Hurley, L. "Companies win big at U.S. top court on worker class-action curbs." *Reuters*. May 21, 2018.
54. Kim, L. "Two Bay Area Women on Time Cover for 'Person of the Year.'" *ABC7 San Francisco*. December 7, 2017.
55. Hook, L. "FT Person of the Year: Susan Fowler." *Financial Times*. December 12, 2017.
56. Morse, B. "Elon Musk, Susan Fowler, and Mark Zuckerberg Join Tech's Biggest Names in 'New Establishment' List." *Inc.com*. October 2, 2017. https://www.inc.com/brittany-morse/elon-musk-susan-fowler-and-markzerberg-join-big-tech-names-in-new-establishment-list.html Accessed June 8, 2018.
57. Bhuiyan, J. "With Just Her Words, Susan Fowler Brought Uber to Its Knees." *Recode*, December 6, 2017. https://www.recode.net/2017/12/6/16680602/susan-fowler-uber-engineer-recode-100-diversity-sexual-harassment Accessed June 12, 2018.
58. Kerr, D. "Uber's U-Turn: How the New CEO Is Cleaning House after Scandals and Lawsuits." *C-NET*. April 27, 2018. https://www.cnet.com/news/ubers-u-turn-how-ceo-dara-khosrowshahi-is-cleaning-up-after-scandals-and-lawsuits/ Accessed June 14, 2018.