RISK

A USER'S GUIDE

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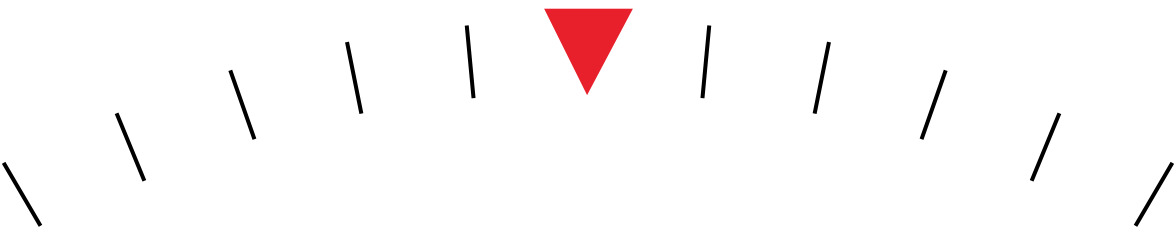


Contents

| *Part Three* |

STRENGTHENING THE SYSTEM

CHAPTER TWO

Damocles and Me

I wish to have no connection with any ship that does not sail fast; for I intend to go in harm's way.

—CAPTAIN JOHN PAUL JONES, "FATHER OF THE US NAVY"

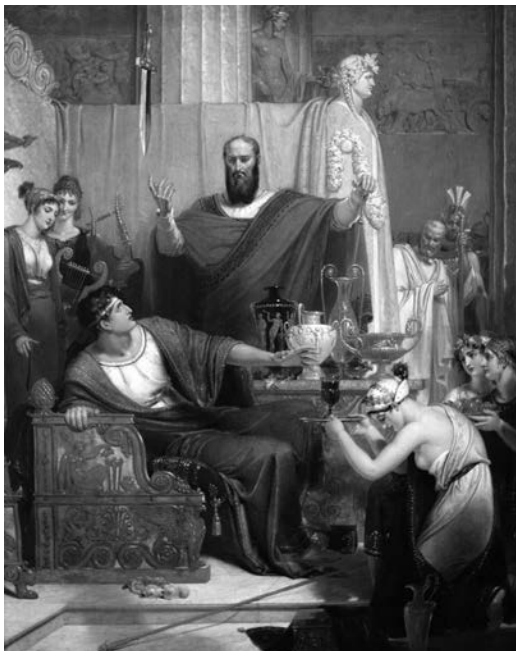
In reality, risk is neither mathematical nor finite. Its impact depends to a great extent on how we perceive, process, and respond.

The Blade Above

The heavy sword hung from the palace ceiling by a single horsehair, its sharpened blade pointed downward as if an invisible hand executing a lethal thrust from above had been suddenly stopped. Directly below, in sharp contrast to the image of imminent violence, a man sat on a regal bed of gold, surrounded by delicacies of food and drink while servants attended to his desires.

The sword belonged to Dionysius II, the king of Syracuse, and it loomed over Damocles, a subject of the monarch who was receiving an unsubtle lesson in the perils of power, simultaneously enjoying its benefits while being made acutely aware of its mortal dangers.

I remember the story from my youth. The aging volume my mother gave me showed Damocles staring upward at the sword, his entire body tensed in apprehension, the onlookers exhibiting both horror at his predicament and relief in not sharing it. I don't remember giving much thought to the likelihood that the tiny strand of horsehair would give way, letting the sword plunge into Damocles, or whether the weight of the



Though thrilled to be seated on the throne, Damocles is terrified by the sword hanging by a horsehair.
(PAINTING: RICHARD WESTALL, *The Sword of Damocles*)

sword, height of fall, and sharpness of the blade combined would inflict a serious wound. Even then I understood the probabilities of those factors were beside the point. The lesson was that frequently individuals, and most particularly leaders, operate in an environment of constant risk. The sword may not be so evident, but it is there. We must learn to live with risk, and even better, do something about it.

Thinking about Risk

It's worth stating the obvious here at the start that this book isn't an academic exploration of risk. Theory is one thing. How we actually perceive and act upon risk is another thing entirely. For our purposes, we intend to approach the subject from a practical perspective, focused not on odds—but on readiness to respond.

Although many brilliant minds have studied risk in detail, their theories and prescriptions rarely determine how each of us actually approaches the ever-present challenge of risk. At least that hasn't been the case for me or any of the organizations I've been a part of. So while understanding the more theoretical aspects of risk can be valuable, knowing how each of us—and our teams and organizations—actually *perceives* risk is essential.

This is easier said than done. There's something highly subjective about how we consider risk, both individually and collectively. At the most basic level, I have always viewed risk as the probability of something unwanted happening (e.g., Damocles's horsehair breaking), and the potential consequences if it did. At the most basic level, the combination of those factors constituted my estimation of the risk involved.

Regardless, in the long run, what *might* happen holds less interest to me—and certainly less practical importance—than what I intend to do about it.

In some cases, as with life insurance or seat belts, I dutifully take steps to mitigate the impact of a negative event. In other cases, like when I'm driving or managing my finances, I try to maintain the agility to react to changing conditions and emerging threats. And in some instances, I irrationally deny the existence of the risk or hope that probability will work out in my favor, like those who ride motorcycles without helmets or smoke two packs a day. Sometimes I'll study situations extensively, but on the vast majority of risks I encounter (even some big ones), I rarely do the due diligence to determine mathematically what the best move is. I'm guessing I'm about average on all these.

By way of example, in December 2019, I arranged for a long-needed spine surgery. To give myself the best probability of having a good outcome, I contacted a friend of mine at a prominent hospital to seek his advice. He recommended a highly experienced surgeon. During the consultation, the surgeon dutifully outlined for me the potential risks associated with all major operations as well as those specific to the spine. I listened intently, but in every case where bad outcomes or complications were accurately described as being rare, I assumed I would naturally fall into the far larger population that suffered no difficulties.

The surgery was almost twelve hours long, complicated by scar tissue from two earlier back operations, but seemingly successful, and soon I began my recovery. But four weeks into that process complications arose. Two more operations followed and then almost a month flat on my back in hospital beds. Months later the problem seems to have been fixed, but it gave me a new appreciation for how I perceive and act upon risk.

Could I have done anything differently? The surgery was necessary, and I sought out the most qualified doctor I could find to perform it. But I admit that, during the period of complications, his assurances that I was the first person to suffer this problem in more than four thousand such surgeries gave me no comfort. Risk is theoretical, psychological, emotional—an unreal bolt of lightning that always hits someone else. Until it doesn't.

The point I want to make here is that while we need to do our due diligence and make well-informed choices, we can't live life inside a spreadsheet trying to tabulate the countless risks that we encounter every day. Even if we *were* to determine mathematically what the best move is, we can't ever account for all factors, and in a fast-moving, complex environment, such an approach would likely *increase* risk by giving an illusion of completeness impossible to attain. However, developing a thoughtful appreciation of the threats we face, our vulnerabilities, and the resulting risks can be hugely beneficial.

In the end, the real question is not one of odds but attitude: How should we *think* about risk, and even more important, how should we react to it?

Learning about Risk

The study and calculation of risk is a respected science that has accelerated dramatically in depth, breadth, and utility in the last two centuries. Useful concepts outlined in decision theory, dual-process theory, game theory, and expected utility theory—and a host of other research-based conclusions—are available to educate and improve how we understand and deal with risk. Our ability to appreciate and leverage technology to calculate probabilities is also vastly increased over that of our ancestors. As

a result, we have established rules, tools, and jobs (e.g., chief risk officer) to reflect our increasing mastery over the vagaries of risk.

But that's not what this book is about. It offers a new way to understand and manage risk: a system that acknowledges and improves upon mere instinct by shining a light beyond the approaching threat to illuminate the *capabilities* that we can apply to its resolution.

This approach is born out of my experience that we rarely knowingly leverage academic study or theory in dealing with risk in real life. I have sat through countless briefings that tabled extensive, sometimes impressive, data-driven conclusions, but more often than not saw decisions made more informally and more intuitively than strict science would ever have approved. Even calculated comparisons of relative risks depicted with seeming numerical precision, were, when dug into, actually based on subjective assessments by all-too-human operators. We interpreted or adjusted the data until it fit comfortably with our intuition.

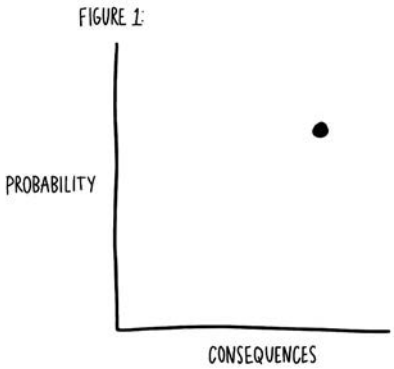
That's not necessarily a wrongheaded approach. As researchers John Kay and Mervyn King argue in their book *Radical Uncertainty*, the inherent uncertainty that underlies most situations, and challenges decision-making, means that even massive amounts of information can rarely eliminate the element of chance. It's both that simple and that complex. We can't eliminate risk, but as this book will show, we can develop and maintain our resiliency.

In practice, most of us learn about risk through experience. Raised in the late 1950s and 1960s as one of six children, I rode countless miles on my bicycle but never owned a helmet; I was crammed uncomfortably for hours in the family station wagon, but never wore a seat belt; I don't think my two little brothers (six and ten years my junior) ever sat in a car seat; and like other kids in the neighborhood, we were "free-rangers" who disappeared in the morning and reappeared dirty and hungry that evening. We wouldn't have considered ourselves as risk-takers or our parents as irresponsible—I suspect we were just largely oblivious.

Risks were considered differently then. I distinctly remember when the front yard of my third-grade schoolmate's home was dug up for the construction of a bomb shelter, and green fifty-five-gallon drums of civil defense supplies lined the halls of Stonewall Jackson Elementary School's

basement in Arlington, Virginia. But what appeared to be thoughtful mitigation of an unthinkable risk was a futile gesture given that our proximity to Washington, DC, and the Pentagon made surviving a serious Soviet nuclear strike, even in my schoolmate's shelter, an unlikely possibility.

As I got older, I found myself, probably like most people, unconsciously calculating risk using a simple model that balanced the probability of an event or outcome and the consequences if it did happen. If I climbed on the roof of our home, I simply had to judge how likely it was I would fall, and if I did, how badly it would hurt. If both the probability of falling was low and the consequences limited—there wasn't much risk. If either the probability or the potential cost was high, it was cause to reconsider. As shown in Figure 1, the concept isn't complicated.



I chose a soldier's life for many reasons, one of which was the desire to perceive myself as a courageous risk-taker. I liked the idea of taking risks that others would not. Like other comrades I would eventually serve alongside, I pursued becoming a paratrooper, a Ranger, and a Green Beret (Special Forces officer), and I joined elite units partly for the cachet of appearing to disdain risks others shrank from.

However, although I hoped to define myself as a risk-taking warrior, it's important to understand that overall, to the very marrow of its bones, the United States military is an intensely risk-averse entity. That doesn't refer to the physical courage of the women and men in uniform, or even to the audacity of many of the operations they conduct, but instead to the

bedrock belief that, charged with the defense of the nation, our armed forces can simply not afford to fail. In this regard, in matters of importance, most military leaders prefer belt and suspenders, and a backup set of each.

For observers, and often for lawmakers, this can be frustrating—a military that always wants more. Accepting a force structure of units, ships, tanks, aircraft, and other elements of military power that produces less than an overwhelming probability of victory is incredibly difficult for military leaders. Despite the romanticism of last stands by small bands of heroes, given the option, soldiers never want to fight outnumbered or outgunned.

On a more personal level, military leaders, like all people in a position of accountability, instinctively seek to avoid failure. History often classifies generals and admirals into two categories: winners and losers. While the reality is less binary, no military leader wants the personal or public burden of responsibility for defeat. Many commanders, frightened by the prospect of making a costly mistake, find themselves frozen in fear and fall to those who act decisively in the face of risks. Fortune, it is said, favors the bold.

Added to this is the sense of responsibility leaders feel for the men and women they lead. For most, even superficially hard-bitten warriors, there is a deeply emotional, almost visceral, obligation to do everything in their power to protect the lives of those entrusted to them. Even operations sure to result in painful losses, like bloody assaults on Pacific islands or Omaha Beach, are considered against the imperatives of the broader effort. Risks are rarely ignored; they are the source of angst and stress in compassionate leaders.

Combat aside, I found that military leaders in a peacetime environment struggle with everyday risks—and with teaching and learning from risk—much as their counterparts in the civilian sector do—and this struggle can produce some predictable, albeit interesting, behaviors.

Although After-Action Reports from veterans of World War II combat emphasized the importance of live-fire training in preparation for combat, training with lethal ammunition carries some obvious risks. While static positions with constant oversight by noncommissioned officers, or

sergeants, minimize the likelihood that soldiers will mistakenly shoot themselves or others, they hardly approximate actual battle. Maneuvers with live ammunition, particularly in darkness, when the US Army hopes to fight in order to leverage its technological strength in night-vision equipment, are infinitely more difficult to control. Ultimately, commanders must weigh the reality and value of training with risk.

In my career, I saw a wide range of reactions to this challenge. In the best units, commanders worked tirelessly to balance realism and controls to achieve the most effective training possible. Special Operations forces with more mature operators were able to go furthest to create the most realistic scenarios, but even some conventional forces produced impressively valuable training experiences for their soldiers. Accidents, even tragically lethal ones, periodically occurred, but when they did, the organizations received training on how to prevent recurrence and balanced the risks with the value the training provided.

But it was never easy or straightforward. Often success depended upon the commanders, and the tension involved was significant. If their units were realistically prepared for combat, commanders were well regarded by the chain of command, but the scrutiny that followed a training accident often acted as a more powerful disincentive to avoid risk. For too many it was safer to pull back on the realism in their training to reduce the risk of accident. And organizationally it was hard to pressure them to do more—leaders who pushed to approximate combat conditions could be seen to be accepting responsibility for the risks involved. Career-wise, fielding a battle-ready unit was good, but the reality was that responsibility for a lethal training accident could be a career killer.

The predicament was clear: "Do I incur the risk of harming my career to prepare my soldiers for the rigors of combat—or pull my punches?" There was always a siren call to rationalize taking the less risky course.

Living with Risk

There is a common misperception that soldiers transitioning from peacetime to combat undergo a metamorphosis—laggards become lions and the risks of combat bring out the best in even the worst in uniform.

Periodically that does happen, and certainly the danger of battle focuses the attention of most soldiers. But my experience was that while combat seasons and matures everyone involved, an individual's relationship with risk remains largely constant. Those who are comfortable with assessing and responding to risks in peacetime are the same under fire. For those whom the uncertainty of amorphous negative possibilities breeds caution, and even timidity, combat reflects an uncomfortable extension of those tendencies.

And this phenomenon isn't just limited to combat; it also occurs at the organizational level. The low casualty rate and rapid victory of Operation Desert Storm, America's rout of Saddam Hussein's army in 1991, was a wonderful contrast to the slow agony of Vietnam and seemed to reset expectations. Future war, we hoped, would be brief and less costly. Then, in October 1993, a brutal, but highly reported gunfight in Somalia's smoldering capital of Mogadishu resulted in the death of eighteen American servicemen, followed quickly by our withdrawal from the troubled country. Overnight it became dogma that Americans were superb at technology-enabled wars from afar but were unable to withstand casualties, particularly in confused, difficult fights.

Ghosts of Somalia traveled with US forces reluctantly deployed in 1995 into the war-shattered Balkans. There, working under the concept of a peacekeeping mandate, force protection became the highest priority. While it's difficult to criticize the inclination to do everything possible to protect soldiers from harm, America and its military began to create a perception (inside and outside the force) that any casualties would reduce the resolve necessary for armed conflict. When foes believe that the United States is more determined to limit its costs in blood than to ultimately prevail, they will adjust their strategies accordingly.

In this vein, North Vietnam prevailed largely because it was able to convince the United States that there was no level of loss that would deter it from its objective. Faced with the unacceptable option of either devastating North Vietnam, probably with nuclear weapons, or fighting indefinitely, the United States threw in the towel.

Both al-Qaeda across the globe and the Taliban in Afghanistan have gone to school on the American experience. Each seeks to communicate

Soldiers were at constant physical risk in Afghanistan. Here, an Afghan National Army soldier and U.S. forces carry a wounded American.
(AP PHOTO/RAFIQ MAQBOOL

that the risks of continuing to actively oppose them on battlefields in the region aren't worth the sacrifice. Particularly in a democracy, absent a clear existential threat, it is difficult to sustain a compelling case for incurring casualties in support of physically and psychologically distant foreign policy objectives.

Communicating Risk

In the fall of 2008, not long after I'd relinquished command of a Special Operations Task Force, the new commanding general proposed a cross-border operation into Pakistan to strike Taliban who were using border areas for safe haven. I had assumed the position of director of the Joint Staff in the Pentagon and monitored the plan as it was briefed to the required decision makers in Washington, DC, and ultimately approved. As I remember, the plan was characterized as "high risk," but it was well within the capability of the force assigned to conduct it. Except for the fact that the target's location was in Pakistan, which carried significant

political sensitivities, the mission was not unlike countless others the command was conducting nightly in Iraq and Afghanistan.

As it unfolded, the mission lost its surgical quality and became a very visible gunfight in which a number of Taliban were killed, and the public violation of sovereignty aroused the ire of the Pakistanis. In the immediate aftermath I received several calls to my Pentagon office asking me, in effect, "How could this happen? Why did our forces screw it up?"

In reality, they hadn't. Nothing goes perfectly in combat, and every operation carries risks that the enemy will exceed expectations, that extraneous factors will intervene, and in this case that it had simply become less clandestine than hoped. I remember asking one agitated caller, "I listened to the briefing describe the operation as 'high risk'—what about that didn't you understand?"

I realized later that, under the circumstances, maybe my question was unfair. Although in the lexicon of military special operators "high risk" communicated the clear possibility that things wouldn't go as planned—and might well go badly wrong—someone from another background lacked that context. Terms like "high" and "strong" had a hollow quality, devoid of effective meaning to the uninitiated. Watching a series of "high risk" operations executed successfully by Special Operations forces likely deadened their appreciation that over time the probability of failure will prove true. Even operations with a 90 percent chance of success will fail 10 percent of the time.

In today's environment it's always a struggle to communicate risk. Understatement is ignored and exaggeration is discounted. Sources are viewed with suspicion, and even well-intentioned advocates intentionally amp up the message of impending risks in order to be heard over the cacophony of competing alarms. The result is that it is difficult to separate the signal of real risks from the noise that bombards us.

Twenty-eight years before the raid into Pakistan, another operation was conducted that shaped much of the remainder of my career—and I wasn't even part of it. It was the spring of 1980 and I was a young Special Forces lieutenant working in Thailand. Five months earlier, in November 1979, Iranian students had seized the US embassy in Tehran and were now still holding fifty-three American hostages.

On April 11, 1980, after several months of frustrating attempts to negotiate their release, President Jimmy Carter received a briefing on a rescue plan devised to be executed by American Special Operations Forces. But communicating the risks associated with such an operation is never easy.

Air Force General David Jones, the chairman of the Joint Chiefs of Staff, as well as key leaders of what came to be called Operation Eagle Claw briefed the mission to the president. Major General James Vaught would serve as the overall mission commander, and Colonel Charlie Beckwith would lead the embassy assault. Vaught, a veteran of combat in Korea and Vietnam, was an imposing figure, and Beckwith, the boomingly confident founder of America's nascent counterterrorist force, was instinctively passionate in his advocacy.

In the session, President Carter asked Vaught for his assessment of the probability of success, or degree of risk, and the estimated number of casualties. Vaught, after orchestrating almost five months of intensive planning and rehearsals, expressed confidence that the mission had an 85 percent probability of success. He highlighted risks associated with the time spent on the objective, entering the embassy compound, but said the force had prepared for even the most difficult circumstances—the hostages secured by a truly active guard force. He told the president that he expected a limited number of casualties among the operators and hostages, but that some were likely.

Colonel Charlie Beckwith and Major General James Vaught were key commanders of Operation Eagle Claw.

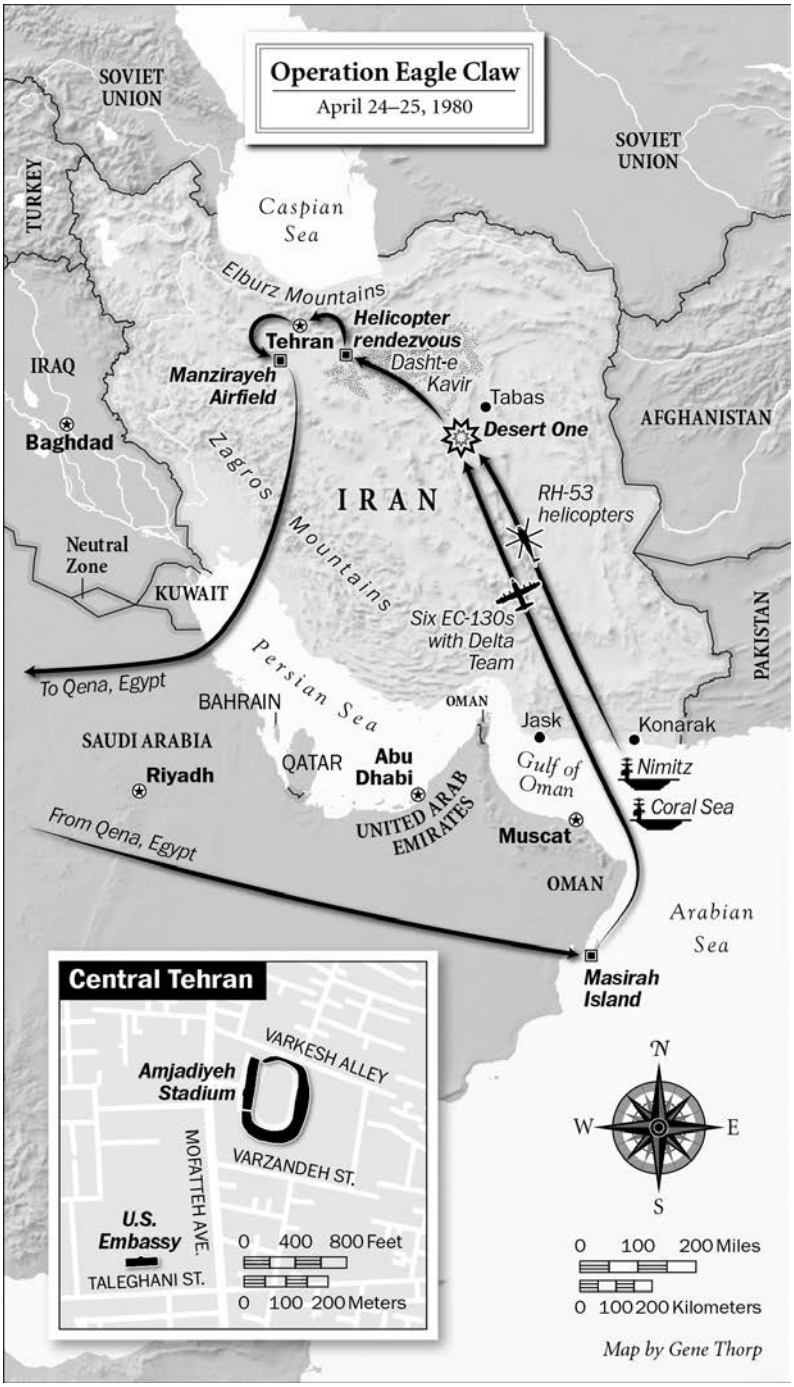
When asked, Jones and Beckwith indicated that they agreed. President Carter approved the mission as briefed. The operation would be conducted less than two weeks later, on April 24, 1980. It was an audacious effort by some of the best a nation had to offer—but it ended in humiliating failure.

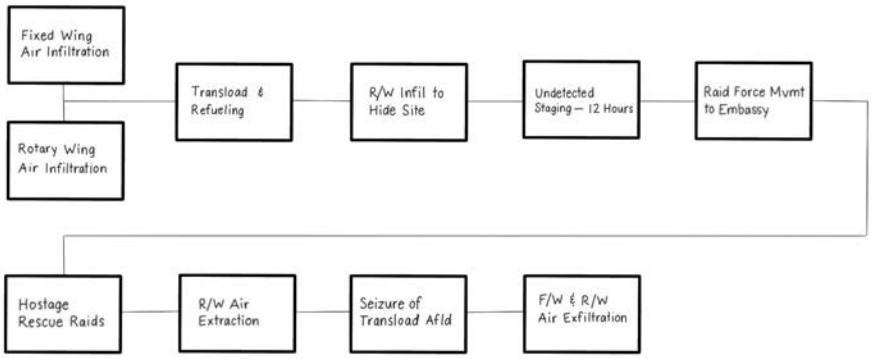
The challenges of the mission resulted in a plan that was necessarily complicated and undeniably high risk. Constructed after weeks of intensive analysis of options, it included a series of steps, or phases, conducted in sequence to infiltrate and position the force for the rescue, then to extract the hostages and everyone involved from Iran. Launching from an aircraft carrier in the Arabian Gulf and from other bases in the region, the raiders would simultaneously infiltrate Iran by fixed- and rotary-wing aircraft to conduct a hostage rescue raid on the American embassy in downtown Tehran before exfiltrating the captives and operators.

Infiltration involved flying nighttime routes to avoid Iranian radar, transloading commandos from cargo aircraft to helicopters in darkness on a deserted piece of desert named Desert One, then positioning the raid force outside of Tehran. The following night the raiders would strike the embassy compound (and one other location in downtown Tehran) and hopefully secure the hostages. So far, so good.

But they then had to get out of Iran. After the raid, expected to involve some level of firefight, exfiltration included securing Tehran's soccer stadium as a helicopter pickup zone and seizure of another airfield for cargo aircraft to extract the force. Because of the sequential nature of the mission, each step depended on the successful completion of all the steps preceding it (e.g. no assault of the Embassy could be conducted if the raid force had not infiltrated successfully).

Each of these tasks was difficult, but theoretically within the capability of the elite force assembled for the mission. Training and rehearsals had been rigrously conducted, but experience has shown that even with practice, it is impossible to perfectly predict the weather and other conditions they would have to be performed under, and thus accurately assess their statistical probability of success. But for the purposes of this, let's say that each of Eagle Claw's tasks (or phases) had a roughly 90% chance of working as planned.





The fixed wing (F/W) and rotary wing (R/W) aircraft would depart from their aircraft carriers and bases throughout the Middle East. They'd meet to transload and refuel at a landing strip known as Desert One. From there, the rotary-wing aircraft would infiltrate to the hide sight, where they'd wait (undetected) during daylight hours before the raid force then moved by truck to the embassy. Then they would extract the hostages using the rotary-wing aircraft and transload them onto an airfield, where the cargo aircraft would remove the hostages and return them safely to the United States.

It is crucial to remember that because every step in the operation was essential to the whole, every step must succeed. And even if the realistic probability of the force's completing each step was 90 percent (or .9), the overall probability Eagle Claw would succeed was not 90 percent. In actuality it was:

$$.9 \times .9 \times .9 \times .9 \times .9 \times .9 \times .9 \times .9 = .348$$

Imagine President Carter's dilemma if the briefing had described the operation as having a less than 35 percent probability of success?

Obviously, this exercise itself is flawed. The probabilities assigned would have been arbitrary at best—although the low probability would have been jarring. But in my experience, when faced with a relatively complicated mathematical evaluation or the earnest faces of experienced operators saying they can accomplish the mission—I think most of us would lean toward optimism. After all, we have every reason to *want* it to work. A numerical equation pales in comparison to the confidence of veterans like Major General Vaught and Colonel Beckwith. In that

environment, risks seem to shrink, and we are sorely tempted to believe—as Jimmy Carter did.

The case of Eagle Claw, like most difficult decisions, was even more complex than might be readily apparent. When President Carter went into the decision-making process, he had just experienced five months of diplomatic impasse and was under the clear pressure that a failure to resolve the hostage crisis would likely doom his chances of reelection in November. Naturally his assessment of risks to the mission was going to account for likely political costs of inaction.

The military leaders had developed their complicated plan over several months, and after extensive consideration, felt they had crafted not the best plan, but the *only plan* that would work. They had assessed the two biggest risks as the helicopters completing the mission, and the emergence of an Iranian mob gathering around the embassy before evacuation of the hostages and raid force could be completed. Both risks had been mitigated, as much as possible, by utilizing two helicopters above the six needed, and by implementing crowd-control measures in the vicinity of the embassy compound.

There was another pressure—that of lengthening daylight. As the weeks passed from the long nights of winter into spring, the reduced periods of darkness would soon make the operation impossible until the fall, which was months away. There was an overriding feeling that if the operation was to go, now was the time.

From the cheap seats, it is easy to find fault with the plan crafted and the decisions made—until you've been in the position of the people involved. Then it looks and feels different.

In the aftermath of Desert One, with destroyed and abandoned American equipment sitting like a monument to failure in the Iranian desert, leaders in the White House and Pentagon went to work on creating a permanent force, ultimately known as Joint Special Operations Command, capable of successfully completing such missions. I would serve in and ultimately command that force, finding myself repeatedly in the position of assessing and communicating risks that were difficult for both the uninitiated and even the experienced to fully understand.

Assessing Risk

Even when I was out of uniform, risk followed me. For two years I had the opportunity to sit on the board of directors of Deutsche Bank USA, the American division of the German bank. It was a fascinating experience as I watched truly dedicated professionals wrestle to repair organizational and reputational damage caused by a combination of factors that were further complicated by a large measure of internal dysfunction. Much of the work revolved around risk.

Risk assessments are more formalized in banking than in almost any other part of the commercial sector. The Great Depression, dot-com crash, and Great Recession were all followed by periods of increased scrutiny that attempted to identify and analyze the roots of the problems. In the wake of the 2008 crises, risks were identified in the emergence and popularization of financial tools like CDOs—collateralized debt obligations—as well as other less publicized activities and products. Taken as a whole, these risks created an existential threat for global financial institutions that traditionally had portrayed themselves as being rock-solid.

As a result, governments sought to restore the soundness of the financial sector by increasing oversight and demanding discipline from banks in maintaining liquidity and limiting exposure to risky loans or investments. To some degree it has worked, but a fundamental tension remained: riskier investments typically bring higher returns, and money sitting in the bank to provide liquidity doesn't yield a profit. Bankers compete and are usually personally compensated for the revenue they generate for their financial institutions, and a conservative, low-risk approach brings lower returns. Therefore, governments at every level, led by the US Federal Reserve, now demand detailed risk assessments to ensure that the banks remain safely out of harm's way.

This has produced some elegantly complex computerized models that incorporate a variety of factors or variables (interest rates, gross national products, etc.) that all impact a bank's financial health. No doubt these models have value, but my eyes glazed over every time we reviewed them. They did provide a good way to calculate metrics like levels of liquidity

the bank should maintain, but the far more fundamental risks to Deutsche Bank lay, as everyone who worked there understood, in factors like reputational damage, the ability to retain key talent, and the underlying culture of how the organization operated.

My point is that sometimes models or other dashboard-like systems tell us all is well even when we can look out the window and see a monstrous meteor headed directly toward us.

Conclusions

There is a humorous story, probably apocryphal, passed among special operators about an incident that took place during the very real chaotic withdrawal from Desert One, the transload location for Operation Eagle Claw. In the dust-filled darkness of the remote desert landing location, the mission had been aborted due to a shortage of operational helicopters, and the raiders reloaded cargo aircraft for the long exfiltration. Mattresses had been spread across the floors of the aircraft and some of the disappointed commandos lay down and fell asleep.

The exfiltration did not go well. The RH-53 helicopters that had just endured a nail-biting flight into Iran through unexpected sandstorms now had to refuel off EC-130 cargo planes for the flight back, a procedure that brought whirling rotors, propellers, and hulking airframes in close proximity in darkness. A mistake occurred and an EC-130 and RH-53 collided. The resulting fire ultimately killed eight Americans and destroyed both aircraft—an ignominious end to an already failed mission.

The story goes that there was time for the commandos in the cargo compartment of the EC-130 to flee the aircraft. One veteran operator, awoken suddenly from a sound sleep, leapt to his feet, moved to the door, and thinking the aircraft was already in flight and at high altitude, dove out and assumed a free-fall parachute posture—which he maintained until his body hit the ground with a thud—eight or so feet later. As always, even in tragedy, the operators found this reaction hilarious, and later, to further poke fun at the operator, asked why he threw himself out when he had no parachute. The veteran replied, "You have to solve one problem at a time."

Risk is like that. It comes at you from out of the blue, from every angle, when least convenient. There is a cost both to becoming overly focused on risk and to ignoring it. And the sweet spot between the two extremes moves with the circumstances around you.

Dealing with risk is part art, part science, and always depends heavily on the personality of an individual or the culture of an organization. There's no perfect formulaic approach to assessing risk nor an effective checklist to avoid or mitigate it. The emergence of data-fueled artificial intelligence will help identify potential risks with greater clarity, but probabilities will always be impacted by too many variables to let us master risk by taking a purely mathematical approach. And there will be special dangers waiting for those who blindly follow the technology solution—there are simply too many players in the game.

But there's much we can do. An essential first step is to accept the reality that the greatest risk lies inside you and your organization. Focusing on myriad external flaming arrows directed at you is less valuable than focusing on your strengths and vulnerabilities; understanding the consequences of an external threat must always be calculated in the context of your life or your organization. To this end, understanding how you perceive risks is fundamental. It begins with opening your senses and suppressing the biases that cause you to ignore or discount many risks. History offers countless examples of how Western nations' hubris about the inferiority of other races and cultures resulted in painful setbacks and humiliating defeats. At the outset of World War II, Japanese pilots were thought to be less capable in aerial combat because of poor eyesight. Humbling reality disproved that racist misconception.

Planning for specific risks is important, but only goes so far. John Paul Jones, whose quotation opened this chapter, sought a fast ship because he anticipated the risks of naval combat, and indeed, in many cases, we can plan for the most likely risks that will arise to challenge us. But although every special operation I was ever involved with included detailed contingency plans, rarely did we execute any of those contingencies as planned—the risks that arose were always a bit different from what we'd expected. Still, there was tremendous value in assessing and planning for those

contingencies because they gave us a better understanding of our ability to respond and the need to remain agile enough to do it.

In the end, we don't know what a baseball pitcher's next throw will bring. We must be well practiced in hitting, in a stance that allows us to watch him release the ball, decide whether we should swing, watch, or duck—and then act.

And it's useful to remember that baseball's iconic Ted Williams, who set an unmatched standard when he batted .406 in 1941—failed 60 percent of the time he strode to the plate. Just as Williams, a doggedly hard worker, did everything in his power to improve his swing, it's up to us to do all it takes to develop a strong Risk Immune System.

THE BOTTOM LINE

While risk is often portrayed mathematically, our response to risk is more often instinctive. Understanding the factors that drive how we think about and act upon risk is critical.

| *Part Two* |

RISK CONTROL FACTORS

A COMBINATION OF SHORTCOMINGS

Candidly, I think we all took it for granted—and we shouldn't have. All we had to do as the enemy approached was to shut the gate, and yet it remained wide open.

In January 1984, my battalion, part of General H. Norman Schwarzkopf's 24th Infantry Division, was on a rotation to the US Army's technology-enabled training center in the Mojave Desert. I was commanding a mechanized rifle company, 120 or so soldiers mounted for combat in M113 armored personnel carriers.

The training was harsh but exhilarating. Nowhere else could our maneuvers approach the realism of this experience. It was an opportunity to test our tactics, our unit, and ourselves against a brutally objective yardstick of effectiveness. Like all units, we were put through a series of missions in an area designed to

approximate a Middle Eastern battlefield against a well-equipped and proficient enemy labeled "Krasnovians," who mimicked the Soviets in every regard.

Partway through the rotation, we were given a mission to defend a long valley that ended in a constricted pass. It was optimal for the defenders. The Krasnovians would have to run a gauntlet of several miles of narrow valley to reach the pass, which served almost as the stopper in a bottle. So to succeed, we only had to kill the enemy as they traversed the valley, then block the pass—how hard could that be?

We labored feverishly for more than forty-eight hours to prepare our defenses. Soldiers dug fighting positions, or foxholes, bulldozers worked round the clock carving lengthy tank ditches across the terrain, and miles of angry-sharp concertina wire were strung. Our bastion looked—and felt—impregnable.

To enable our movement during the frantically busy preparation phase, we left vehicle-sized openings in the ditches and concertina wire with the intent to rapidly close the gaps as the enemy's attack time approached. We'd heard stories about units that had prepared as we had and then inexplicably failed to close the openings, giving the enemy an open highway through their defenses. Nobody, we opined, could be that dumb.

Of course, that's exactly what happened to us. In the hectic preparation of defenses and positioning of units as the enemy advanced, the right hand failed to communicate with the left, gaps remained open (even though we'd positioned materials to close them), and the enemy drove past us unimpeded. We'd planned carefully, worked assiduously—and assumed stupidly. Now we lost completely.

After the training came the After-Action Review, a four-hour-long detailed postmortem of the action. In painful specificity, aided by then-cutting-edge computer-tracking technology, our observer-controllers, really evaluators and teachers, dissected the fight, identifying when and where we'd failed. Not surprisingly, we'd gotten the big-muscle movements right. It was in the little things, and in the places where the pieces of our "system" had to come together, that we came up short. Hopefully, we'd learned an important lesson.

As we shall examine in the following pages, the success of a military unit—indeed the success of any organization in its defense—depends on the multifaceted ability to **Detect** *the enemy,* **Assess** *its strength and route of march,* **Respond** *with effective fires, and* **Learn** *enough in the process to prepare for subsequent attacks. This requires the function and interaction of a series of factors, or capabilities, that include things as obvious as communication and technology, as well as more discreet factors, like diversity and narrative, in order to produce the action of a successful response. To the untrained eye, it looks like trenches and barbed wire, but to an experienced professional, the critical metric is the health of the unit as a "system."*

In the Mojave Desert, the sad reality of our defense was that despite tremendous capabilities, arrayed on favorable terrain, the interaction of a variety of factors led to our defeat. It wasn't a single idiot upon whom we could heap blame; it was the weakness of our system. A combination of shortcomings, none of them singularly fatal, did us in.