A FORMULA FOR HOW TO SCREW UP THE ARMY: TAKE NO RISKS AND MAKE NO MISTAKES

A MONOGRAPH
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ABSTRACT

A FORMULA FOR HOW TO SCREW UP THE ARMY: TAKE NO RISKS AND MAKE NO MISTAKES. By MAJ Joseph P. Buche, USA, 63 pages.

This monograph is attempted provocation—an intellectual dare—from the author to the reader to think about how the Army views risk-taking by its tactical leaders.

More specifically, this monograph attempts to answer whether the Army's capstone leadership, operational, and risk doctrine encourage leaders at brigade level and below to productively take risk. The author finds the answer to the research question to be a resounding "No" and offers suggestions which might change the answer to the affirmative.

Our Army's doctrinal and cultural views of risk are hypocritical. Both offer platitudes that ask military professionals to accept risk, to realize its necessity, and to leverage it confidently on the field of battle. In the next doctrinal breath we encourage aversity to risk by embracing principles that seek certainty and attempt to see the future with perfect acuity. The culture of the Army itself—what its members do, say, and think—and the way the Army organizes itself only reinforce this aversity. If productive risk-taking really exists, the conceptual underpinnings of a model to achieve it must likely come partially from a look outside the profession.

The monograph seeks insight into the research question's answer by surveying civilian risk theory and developing a taxonomy of the same. The work then considers distinctions between civilian and military environments to assist in identifying the transferable insights from civilian risk theory to assist in the creation of a model for military risk-taking in the leadership domain. Taking this distillation and additionally considering a mix of some selected military risk theory, the monograph presents a military risk-taking model. After comparing the elements of the model to Army doctrine, a chapter recommends doctrinal changes.

The successful resolution of the answer to the research question, no matter how well supported, no matter how well written and organized, and no matter how easily approving signatures are obtained, only represents the start of the process. This monograph attempts to contribute to the profession's body of knowledge in a dynamic rather than static sense. The unfamiliar style, the inclusion of various alternative views, occasional conceptual attacks on some of the sacred cows of our professional culture, and other techniques all hope to result in interest, and therefore readership and consideration of the views expressed herein. More than only this, the author hopes to induce second order contributions to the profession's body of knowledge in the form of tangible concern, not mere future citation; further consideration, not simple acknowledgment; and even informed disagreement, not just vague, apathetic disappointment with the monograph's conclusions.

The arrogant and brash assertions above do not come from the author's absolute confidence in the sufficiency of the monograph's analysis and recommendations; they have another aim. If the topic and these assertions don't provoke the professional military reader into a willingness to expend some mental energy, perhaps nothing will. The playground for the lazy and simple minded is on the next shelf, CD, or web site. The author hopes the catalyst for improvement in the profession's efforts in this area start, or at least continue, on the next few pages. The John Plarrens, Willie Campbells, and Mary Ann Carrols of the future deserve—and require—no less.

SCHOOL OF ADVANCED MILITARY STUDIES

MONOGRAPH APPROVAL

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DRAMATIS PERSONAE

(Listed in order of appearance)

Captain (CPT) John Plarren	The main character. A US Army infantry captain commissioned through Officer Candidate School and recently graduated from his advanced course
Command Sergeant Major (CSM) Alex Commare	The CSM for 1st Battalion, 178th Infantry Regiment—Plarren's new unit.
Lieutenant Colonel (LTC) Daniel Jones	The commanding officer of 1st Battalion, 178th Infantry Regiment.
Jean Plarren	John Plarren's wife.
CPT Willie T. Campbell	John Plarren's friend and the commander of a rifle company in a sister battalion—3d Battalion, 19th Infantry Regiment—to Plarren's.
First Lieutenant (1LT) Jeff Tringle	A platoon leader in Campbell's company.
Major (MAJ) Tim Gallion	The operations officer (S3) for 3d Battalion, 19th Infantry Regiment.
Mr. Tom Phillips	Plarren's friend who works for an investment firm.
Mary Hendrick	Phillips' girl friend.
Walt Wildner	A former Army captain to whose company Plarren had sometimes been attached when Plarren was a lieutenant. Wildner left the Army during the draw down and now works as a mid-level executive in large business.
Carl Clausewitz	A deceased Prussian military theorist.
CSM Robert Quarters	The CSM for 2d Brigade, the superior headquarters for Plarren's battalion.
Sergeant Major (SGM) Hank Wilson	The operations SGM for 2d Brigade.
CPT Barry Cirone	Plarren's normal running partner and neighbor.
MAJ Mike Chara	The Executive Officer (XO) of 1st Battalion, 178th Infantry Regiment.
LTC Ron Purvis	The XO for 2d Brigade.
Rusty	A retired military officer and deep thinking friend of LTC Jones.
MAJ Mike Cathody	The S3 for 2d Brigade.
CPT Dave Ounce	An assistant S3 in 1st Battalion, 178th Infantry Regiment and former advanced course classmate of Plarren's.
Sergeant First Class (SFC) Tonnibay	An assistant operations NCO in 1st Battalion, 178th Infantry Regiment.
1LT Teddy Wallace	A platoon leader in 1st Battalion, 178th Infantry Regiment and an individual of considerable moxie.
CPT Harry Flowers	A company commander in 1st Battalion, 178th Infantry Regiment.
MAJ Jim Tommason	The S3 for 1st Battalion, 178th Infantry Regiment.
Mary Ann Carrol	The youngest daughter of another of Plarren's neighbors.
Sally Carrol	The middle daughter of Plarren's neighbor.

Chapter 1 Introduction
The Nature of the Search for Understanding

Captain John Plarren took a seat in the room across the hall from his new battalion commander's office. The airborne ranger, who took great pride in always looking calm and collected, appeared flabbergasted.

"Sergeant Major, I'll admit I don't know everything, but a lot of the stuff the boss said to me in the last hour was,...,well, I don't have the words for it, ...amazing....confusing, ...intimidating."

Sergeant Major Alex Commare had already sized up the newest officer in his battalion. He knew the young man in front of him had been a junior staff sergeant in an FSB before going to OCS and gaining a regular army commission in the infantry. He looked athletic and trim. More importantly, this officer exuded an intellectual energy and an interest in what he did not know. Sergeant Major Commare already thought of Captain Plarren as a fellow warrior. Frankly, he hoped the feeling was mutual.

"Give me something more than that, sir. What's troubling you?" he said.

"Sergeant Major, I don't know that anything is 'troubling' me. I'm just having a bit of difficulty digesting some of my counseling from The Old Man," responded Plarren. "I tried not to look like a fool when he started talking about 'failure floors,' 'risk approval authority,' and 'catastrophic failure,' but I don't know if I succeeded. I think I know his concept, but I'll be damned if I understand the processes about which he spoke—and he made a point of telling me that the process was important."

Commare let a wry smile purse his lips. He'd heard similar statements before. He'd felt them himself when first confronted with risk theory the Lieutenant Colonel Jones way. The tall, powerfully built career NCO leaned forward and almost growled, "Don't let a little uncertainty get you down, sir. Be confident in where you can go, not intimidated by where you are."[1] Commare paused an instant to let the echo of those words fade.

"Sounds like the boss talked to you about risk. You think you and he have different frames of reference on that topic and how it applies to leadership in a troop level command?"

Plarren paused and thought for a moment. He hadn't done much of that in the last hour or so. He realized he'd been reacting emotionally to the uncertainty of the environment in which he found himself. He'd wanted to sound and appear like he was expert in all those topics about which his new commander spoke. As soon as LTC Jones had begun talking about risk, John Plarren had lost his comfort with the discussion. Plarren clearly thought about risk differently than did LTC Jones.[2]

"Sergeant Major, I'm not really sure I have a sturdy frame of reference with respect to leadership risk in a company or field grade command. I mean,...I know I've got to delegate, accept some uncertainty, trust my subordinates, and encourage initiative, but I don't know that I've got anything other than an intuitive feel for all that."[3]

"First, sir, let's make sure you and I view the boss's concept in the same way," said Commare as he leaned forward in his chair. "He's after leaders who'll take smart risks within the commander's intent. He thinks risk-taking pays off in many ways. First, he thinks that a unit filled with leaders who take smart risks will, over the long term, produce sustained superior results when compared with a unit that takes few or poor risks.[4] Essentially, he sees the payoff as the improvement in the organization's product: combat readiness.[5] Secondly, he thinks a risk-taking organization better develops its future leaders. We all talk about initiative and being trained to perform one or two levels up. He thinks a risk-taking environment gets us part of the way there.[6] Finally, he thinks that a successful organization must *accept* the occasional failures risk-takers experience and *reward* the successes that smart risk-taking normally produces. These two simple characteristics will drastically improve organizational climate. We'll all make mistakes. If we aren't afraid to admit to them, we can benefit from their lessons.[7] Additionally, by separating fault and responsibility, we breed a better command climate. There are certainly other benefits, but he sees these as the principal payoffs."

Plarren looked skeptically at his tutor and said, "You sound like you're reading that."

"I am," replied Commare holding up a copy of Jones' command philosophy. "I've told you what he said as I understand it in concept, sir. That won't get you where you need to go, though. The Old Man's right; you need to understand the details."[8]

"Frankly, I felt pretty close to the way you do now when he counseled me. It took some study and thought on my own before I felt comfortable with his philosophy on risk-taking. You've got some time before you take command. Take the time before your inventories begin and look deeper into some of the stuff Colonel Jones told you. Explore this area on your own. Start by looking into what our civilian counterparts think and do; that helped me."

Plarren nodded pensively before he and Commare digressed into a few minutes of talk of old friends and assignments, their conversation dying slowly over the next few minutes simply of its own weight. The important part of their discourse had been its beginning. They both realized that and made no attempt to prolong the small talk. They said their good-byes and parted company.

After Plarren walked out the headquarters door, Commare stood inside and watched Plarren's gold Bravada pull out of the parking lot and disappear over the rise in Argo Boulevard. Deep in thought, he didn't notice the approach of another officer behind him.

"He take the bait, Sergeant Major?" The words came from behind him in the quiet, but sure and precise delivery of Lieutenant Colonel Daniel Jones.

"Yes, sir. I'd have bet a few beers that the good captain would leave your office and visit either the XO or me. I think our newest captain is about to embark on a few days of inquiry. The risk may well pay off."

John Plarren paid scant attention to the scenery as he drove away from his battalion's headquarters. He felt like someone was trailing him with a camera making some kind of Army leadership documentary. Fresh out of the advanced course, about five years into his career as an officer, and with over twelve years as a soldier, he thought he had a handle on shooting, moving, and communicating. He could run with anybody, write reasonably well, and felt like he carried around as much common sense as the next guy. Now with command a few weeks away his new commander had turned his intellectual world upside down.

"...I'll expect you to fail at least four times in the coming quarter—that's your failure floor," his commander had told him. "During our next counseling session we'll talk about these failures, your risk-taking strategy and tactics, and about the lessons we've learned. We will use our discussion of failures as a backdrop to evaluate the risks you took that paid off. We'll also reassess the level of risk authority I grant you."

Plarren had been ready for a short burst of do's and don'ts from his new boss. He had also been ready to spout the requisite standard responses of "Hua!" or "Yes, sir!" at the appropriate times. What he heard about risk-taking left him without a comfortable frame of reference, though.

He was glad it was Friday; the Club beckoned. He made a few brief mental notes about the day's experiences before depositing his car in the Officers' Club parking lot:

- Properly executed risk-taking provides tangible payoffs: it improves the organization's product, develops future leaders, and improves the organizational climate.
- Army leaders don't share a common understanding of risk-taking theory beyond the few platitudes found in existing doctrine.
- Embracing risk-taking conceptually will not produce superior sustained results. Leaders must understand how to take risks to gain from them.
- Uncertainty in the present is not always a precursor of failure in the future.

Chapter 2 Civilian Theory

Understanding Risk Theory: Miscalculated Ease

"So this guy *wants* you to fail?" Jean Plarren asked her husband incredulously. "I may be missing some part of the male bonding process here, but I'm not sure I'd be all that happy if my new boss told me that. Sounds like he lacks confidence in you."

"Jean, I haven't yet got my arms wrapped all the way around what he said, either," John said trying not to acknowledge the blatantly sarcastic glance from his wife of seven years. "Maybe it's not that he wants me to fail as

much as that he knows I'll fail from time to time and he still wants to hire me. If you look at it that way, it does show a great deal of confidence."

Jean Plarren kept up her morning ritual of arranging freshly used coffee cups in the dishwasher in an exacting pattern. John knew she had heard and appreciated his every word, but offered no tangible physical clue that that was the case.

"Whatever it is, I think I've figured out a way to figure it out. He essentially spoke about risk and how establishing an environment that encourages smart risk-taking will produce superior long term results. First, I need to understand the definitions of some of these terms—smart risks, superior long term results, failure, and a few others. Second, I need to understand the concept of risk-taking."

"I've got a reasonable idea of what was in our doctrine six months ago when I started my advanced course. I don't recall much detail on how to take risk *per se*. However, the more I thought about it, the more I found some areas in the civilian world that appear to have a pretty strong correlation. Industrial safety theory must deal with risk. Accidents cost money, so those folks must have been working on this for a long time. In addition to that, I'll look at businesses that have a high likelihood of death or serious injury when they cause accidents. The FAA, NTSB, and United Airlines are all examples. That characteristic will give me a parallel link to military environments," John said with a smug look of satisfaction.

He'd let himself think that this topic was difficult. A few beers at the club, some rest, and a mere few minutes of thought had brought him an easy plan with which to gain quick understanding. Jean's response brought him quickly out of his accelerating self-flattery.

"Try looking into nuke power plants, hazardous cargo transportation, and chemical production, too. Each of those industries can cause fatalities outside just their work force in an accident," she said as she disappeared out of the kitchen enroute to her morning run.

John grunted a low volume affirmative response. The fact that his wife had at least doubled his potential research range with only a few seconds' thought was not lost on him. The complexity of his intellectual search now neared his maximum capacity for routine Saturday morning operations; he knew better than to try to remember more than three things. He grabbed a nearby napkin and a pencil long overdue for routine maintenance, and scribbled down first his thoughts, then Jean's additions.

"Yup," he said to the breakfast nook furniture as he took a slow, satisfying sip of coffee from his "Ranger" coffee cup. "A few books, a magazine article or two, and some assistance from a willing business executive to an anxious young Army officer, and I'll have this whole theory in a nice, neat little bag."

Civil War Generals Pillow and Floyd likely shared equally optimistic assessments when they surveyed the Tennessee countryside. Much like these Confederate officers later discovered, John Plarren would soon find the future not as simple, nor victory as close as it had initially appeared.[9]

Discovering The Taxonomy of Civilian Risk Theory

Spheres One and Two: Traditional Risk Management and Pragmatic Risk Management

The standard din of an Army dining facility normally finds classification as merely gray noise in the brains of the soldiers present to hear it. The cacophony of the many diverse sounds this Wednesday morning seemed to John Plarren to instead represent chaos. In a perverse way at least that made sense to him. His last few days of probing industrial safety theory, traditional risk management, in an attempt to understand Colonel Jones' risk philosophy had left his mental faculties a bit chaotic. The more he thought about the it, the less the theory matched his boss' philosophy. He whimsically accused himself of letting his analysis get in the way of simply consuming and archiving facts; it was now harming his ability to enjoy his omelet.

"Johnny, your dog get run over or are you trying to add without paper and pen again?" asked his sarcastic table mate, Captain Willie T. Campbell. Campbell, always one to enjoy his omelets, barely missed a beat to ask his

question. Plarren wondered momentarily if it was because Campbell simply eschewed analysis in favor of archiving food.

"No, Willie. No dog deaths to report, and I leave the math to you," Plarren replied with a faint smile. Plarren thought Campbell a fun fellow with whom to speak, but an officer not weighted down by more than an average intellect. Plarren knew little about the other officers and the NCO seated with Campbell and he in the 3d Battalion, 19th Infantry Dining Facility.

"I'm just thinking about this risk-taking stuff about which my colonel talked with me last week," Plarren continued to Campbell. "I thought I had the plan that would enlighten me about risk-taking, but I'm pretty sure it was a dead end. I did a bit of research into industrial safety and thought that it would..."

"Ahh, the hunt for hazards," murmured one of the lieutenants seated with them at the table.[10]

"Huh?" asked Plarren not really understanding the junior officer's short comment.

"Jeff Tringle, this is Captain Plarren," Campbell squeezed out between omelet bites going in. "Tringle is the best and most powerful platoon leader in the free world. He also runs my first platoon."

"Sorry for interrupting you, sir," said Tringle during the obligatory handshake. "I worked my way through high school and college at a canning factory. I ended up working in the plant safety office. After some time on the job we lower level workers decided our mission was really pretty easy in concept; we hunted for hazards and then tried to kill them."

Tringle hesitated momentarily, then added, "If you don't mind me asking, what relationship were you trying to draw from industrial safety theory to your battalion commander's philosophy?"

Plarren sensed impending embarrassment. He noticed the others at the table suddenly begin to take notice of the interchange. This lieutenant might know more about risk than he did. He might well confirm Plarren's recently developed hunch that traditional risk management provided little conceptual utility to risk-taking in a leadership environment.

"Well, Jeff, I thought I could translate some of the theory behind industrial safety theory— traditional risk management—into something that would help me get my hands around my colonel's philosophy on risk-taking." He quickly added, "I don't think I found much, though."

"I never really thought about that, sir," responded Tringle. He stopped eating for a moment and stared thoughtfully past Plarren. Plarren cast a sideways glance at Campbell, sure that this pause in the lieutenant's activity would drive Campbell to seize and devour Tringle's omelet, too. The thoughts of one of his anonymous table mates—a major—brought Plarren back to the subject at hand.

"You assigned to 1st of the 178th, Plarren?" asked the rather slim, intense major.

John Plarren nodded in the affirmative along with a respectful, "Yes, sir."

"Sir, John just arrived from his advanced course," said Campbell, the apparent master of ceremonies. "John, this is Major Tim Gallion, our S-3."

"Good to meet you, John. Your commander has created quite a stir in the brigade, if not the division, with his risk philosophies," said Gallion. "Tell me about the safety theory you researched. Then we can discuss your boss' philosophy, if you don't mind."

Plarren swallowed hard. He was now on the spot. At least he wasn't alone in his uncertainty; this group wasn't sure about all aspects of risk-taking, either.

"Well, the way I understand it," Plarren began, "the process has three or four steps. First, you look for hazards. Hazards are situations that could cause some type of damage.[11] Next, you assess the likelihood and the cost of occurrence. Then you come up with methods or changes in the plan that will eliminate the hazard. If you can't do that, you figure out ways to reduce the risk of the hazard. Finally, you put your hazard mitigation plan into affect."[12]

"I think you missed one, buddy," Gallion said. "Don't just think planning; think about execution, too. What is the last step in our troop leading procedures?"

"Supervise!" interjected Tringle, happy to have another right answer.[13]

"Right, Jeff," said Gallion smiling. "What you described as a rather static and linear process, John, becomes dynamic when you supervise execution and make compromises of course based on performance."

"Sir, if I may, there are a few other things that I think typify traditional risk management," said Tringle. "This approach generally results in a checklist approach to ensure hazards are mitigated.[14] We had a myriad of forms that described known hazards and identified the 'fixes' for those. I know that sometimes instead of checklist, mechanical or software 'if, then' loops are placed in systems to achieve the same effect. I think nuclear power plants operate that way.[15] In an industry where an error can result in fatalities pretty easily, we need some type of assurance against any significant accidents.[16] In addition, what Captain Plarren described is pretty rote. Modern safety theory takes into account human perceptions and actions.[17] This really is a modern science.[18] Here's a quick sketch I drew that outlines the basic process."

Tringle pushed a small sketch on an index card to the center of the table.

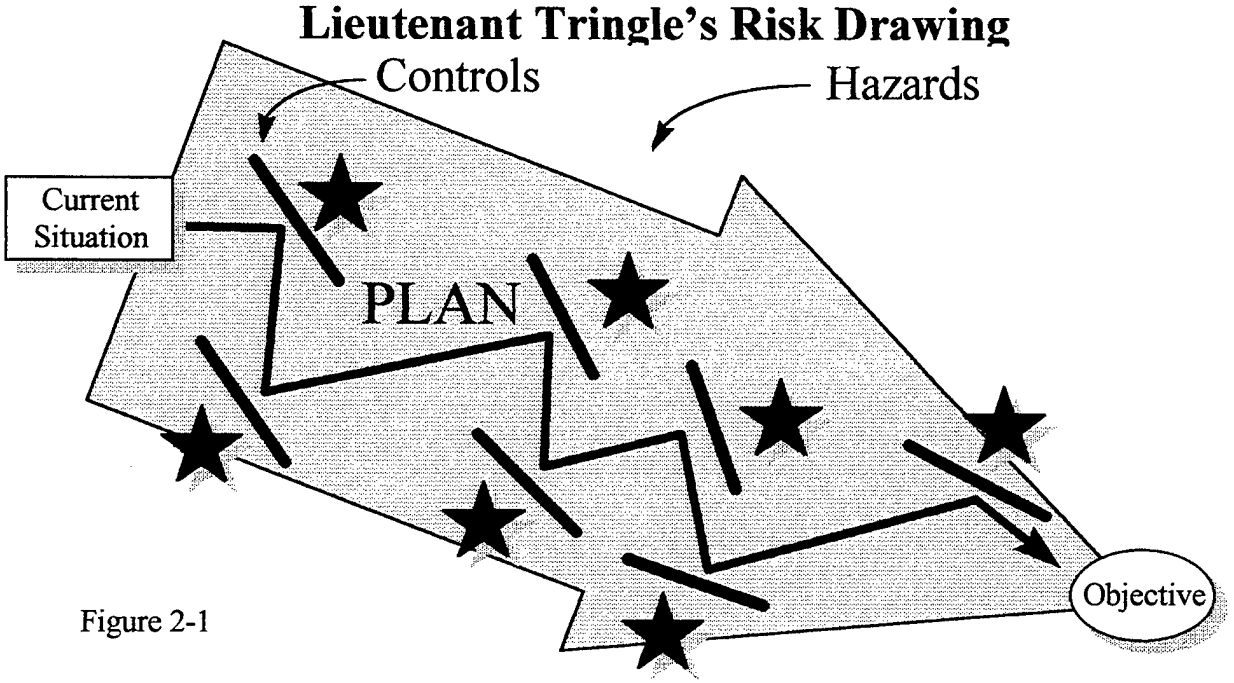

Figure 2-1

"Careful, Jeff. The 'Three' is about to go back to The Old Man and tell him to make you the next battalion safety officer," interjected Campbell with a smirk.

"Even with that in mind...," Tringle continued. "Though I think Captain Plarren used the term correctly, lots of folks use 'hazard' and 'risk' synonymously; that's wrong. Hazard is something that can bite you. Risk talks of the possibility of that bite."[19]

"Your boss is right, Jeff. You are in danger of an additional duty," said Gallion jokingly. He then turned to Plarren and said, "What do you see wrong with that methodology, John?"

"I don't understand, sir," responded Plarren to his inquisitor.

"See, John, you said that you couldn't get that theory to mesh with your commander's risk philosophy, right? Let's start from square one. I don't see *anything* wrong with that methodology. Why on earth would we not want to do anything this process advocates? Can you picture a competent leader who wouldn't try to determine in advance hazards to his soldiers and equipment? Having done that, can you imagine analyzing a training plan and finding some potential for harm to your troops or significant damage to some equipment, and *not* trying to prevent that from happening? Its no different when thinking of the way to run an airline, a factory, or a nuclear power plant. Think of hazards as another enemy. Tringle was right; we try to kill hazards,...just like we try to kill the enemy."

"That all seems to make sense when you say it like that, sir," said Plarren mulling over this field grade officer's logic. "But, you're right. It sure doesn't seem to mesh with my battalion commander's philosophy."

"You started out with your commander's philosophy and tried to make reality fit it. Now I happen to like Colonel Jones. He seems like a great infantryman. But, did you ever consider that perhaps his philosophy wasn't based in the real world? Maybe all this touchy feely crap we've adopted from the business community doesn't really work except on paper or in a board room. In those two environments you don't have to produce anything, nor do you have to pay for disasters. You see, risks—and the hazards associated with them—aren't something we like, they're a condition of the battlefield. We don't want to have them around. Instead we're forced to deal with them. Dealing with them effectively involves reducing the potential and severity of those hazards—controlling the risks—to as great an extent as possible. If this system doesn't do that, find me one that does."

The intellectual gauntlet had been thrown down. Everyone at the table sat in silence for an instant. Then, Willie Campbell stirred.

"Sir, I don't know that the traditional risk management scheme we just described is really the Yellow Brick Road you seem to think it is," Willie Campbell said to his battalion's operations officer with clearly evident glee. "I can find some flaws in that methodology even if John here can't."

Plarren waited for a curt retort from Gallion to Campbell. They were actually discussing some important things here. Willie had little to add so he should shut up and continue eating. But Major Tim Gallion only smiled at Campbell's comment and said, "I'm all ears, Willie."

"My process is more effective and pragmatic than the one of which Jeff and John speak," Willie the Tutor began. "It's not all that complex, either. First, we avoid any risk that carries no benefit or is easily avoided." He then added, as much to himself as those to whom he was speaking, "Shouldn't be any debate there."

"Now we need to admit that we just can't find all the hazards out there, sir.[20] It's a damn complex world. Even if we had the smarts to find all the myriad of hazards on the battlefield or the factory, we certainly don't have the time. We can argue about that, but I'm guessing that while a battalion S-3 might say he or she has the smarts, there will be no claim of more than sufficient time."

Gallion just smiled his agreement and glanced at his watch as Campbell continued his sermon.

"You're on safe ground there, sir. I think most middle managers at United Airlines or Ford Motor Company would agree. Given this lack of resources—available time and all encompassing intellect—let's now simply avoid worrying about any risks, not already eliminated by our first rule, which present a hazard with an incredibly small likelihood of occurrence. Yes, Tringle here could catch a meteorite on the noggin on the road march, but we just don't need to spend any intellectual energy trying to think about that. Sorry, Jeff. So that's our second principle: don't worry about the hazards that have a very low probability of occurrence.

Tringle, happy that Campbell had finally taken a breath, interjected, "Now, sir, I don't think that's all that different from some of the risk management stuff I dealt with. We always considered whether a risk was "credible" before..."[21]

"Jeff, please; I'm dispensing wisdom," Campbell interrupted his charge in a paternal fashion. "As I was saying,...Next we avoid accepting any risk with an associated hazard that is relatively likely to occur unless it has clearly overriding benefits. With these first three rules we've eliminated a great many risks and their related hazards. We're left with a set of things to consider that's both manageable in terms of number and realistically requires consideration. We look at what could happen if we take the risk and compare it to what could happen if we don't take it.[22] By doing these things we've taken a pragmatic approach that minimizes our effort while concentrating in those areas which can provide some utility. Never to be outdone by a mere lieutenant, here's my sketch."

Campbell slid a napkin well abused by his pen to the center of the table and over Tringle's drawing.

Captain Campbell's Risk Drawing

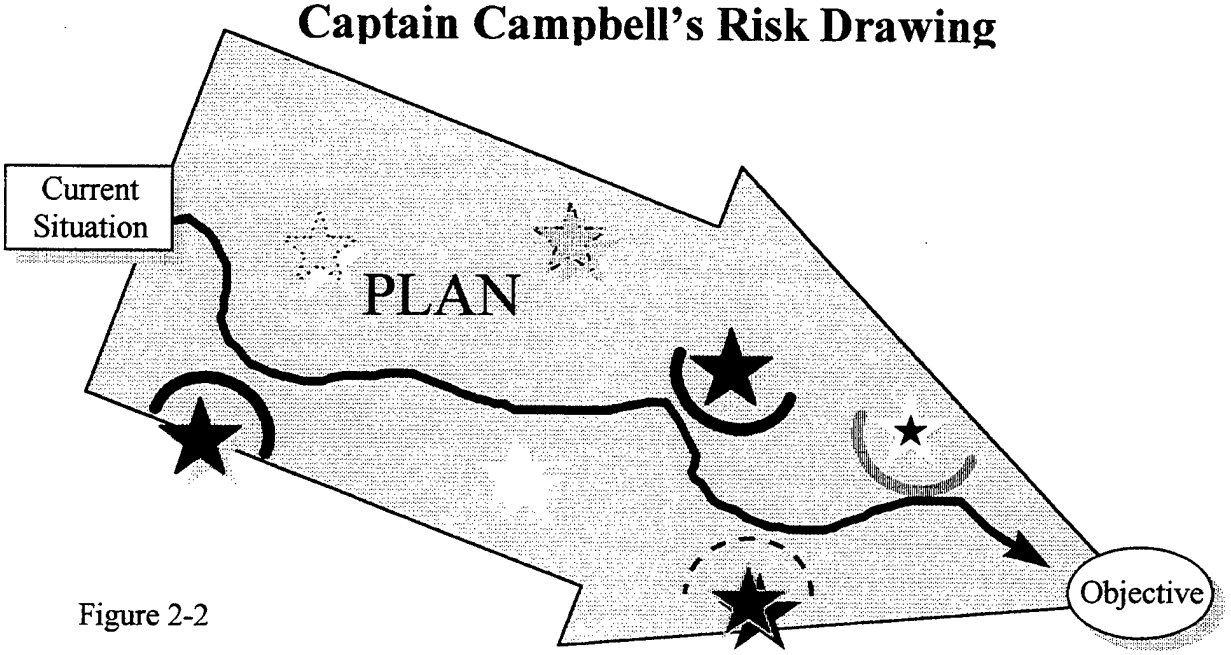

Figure 2-2

Gallion nodded and smiled. He looked Campbell in the eye and said, "I'd need more time to evaluate everything you recommend, Willie, before I sign up for your procedure. But tell me, have you invalidated my argument? Are hazards not bad using both systems? Do we like them or are we forced by our environment to deal with them? Don't both systems see hazards as the enemy, as something to eliminate?"

Gallion found his comments met by thoughtful efforts to avoid his gaze. Pleased with this result, he continued, "Risk Management, even with these pragmatic modifications Willie suggests, seems to provide a pretty good framework with which to consider risk."

Gallion then turned and directed his final comments directly to Plarren.

"John, I'm certainly not your boss. You might want to consider our conversation as you think about your commander's risk philosophies. Maybe with some thought and courage on your part you will convince him that he's a little off the track."

"Well, sir, now that you've told John that his rater has no brains," said Campbell. "We should all move out so that our rater doesn't do the same to us when we miss his 0900 CONEX inspection."

All that remained was the set of Pavlovian watch checks and perfunctory handshakes of temporary farewell.

As he reclined at the table Plarren identified one advantage of his temporary status as a man without a job. He watched the other officers scurry off to their waiting requirements while he sipped his coffee and thought. He reflected on the conversation and recorded its cogent points:

- One sphere of risk theory encompasses traditional risk management. Practitioners in this sphere hunt for all potential events that could produce bad outcomes (hazards) and then seek to impose controls that limit the likelihood and severity of those potential occurrences.
- The standard of "credibility" as to the likelihood, and to a lessor extent, severity of the hazard is the tool generally used to determine which hazards are worthy of mitigation.
- A related, though distinct, sphere encompasses a Pragmatic Risk Management. This sphere's practitioners seek to limit hazard consideration to a subset of potential hazards that pose the greatest threats. This limited consideration allows concentration on a more limited quantity of hazards and should produce more effective mitigation.
- With very limited exceptions, these spheres see hazards as universally bad—something from which nothing good comes.

- These spheres view risk theory as a science and frequently design rote paradigms to reduce the likelihood of hazard occurrence. This may take the form of automated "if, then" procedures or checklists that seek to guarantee the elimination of the hazard.
- In these spheres--particularly in the first--we are likely to find zero tolerance goals and objectives.[23]

Discovering the Taxonomy of Civilian Risk Theory

Spheres Three and Four: Investment and Leadership/Management

"Don't think of risk simply as the possibility of something terrible happening," said Tom Phillips as he finished off the last of the nachos. "Think of it as an opportunity. Investing and money management are about opportunity. Risk indicates the presence of opportunity."[24]

John Plarren knew simply this minor turn in the dinner small talk must have annoyed Jean somewhat. She normally rigidly enforced the 'No Business Talk in the Restaurant' rule. John thought that perhaps she wasn't considering an innocent question about Phillips' profession as a rule violation. Because Jean tended to define business as anything to do with the Army, he might now be on safe ground. As long as Jean and Phillips' girlfriend, Mary, stayed engaged in their conversation maybe he'd be safe learning more.

"Don't people generally shy away from risks?" Plarren asked.

"Well, it's not so much that people hate uncertainty—but rather, they hate losing," Phillips said with a smile.[25] "What's interesting is that most folks aren't risk averse, they're loss averse."[26]

"Explain, Tom."

Phillips took a quick drink of iced tea and continued, "It's a bit strange, but we've found that behavior with respect to risk isn't consistent with assumptions of rational behavior. If you take a risk and think of the potential outcomes in terms of the good things that could happen, most people are risk-takers. If you take the same risk and think of the potential outcomes in terms of the bad things that could happen, most people are risk averse. People's behavior changes simply by the manner in which one characterizes the potential results."[27]

Plarren was very tempted to take out his notebook and start recording this cornucopia of information, but he suspected such an act would almost certainly draw Jean's ire; and end Phillips' and his discussion. Phillips' continued speech brought Plarren back to the conversation.

"There's been some interesting research into our willingness to risk. Theory seems to suggest risk aversity in the positive returns domain. Group decision making tends to make a body favor risk more than it would if individual members made the decisions."[28]

"Positive returns domain?" said Plarren with another quizzical look.

"Above your aim point," responded Phillips. "Ahh,...successful; at or better than your objective."[29]

"How do you guys define success, Tom?" Plarren said shifting forward on his mental list of questions.

"Success may never really be precisely defined, John," Phillips responded. "But you can assume it's above the status quo.[30] If I invest some money and end up with more money, I've succeeded. Now, you can argue about whether that more money is in real dollars, whether it takes into account the opportunity cost of that particular investment, or many other nuances.[31] The bottom line, though, is status quo generally provides the aim point. Whatever the aim point, people seem to shy away from risk if they think they're doing well. If folks think they're doing poorly, they will take more risk."[32]

"How do you determine a 'good risk'?" asked Plarren.

"I don't know that you can determine a 'good risk', John," replied Phillips. "After we determine what the investor wants we can get an idea of where to invest using beta."

"What's beta?" Plarren queried Phillips. "Is that the name of your genius investment cyborg?"

This brought a snort of laughter from Phillips. He responded, "Remember when I talked about information and its relationship to potential profit? Well, we reduce risk through research.[33] One simple tool that some cursory research can provide us is beta. Beta is a number that describes how a certain security or investment will behave with respect to

the market as a whole.[34] It's essentially trend extrapolation. You look at how something has performed in the past and make assumptions about its future behavior."[35]

"I think I've heard of this," Plarren said, happy that he seemed to finally know something about the topic. "If stock X has generally fluctuated twice as wildly as has the market as a whole, I know the Beta is 2. If the Beta of some other security was 10, I'd know that it represented a bigger risk. So a drop in the market of 100 points would likely yield a drop in that security of 1000 points."

"We're oversimplifying, but yes," said Phillips. "That's about it. Don't forget, this isn't just applicable for losses, but for gains, too. Like I keep saying, risk represents opportunity, not just the potential of bad things happening."

"Do you guys mitigate hazards?" Plarren asked.

"I never thought about it in exactly those terms, but I think we do," began Phillips. "It's paradoxical, though. Portfolio theory addresses that. Essentially, we put money into a number of instruments representing a broad variety of industries. This diversity tends to dampen volatility of any violent swings in the market."[36]

"Where's the paradox?" Plarren inquired.

"Think about it. If you were 'perfectly diversified' and your portfolio represented the market exactly, then your risk would drop so much that your potential for gain would drop a great deal, too."[37]

"Interesting," noted Plarren.

"Remember, John. Risk signals opportunity. Low risk, then low opportunity."

"Can you think of anything else about this stuff that would help me?" Plarren asked Phillips as the former dabbled in the remnants of what used to be nachos.

"A series of small losses has a cumulative effect. All my risks deal in a common currency—literally currency. I think you'll find this differs from the risks normally associated with assembly line work."[38]

"Makes sense," said Plarren. "Risks gone bad in a factory could result in losses in employee time, damage to equipment, regulatory hassles, and the like. While you can try to enumerate those in dollars, it seems it would be an inexact measurement. Shoot, even those would be easy compared to trying to tabulate the dollar cost of a chemical spill or nuclear power plant disaster."[39]

Plarren nodded thoughtful agreement with himself. He then blurted out, "Hey, Tom. If you could draw a picture of how you view risk, what would it look like?"

Phillips paused for a moment then drew a quick sketch on a napkin and passed it to Plarren.

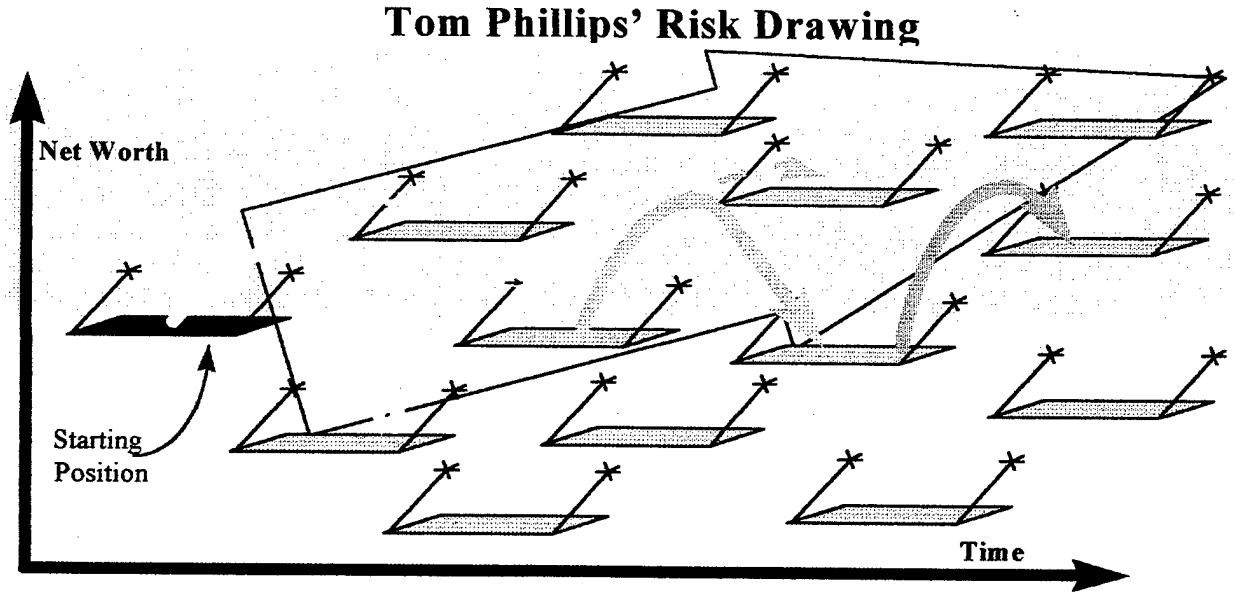

Figure 2-3

This act drew immediate mock disgust from Jean Plarren.

"Gawd, Mary," she said in a voice a bit louder than John would have liked. "There're drawing on napkins again. Let's get out of here."

Mary Hendrick chuckled and grabbed for her purse. As she began scooting out of the booth she told Phillips, "Jean and I are headed out into the mall to look for some running shoes. We'll see you back here in forty-five minutes."

Jean Plarren gave her husband an "I told you so" look as she followed her friend out of the booth. John Plarren thought she was telling him, "See, other folks get tired of that crap, too." He gave his bride a smile that tried to look naive and loving.

As the two men watched Jean and Mary exit into the raw capitalism of the modern America, they heard a sarcastic and familiar voice just behind them.

"Most of us enjoy the company of our wives and girlfriends. We try not to run them off. You two must be innovators,...or maybe just not all that smart."

Plarren and Phillips turned to see the grinning countenance of Walter J. Wildner. Both knew Wildner fairly well. Wildner had been an infantry captain in Plarren's battalion when Plarren was a lieutenant. Wildner had taken the money offered to leave the Army during the drawdown and turned it into a Masters in Business Administration. His business connections had led him to Phillips.

"Good thing you're here, Walt," said Phillips. "I can add that intellectual gem to my notes on pure genius."

The trio exchanged a few more salvos of sarcastic greetings before Wildner assumed the departed women's spot in the booth.

Without waiting for the conversation to drift off his chosen subject, Plarren quickly directed Phillips' thoughts back to his drawing.

"Tell me about your Picasso on the napkin, Tom," Plarren said.

"Oh,...right,...investment risk picture," began Phillips. "Think of several platforms attached to a wall. Some of them have very sturdy moorings, others spring loaded ones, and still others weak and faulty connections to the wall. Every night when I go home repair crews work on the moorings. I don't know exactly what they do, but they work slowly. Every day when I come to work I start on one of the platforms and try to jump up to a higher one. I get to watch others jump, too. If I get the right set of binoculars, I can see many of the characteristics of the moorings. With that, by watching how they respond to others' jumps, and by checking how they have performed in the past I can craft my plan. Small jumps are easier to make. Generally when I make small jumps, I have less of a risk of falling and, if I fall, will fall a shorter distance. My boss has a rule that I can't try to jump higher than a certain distance without his OK. The shading you see about halfway up on the horizontal represents the status quo, my aim point."

"Your picture of risk; right, Tom?" asked Wildner. When he received a nod, he pulled out his ever present leather bound organizer and started going through its contents.

Plarren took little notice of Wildner's work. Since Jean was now gone, he was busy with his notebook trying to capture the conversation up to this point and the applicable elements of Phillips' conceptual napkin. His scribblings kept him occupied enough that he missed the waiter refilling the table with beer. When Plarren finally looked up he was met with two smiling friends and more sarcasm.

"May we continue, John?" asked Wildner not trying very hard to conceal the mildly snide nature of the remark.

"Some of us didn't stop," Plarren retorted.

Without waiting for Plarren or Phillips to say anything further Wildner said, "Tom, you having always been civilian scum like I am now, won't remember what I said to young Lieutenant Plarren when he was attached to my company. John, what was that weird element of my commander's intent? Do you remember?"

"Walt, there were a great many things weird about your commander's intent as I recall," answered Plarren, not knowing the direction Wildner wished to go.

"Good Lord, young man, did you learn nothing under my tutelage?" blurted out a smiling Wildner.

Plarren reflected for a moment and felt certain that he had greatly improved his ability to manipulate expletives while under Wildner's command. He suspected this was not the appropriate answer, though. Wildner did not wait very long for an answer.

"Catastrophic,...Help me here, John, ...catastrophic what?"

"You always told us your definition of catastrophic failure, Walt," said Plarren, mildly relieved he'd got this one right, though apparently unsure of the connection.[40] "I give up," he said after an instant or two. "How does that relate to this conversation?"

"You don't understand where I'm going with this, do you, John?" queried Campbell.

Plarren thought of several tempting responses to the question, but assessed their respective values and opted for only a "No."

"Risk 601--a graduate level business course--is now in session," Wildner continued. "I'm sure Tom just talked you through Risk 101. Based on his picture, I can see you learned a lot. A reasonably sized business, or a unit in battle for that matter, is a complex organization. Even on a good day the business world and the battlefield are fraught with ambiguity and uncertainty.[41] Clausewitz's fog and friction are everywhere, even in great organizations. Even *if* you could conceptualize and find all the hazards out there, you couldn't mitigate or control all of them. The fog prevents complete identification of all the hazards and the friction makes the mitigation of all of them too expensive. Don't despair, though. It's lucky for us we don't have to."

As Wildner let the meaning of his last sentence sink in, Plarren admitted to himself that Wildner certainly had his attention, now.

"What are the possible outcomes of a risk?" Wildner asked. "Here's a hint: One of them is success."

"OK, Walt," Plarren responded. "The other is failure."

"That was too easy. I'll bet he's got you, John," said a smiling Phillips to Plarren. Plarren gave Phillips a quizzical look just as Wildner continued.

"John, you let me trick you into assuming this was a simple situation; that there were only two possible outcomes and that they were mutually exclusive. That's not the case. Look at my first drawing."

Walt Wildner's First Risk Drawing

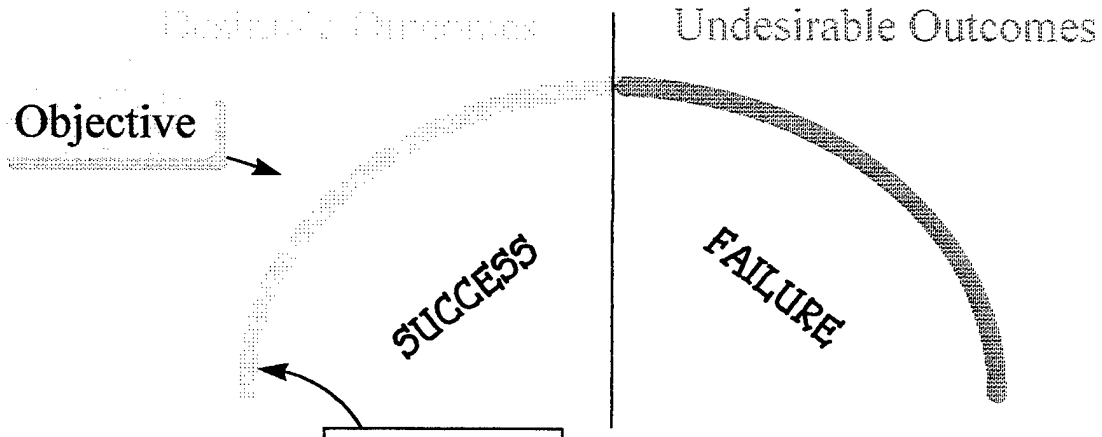

Figure 2-4

"You talked about a world that looked like this. I've drawn an arc that represents all the possible outcomes of a risk. You saw things as good or bad with our objective somewhere on the good side. Sorry to bust your bubble. The situation is more complex. Look at the second drawing."[42]

Walt Wildner's Second Risk Drawing

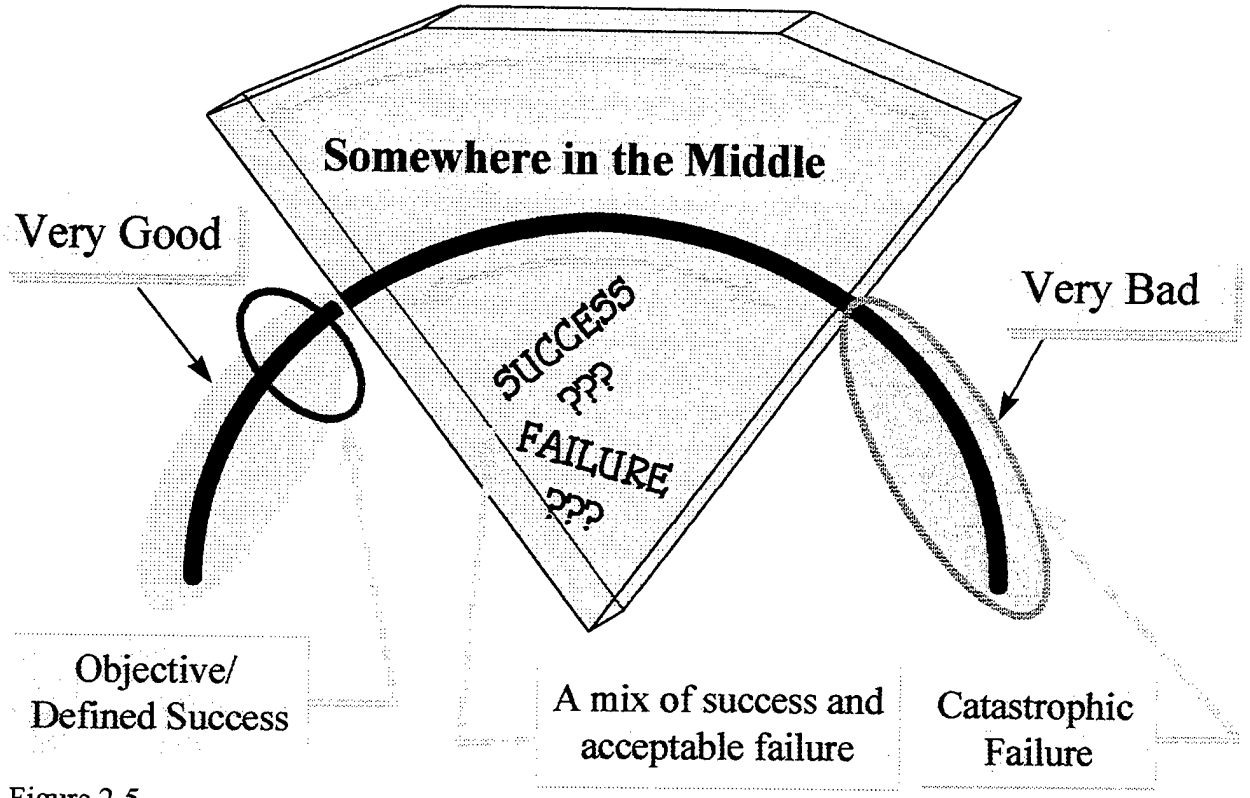

Figure 2-5

"This is the real world, my friend. We know intuitively that on one end of the spectrum we'll find outcomes that are very good. On the other end of the spectrum they are very bad. We generally draw a smaller circle in or near the one showing "Very Good" and call it our objective, our definition of success, our goal, or something like that. What we need to do is tell our subordinates where that "Very Bad" circle lies. That's our catastrophic failure; outcomes that are patently unacceptable. The hazards that could put us in that circle are the ones we need to mitigate."[43]

"See, John, if I can just keep us from experiencing a catastrophic failure, that puts us at least in the gray area I've drawn there. Unlike several others who view risk differently, I know that I am in a dynamic system; my subordinates will act independently to create success and thwart failure.[44] I pointed them toward my objective with a vision, or intent, statement, *and* away from catastrophe by defining it and taking some mitigation actions myself. All the things I normally do as a leader help my organization get to my objective. With this approach I only work to prevent us from falling into the red circle. Solely my preventive efforts get us in the gray, that area that contains a mix of success and failure. The remainder of the efforts of my subordinates and I get us moving toward the green." [45]

Wildner took a breath to allow his friends the chance to think about his words. He continued by asking, "Everybody speaks pejoratively about a zero defects environment. Tell me why."

"Not too tough a question, Walt," said Phillips. "You're not allowed to make mistakes. It tends to cause leaders to micro-manage, to supervise very closely so that nothing goes wrong; nothing for which they can be held responsible."

"You are, of course, right," continued Wildner. "But we should remember that mistakes don't represent absolute failure, *per se*. A mistake is an event, the full benefit of which has not yet been turned to your advantage.[46] Word choice is important, here. You won't find many business theorists talking about the value of 'failure.' They'll talk about mistakes, glitches, bungles—you decide on your own idiom—but the word 'failure' has too many bad and abject connotations.[47] Over the long term I can learn things and use them to my future advantage by experimenting, by taking risks. The better I craft these risks, frame the risks, the more likely I am to find long term success.[48] That's what's so

important about the middle ground in my drawing. We've all got to understand that results in that area aren't 'bad' if we use them correctly."

"OK," said Plarren. "How do you determine who can approve risks?"

"That's pretty tough. I don't know of anyone who has an exact system for quantifying that the decision to take this risk or that one must be made by a certain individual. I mean, I haven't seen a table or anything that clearly delineates responsibility.[49] Right now business management theory is pushing innovation. You can't do that without taking risk.[50]

"Business theory says to attack that ambiguity with mentoring, doesn't it?" asked Phillips. "Business theory buys into the idea that the systems are complex enough that it takes some kind of intuition or genius. If someone isn't doing well with risk, they assign someone more experienced to help."[51]

"Yeah, that's one bit of advice, but I don't think we've got the answer in concrete terms. The thought ties into Peter Senge's thoughts," said Wildner. "He talks about Learning Organizations succeeding in the future."[52]

"Wait a minute, Walt," interjected Plarren. "I can't understand how an organization can learn. I mean,...an organization is really a collective of individuals. Tough to believe that those lines on the organizational chart are 'learning.'"

"In truth, a learning organization is a misnomer," responded Wildner. "Teams in the organization are the ones who actually learn.[53] That's an important point, in my opinion. It takes the individual doing something or knowing something, then acting in a smaller collective, before the organization can improve or perform that function. Look at Senge's first discipline; it's personal mastery.[54] The individual skill must come first."[55]

"I think I'm following, here," said Plarren looking up from his notes. "But are you saying there is no formula for determining risk approval?"

"I may not have an answer, John, just a few points that relate. One thing I'll tell you is that we've got to be careful that we don't evaluate things in an artificially simplistic vacuum. It's easy to conceptualize a micro-world that contains very simple cause-effect relationships and come to the wrong conclusions. Innovation—remember that's risk-taking—almost always happens in a complex environment where there is no such thing as a truly discrete event.[56] Sometimes solutions are counterintuitive and we may only find them through experimentation.[57] Here's another point that relates back to Senge's work. Shared vision is the way we synchronize our efforts.[58] Leaders establish the vision and pull their organization, they don't push it.[59] Creating a shared vision and reducing feedback delay to their subordinates may be how we mitigate hazards to success."[60]

Phillips entered the conversation now as the deductive pupil, if not teacher, "Based on your point about the difficulty you guys have objectively defining one's authority to take risk, it seems that perception of that abstract quantity or quality of risk is pretty important. It seems that evaluation of the risk is highly personality dependent."[61]

"Right," responded Wildner. "That perceptive ambiguity may contribute to a trend to be willing to take part in risk oneself, and less willing to allow others to risk.[62] That's dangerous. Reengineering, innovating, they can't take place if just one person or echelon is empowered to act."[63]

"Holy Day!" exclaimed Phillips. "You want danger? The ladies will be back any minute. Based on the circumstances under which they left, we better be ready to go when they get here."

The three men flagged down their server, paid the bill, and collected their belongings. Phillips and Wildner headed out into the mall leaving Plarren seated at the table.

Through the open doors of the restaurant John Plarren watched his two friends walk out into the mall. He saw them meet his wife and Phillips' girlfriend. The two groups paused and began talking. Plarren hurried to summarize his discoveries before Jean tired of exchanging friendly small talk. When he finished his notebook held the following annotations:

- Investors and other financial risk disciplines (Plarren called this his third sphere of risk theory) see a risk as containing opportunity; both hazard and gain are possible. Without the hazard there would be little or no opportunity.

- Practitioners of risk in this sphere frequently measure risk by using beta. Beta is a volatility index of a specific commodity with respect to the market as a whole.
- Sphere three sees research and timely information as a way to reduce hazard likelihood and severity.
- Losses and gains from one risk in this sphere can be applied against other losses and gains. This allows an entity to "hide" failures with offsetting gains. In addition, it can result in debilitating consequences of a multitude of minor failures–insignificant losses happening many times produces an aggregate significant failure.
- An individual's or entity's authority to take risks can be expressed in terms of maximum potential dollar loss.
- The aim point is generally the status quo. Success extends the status quo to a favorable outcome.
- Sphere four (leadership and management) see mistakes and failures—the results of encounters with what spheres one and two would call hazards—as opportunities to learn and improve performance in the long term. Sphere four doesn't see hazards as universally "bad."
- The inherent uncertainty in sphere four may mean that encouragement to conduct loosely controlled experimentation is the key to finding solutions to complex problems.
- It is very difficult to quantify risk authority in this sphere. This is true for at least two reasons: 1) gains and losses do not occur in a common currency, and 2) system complexity yields uncertainty and potential outcomes are ambiguous.
- In sphere four one cannot generally directly transfer gains achieved with one risk to offset losses incurred by others
- Sphere four also shares with sphere two the belief that the system is dynamic. One leader or echelon is not required to do all the work. Subordinates can solve problems and learn lessons without any action on the part of another leader or echelon.
- Aim point selection is much more subjective and abstract in sphere four than in the first three spheres. Aim point specificity is also much less concrete than the first three spheres. The first two spheres can quantify the absence of events (accidents) that cause more than some type or amount of cost as an aim point. The third sphere can quantify a dollar figure for an aim point. In addition to the subjectivity of the selection, the method of selection is much more personality dependent than the other spheres.
- The perception of the degree of risk, not the actual risk, guide actions in most of the above environments. (Only the third sphere, with its ability to quantify risk numerically using a common "currency", is generally free of this characteristic)
- In both spheres three and four payoff perception varies greatly between entities.

Chapter 3 Focus on the Military

The Distinctions: Legions and the Citizenry[64]

John Plarren sat patiently in the lobby area in the headquarters of the Second Brigade. He was already acquainted with the man for whom he waited. Nine years ago *Sergeant* John Plarren had worked with the Second Brigade Command Sergeant Major, CSM Robert Quarters, when Plarren was in the supply company supporting Quarters' battalion. He felt a bit awkward now calling on Quarters as an officer. In Plarren's mind Quarters still remained the superior, even given the formal rank disparity. Quarters had been a Command Sergeant Major longer than Plarren had been an officer. Quarters' exploits in combat had been chronicled in at least one book. He had earned a college degree and Plarren suspected he was working on his masters degree. Plarren sometimes thought Quarters was what the Army had in mind when it initiated the Command Sergeants Major program.[65] He could think of no better person with whom to talk regarding the differences between the military environment and that of the civilian world.

As Plarren sat waiting he pulled out his notebook and read again a characterization of the Army he'd pulled from an article. It sounded like the school solution for how to build a risk averse organization.[66]

> Our Army is a hierarchical organization and one already drawn to caution by the potential cost of mistakes. Its ranks are filled with leaders who have Type A personalities, who must be promoted to be retained, who are formally evaluated at least annually, and who hold their positions for no more than two years.

Plarren flipped forward in his notebook to another tabbed section that talked about risk aversity and some potential reasons for its existence.

> The fear of failure scares off many comers to the risk-taking game. They know that the second core precept of both military and civilian theories states that risk takers—even smart, experienced ones—will sometimes fail. For many the short term hiccups of occasional failure loom larger than do the macro payoffs farther down the road. It's very tempting to back away from the edge and play it safe. The logic seems to say that if you're not doing anything, how can you possibly be doing anything wrong? For leaders in short term positions or ones that must show tangible net positive results in a short time it's easy to see success in risk aversity.[67]

He thought that at least a few of those characteristics were unique to the Army. His thoughts were interrupted by a jovial snarl from across the room.

"Now there is an officer who we just might be able to make into an NCO!" said the smiling CSM Quarters. "Come on in, sir. It's been too long."

Plarren stood, shook the CSM's hand and walked into his office.

"The concern is not whether you can make this soldier into an NCO," Plarren told the Second Brigade's senior NCO. "I have NCO-ERs that say that is a hopeless cause. The real issue is now whether or not we can let him command a company of your troops."

"I'll leave such determinations to Colonel Jones, sir. He seems more than capable of that," responded Quarters. "Sir, this is Sergeant Major Hank Wilson, our operations sergeant major. Do you mind if he joins us?"

"Not at all," said Plarren as he and Wilson shook hands. Plarren sat in one of the chairs and continued. "I can use all the help I can get. I'm trying to understand how a leader effectively takes risks and then try to align that with Colonel Jones' philosophy on risk-taking. I really need assistance right now trying to define what makes our military environment—specifically Army combat battalions and below—different from a civilian environment. Like I told you on the phone, Sergeant Major, I've looked into civilian risk theory. I want to ensure I don't try to accept something that works in the civilian world and try to apply it to the Army if the differing environments invalidate it. I've already listened to at least one lecture from a field grade officer deriding anything 'touchy feely from the business community.'"

"Sergeant Major Wilson and I have been talking about that very thing for the last several minutes," said an again smiling CSM Quarters. "Show him the list, Hank."

Wilson rose from his chair and pointed to a board next to the door to the office.

"Sergeant Major Quarters called me yesterday after you spoke to him. We told a few of our troops to do some homework last night and think up one distinction each. The sergeant major and I distilled the list down to these eleven."

Plarren read quickly through the list.

1. Leaders don't select or hire Army "employees" (soldiers).
2. Army "workers" have a signed labor contract unlike any union's.
3. Small unit people turnover is higher than any business could tolerate.
4. Army "workers" are much younger than vast majority of businesses.
5. Army leaders have great deal more power over "workers" than civilians.

6. Army leaders' responsibility to subordinates doesn't end when the whistle blows—they control subordinates' time 24 hours a day, 7 days a week, etc.
7. Army "workers" are expected to accept the risk of death on the battlefield in order to accomplish their mission.
8. Soldiers "work" in an environment of deprivation.
9. Soldier motivation to act is directly related to team cohesion.
10. Army organizations face much greater mission and condition uncertainty.
11. Day to day Army work (training) doesn't precisely match its mission (warfighting).[68]

"A few of these may need a bit of explanation," said Wilson without a change in expression, inflection, or volume. "Number seven may find those who would argue that policemen, firemen, and some rescue workers qualify for that description. That's superficial analysis, though. The fact is that those people accept danger as a condition of their employment. That's not all that different than a high rise construction worker or race car driver. Battle is quite different. Even the most dedicated maneuverist has to apply firepower on his opponent to win in battle. We conduct engagements by killing the enemy and vice versa. That's not how we fight crime, extinguish fires, rescue trapped skiers, or build skyscrapers."

Wilson paused for comment. Receiving none, he continued.

"Number ten may also bring out the skeptics. ATT runs communications networks. They understand their customer base. They must have a pretty fair comprehension of their competitors, too. Not true of you and I. In the next quarter the brigade team will have units fighting high intensity at the NTC with a parent headquarters for whom they have never worked, a battalion training for a future fight on the low end of the spectrum at JRTC, a no notice fly away NEO exercise, and send a provisional battalion to perform at an air show in Ohio; *and that's just the plan.* Riots, hurricanes, wars, skirmishes, floods, and public affairs *may* all be on our plate in the future—we just don't know if, who, when, or where."

"Did you consider saying something about the difference in published standards between the military and civilian environments?" asked Plarren of Wilson. "I mean, my troops will have a comprehensive description of every task, condition, and standard I expect them to perform. Isn't that different than one would find on the outside?"[69]

"No, sir; not true. That statement reflects our misunderstanding of the civilian world," interposed Quarters, kindly ascribing Plarren's individual logic faults to a collective delusion through his use of the word 'our.' "Many civilian disciplines have similar publications. If you think about it, work on an assembly line is much less dynamic than a private finds in battle. That static environment more readily lends itself to the establishment of a rote list of actions supervisors expect of an employee."[70]

"OK. Sergeant Major, if you had to pick from this list the characteristics that offer the most pronounced distinction between the Army and the civilian world, which would you pick?" further queried Plarren.

Wilson turned to the board and gave it a pensive stare. Again without emotion he responded, "It has to be the last four. Out of those few, I'd say numbers seven, ten, and eleven are very distinct. If I had to boil the differences down to an absolute minimum, I'd go with those three."

"This is great stuff!' said Plarren. "Let me just copy these down in my..."

"Come on, sir!" interjected Quarters. "I've already 'E Mailed' them to your house. If you need a hard copy, take this one. You didn't think you'd ask for a list and I wouldn't give you one on paper, did you?"

"If I did think that, I sure won't admit it," came Plarren's somewhat embarrassed response.

"Don't worry about it. My motive for having the lists already made has as much to do with schedules as anything. Wish we had more time today, sir," said Quarters as he gestured to Wilson. "Both of us are about to be late for some training; we need to leave ASAP."

"I think you've given me what I need, gentlemen," said Plarren. He sighed and looked back at the board before continuing, "I'm never really sure I'm on the right track on this, though."

"Don't let that bother you too much, sir," said Wilson. "I'm told Einstein died still looking for a Unified Field Theory. He never found it. That doesn't mean his search didn't produce tangible benefits for himself, those around him, and those of us who follow in his footsteps."[71]

Plarren's quizzical look finally produced a smile from Wilson who explained, "No, I'm not taking masters courses like Sergeant Major Quarters, here. I've just got a scholarly high school aged daughter that's pretty talkative at the dinner table. She's proven that even dad can learn in the right setting."

As Plarren drove away from the brigade headquarters he thought about SGM Wilson's closing comment. Plarren had a goal, some information, but no answer or solution, yet. Maybe this was the creative tension of which Senge spoke.[72] Whatever it was he needed to synthesize his distinctions and determine how they effected civilian risk theory when applied to the military.

The Distinctions: So What?

An old friend had told John Plarren that you can talk while running. If you cannot talk, you are racing.[73] Racing with another person was a physical activity. Running with someone required both mental and physical effort. Given that definition, Barry Cirone and he were running.

"OK, John," Cirone said after about two and one half miles of hearing the staccato version of Plarren's thoughts on the taxonomy of risk theory and the civilian-military environment distinctions. The famed question arises. So what?"

"It draws the famed response," responded Plarren. "I don't know."

"You're honest, John," continued Cirone; then adding with his deadpan mirth, "That may get you a job delivering pizzas." After providing Plarren with a courteous interlude with which to formulate a caustic reply, Cirone continued.

"Here's my assessment. Uncertainty and training mismatch are the significant differences in my book with respect to this topic. Danger, the third one Sergeant Major Wilson gave you, contributes to the magnitude of the distinctions of uncertainty and training mismatch. As you apply those to the differing risk theories you noted, it seems to me you've invalidated the techniques of your first sphere. How can one expect to find every hazard in an environment that's fuzzy and in which you spend little time; have little experience?"

"Well, Barry, I don't know if I can..." Plarren started to respond.

"John," interrupted Cirone. "I considered the answer obvious enough that I asked the question rhetorically. Your sphere one process may function well in relatively stable environments, but it creates the 'if, then, do loop' from hell on the battlefield. If you accept that process, you'd need to reevaluate both hazards and controls every time conditions changed. If conditions constantly change you have never ending work that produces no product."

"You're right, Barry," Plarren said as Cirone took a few breathes after his sermon. "If the Army's risk management doctrine falls in this sphere, that may mean it's conceptually bankrupt when applied to the battlefield. I need to look into that some more."

"Some form of Willie Campbell's approach may be the answer in terms of modification to lend validity to the sphere one process for our training, John," Cirone wheezed as they churned up the steepest hill of their route. "If we are going to start our process by looking for danger, we've got to have a better idea of where to start looking than simply looking everywhere. That whole mindset is a little wacky for our line of work. Shoot, if you want to make a plant as safe as it can be, I can do that. Lock the doors and let no one in. You know we Army folks perpetuate the same type of lunacy when we have our soldiers shout back to us that the number one priority on the rifle range is safety. That's not true. The number one priority is to qualify soldiers, or zero the weapons, or whatever is the training objective. If avoiding injury was the top aim, we'd never go there. Whatever framework we adopt has to concern itself with results. That's where the process should start."

Cirone and Plarren crested the hill and turned down Kinnison Road's long slight downhill past the elementary school. Cirone was silent, apparently both pleased and amazed with himself for his somewhat profound deductions of

the past mile or so. Plarren thought he could see Cirone rechecking the logic of his statements to see if the beauty of their conceptual foundation matched their brilliance when spoken in haste.

The noises of the elementary school playground at recess pulled Plarren's attention away from his analysis of his friend's mental process. He found himself transfixed for a few moments watching the kids play. Small knots of children running around in patterns that seemed to make sense only to the participants. A few teachers—some grading papers or reading literature—hovered near the building exit and occasionally raising their eyes to check on the children's exploits. Plarren saw his neighbor's daughter pushing her younger sister on the swing, evidently reveling in her role as playground pedagogue. The younger sister did suffer in this relationship. Waving to Plarren with both hands, she fell off the swing near its forward apogee. This disaster—in the eyes of the younger girl—was short lived, though. Her elder sister picker her up, hugged her, appeared to provide some limited instruction on the use of one's hands while engaged in swinging, and the fun began again. The happy ending made Plarren feel a bit less guilty over his short snort of laughter when the girl first fell. He imagined that some day this "Swing-Hand Lesson" might get passed one to some other child. Cirone's burst of audible thought brought Plarren back from the playground.

"Yup," Cirone announced, obviously finished checking his logic. "The paradigm's gotta recognize, and maybe leverage, the dynamic and unfamiliar nature of our environment."

Cirone's burst of intellect and his use of the word 'paradigm' caused Plarren some concern. He'd always thought Cirone an intelligent, but nevertheless charter member of the Luddites of America. Multisyllabic buzzwords were not his norm. Plarren assumed his friend's head hurt, so he steered them for home. Along the way he made a few mental notes for later transcription to his growing collection:

- Application of civilian risk theory to a military environment must be tempered by a realization of the distinctions between the two environments.
- Combat brigades are very rarely able to practice—train—in the environment in which they will operate in when fighting (Training-Mission Mismatch).[74] Even the most sophisticated environments only mildly replicate the danger, complexity, and uncertainty of the battlefield. The degree and nature of danger on the battlefield, the environmental uncertainty with respect to potential missions and conditions, and the Training-Mission Mismatch are the most important and significant distinctions for the purpose of identifying transferable insights from civilian risk theory to the military.
- The framework of a substantial military risk theory should have its genesis in the desired results of the risk it wishes to achieve.
- Don't let go with both hands until you want to get off of the swing.

Discovering Key Aspects of Military Risk Theory

"I'm anxious to hear what you've discovered, John," began LTC Jones as he leaned back in his chair. "My spies tell me you're working on understanding risk theory."

"Right, sir," began Plarren, a bit too uncomfortable back with this denizen of risk-taking thought. "I tried to get my arms around this monster by looking into risk theory in the civilian world. Sergeant Major Commare essentially warned me that I might not find that for which I was looking in doctrine."

Plarren looked at Jones expecting some comment. Jones only nodded so Plarren continued.

"I developed some understanding of risk theory in the civilian world and put them into four categories: traditional risk management or safety theory in sphere one, a pragmatic twist on risk management in sphere two, investment and money management in sphere three, and business management and leadership in sphere four."

Plarren had just presented Jones with a typed copy of his taxonomy of risk theory when the battalion executive officer, Major Mike Chara, stuck his head in the door after a perfunctory knock. Chara paused for the thirty or forty seconds it took Jones to skim Plarren's work.

"Sir," began Chara. "Your 1400 meeting with the brigade commander just got bumped up thirty minutes. I told the brigade adjutant that I'd have to get your OK before we approved the brigade commander changing the meeting time; he wasn't impressed."

"Nor should he have been, Mike," chuckled Jones. "It's too bad for you, too. Now you're stuck sitting in here as young Plarren here teaches me. The subject, XO, is risk theory."

Chara smirked and took a seat.

"Well, John," Chara said looking at Plarren. "This might prove interesting for all of us. When it comes to the Jones' theory of risk-taking, I started out a heretic, advanced to cynic, and now lie in the skeptic range."

"I was just showing the colonel my, ahh..."Plarren began.

"This is his taxonomy of civilian risk theory, Mike," said Jones, completing Plarren's statement. "Looks credible to me."

Jones passed the two typed pages to Chara before he continued addressing Plarren.

"Have you considered whether civilian risk theory in any of your spheres is applicable to the military atmosphere?"

"Yes, sir," Plarren answered, passing his commander another list. "I've had some help developing a list of distinctions. With similar help I refined those down to the ones that most distinguish the two environments."

"Good," came the thoughtful response as Jones perused the latest offering from Plarren. After a pause he added, "Good synthesis of the effects of those distinctions, too."

Chara returned the risk taxonomy to Jones in exchange for Plarren's distinctions. Chara nodded silent assent as he read.

"Now the graduate level stuff, John," said Jones to Plarren. "Have you characterized the Army's environment? You seem to have concluded that we live in a dynamic atmosphere, but I think any effort at developing an understanding of risk-taking in the Army needs first to be able to divine the salient characteristics of the organization itself. Does that make sense?"

"Sir, we need to hose you down again," said a laughing Chara to his boss. Then turning to Plarren he said, "Our good colonel sometimes shifts to polysyllabic speech without warning. What is true about the Army as an organization that could impact on it as a risk-taking entity? For instance, what are the tenures of the officers in this unit?"

"I'm sure I'll command for about four or five years," began Plarren. "I understand the other commanders will only get twelve to twenty-four months. I assume the lieutenants will get about one year in any one position.[75] Those details aside, I think I see where you want me to go, sir."

"Don't just deal with officers," added Jones. "The idiosyncrasies of NCO assignments, schooling, tenure, etc., play a large part in leading this unit. You understand; you're on the right track there."

With Plarren and Chara both silent for a few moments, Jones began speaking again, "John, let me offer you a few ideas on how to proceed."

Plarren tried hard not to appear disappointed when his commander made that statement. He'd hoped that his new boss would express pleasure with his work, give him the keys to knowledge, and send him on his way never to sin again. It sounded like he would have to do more work.

"Given a superficial glance, your work so far is very good. Have you considered military risk theory?"

"I have not looked at doctrine, sir," Plarren sputtered. "Sergeant Major Commare told me he thought I should start with the civilian stuff. Besides, I don't recall much in doctrine about the kind of risk of which we speak."

"*Theory* does not equal *doctrine*," said Chara. "The reverse is also true. So have you found out anything from military risk theory?"

A frown furrowed Plarren's countenance momentarily before he could spout off a quick, "No, sir. Not formally, anyway."

"Find out," responded Chara quickly.

"Not quite the Socratic approach I'd envisioned, Mike," came the mild scolding from Jones to his second in command. "His advice is good, however, John. You need to look at military risk theory. You said you didn't think you'd

get much from doctrine. I'm not sure that's entirely true, either. You need to look there, too. Hell, since we have Chara, here, so recently graduated from the gem of the Army education system, let's make him talk about it."

Chara grinned at the reference to his recent graduation from Fort Leavenworth and said, "There's really quite a collection of military risk theory, John; both historical and present day. The German Army of World War II displayed quite an example of risk theory put into practice. They worked to inculcate their officers and soldiers with a risk-taking nature. Auftragstaktik, the concept of operating on mission orders, is essentially their invention.[76] It's interesting to note that they saw the quality of their officer corps as so important that they did not reduce their commissioning standards even when faced with severe officer shortages near the end of the war."[77]

"BDM published an interesting essay related to this subject," Jones added. "Two senior WW II German generals and two serving American generals talked about how they would defend West Germany in the late 70's. The contrasts were stark. The Americans set up an active defense along the border. The Germans essentially left the Fulda-Frankfurt corridor undefended, banked on the Russians taking the bait, and expected to win big with a counterattack into a huge flank.[78] Let me tell you, that's a willingness to risk."

"That time period—WW I—must have been a great laboratory to compare leadership styles, and the willingness to take smart risks," said Plarren thoughtfully.

"WW II provided quite an opportunity to glimpse leadership styles, John," agreed Jones. "It showed us several examples of successful battle captains who took risks as a matter of course. These same men allowed their subordinates to make mistakes and learn from them. Patton, Gavin, Ridgway, and Guderian were disciples."[79]

"It also showed us the opposite, sir," came the view from the other side of the fence presented by Chara. "Montgomery, Collins, and Hodges were all commanders who distrusted taking risks. Montgomery in particular seemed to prefer having the odds overwhelmingly in his favor before he took action. He'd seen the British suffer horribly in the early war years and wasn't going to contribute to any more blood letting. In addition, none of the commanders I mentioned was famed for allowing their subordinates to error and lose their soldiers' lives. All this from commanders who were respected and maybe revered."[80]

"So WWII didn't validate risk-taking as the key to success in battle?" asked Plarren.

"Well, no. But, Chara's argument presupposes that these risk averse guys he mentions were successful," answered Jones. "...and would be in other environments—not just against the Germans at the end of WW II. Hodges may have been on the winning team, but I don't know that anyone is breaking down the door to get Courtney Hodges' secrets of warfare on the CGSC reading list. In addition, Collins sure thought he was a risk-taker himself.[81] In short, if it was that easy we'd have no argument. The question still appears in the present day debate."

Clearly on a roll, Jones continued, "The debate is not over by any means. Many renowned senior officers—some of the thinkers of our profession—criticize what they see as the current trend to try to eke out progress without making any mistakes. Our Army's CTC program is essentially testimony to the idea that errors can produce learning. There are plenty of others, though, who see errors as a loss; something bad; something to be avoided.[82] Let's face it; collectively we even avoid using terms like failure, error, or mistake except in the pejorative."[83]

"That may be part of the reason we're excited about the future. One of the promises of Force XXI is that it will reduce the requirement to risk," said Chara. "We'll know the situation well enough that we won't face the need to take chance."

"Now, this is one place we fundamentally disagree," responded Jones. "Situational awareness may well reduce risk-taking, but not reduce the requirement or the need for the same. It's easy to envision junior leaders, with their actions and the results visible to a great many people, being willing to take very few actions that could result in failure. They may even try to act only when directed so as to avoid a well documented mistake."[84]

"Another thing that leads me to think that situational awareness will not erase risk-taking has to do with the anatomy of risk. I see three inputs, three situational truisms, that require us to take risks. Ambiguity contributes to the uncertainty in any environment. Now you could argue that situational awareness will remove ambiguity and uncertainty, but the third characteristic of the environment—chance—means that we will not eliminate risk. Hence, we need to be able to take risk well. We need to productively take risk."[85]

"Jees, sir," said a smiling Plarren to Chara. "You think you've got something profound to say and the boss blows it in place."

"Yeah," Chara responded to Plarren with mock sadness and humility. "I don't know if I'll ever be able to express my opinion again,....OK, I can. I do know a few things that are critical, or at least damn helpful, to help establish a decentralized method of command."

Chara quickly wrote on LTC Jones' dry erase board:

1. Leaders must have a common approach to analyzing and solving problems.
2. Staff and units must execute their tasks quickly and to standard.
3. Leaders must be proficient in making decisions, acting, and using initiative within the commander's intent.
4. The people in the unit must respect each other.
5. The unit must work in garrison as it does in the field.[86]

"XO," Jones said to Chara now in patronizing and sarcastic manner. "Your last comments reflect that you can say intelligent things from time to time. While I don't buy into this hook, line, and sinker, it's a great primer."

"You said decentralized command, not risk-taking," asked Plarren of Chara, too serious right now to join in on the needling. "Why?"

"Decentralization, Power Down, initiative, innovation, delegation, command over control, all these are close cousins of risk-taking, John," answered Jones for his XO. "Each requires that the leader, the organization, or both take risk. Failure to take risk as part of the decentralization process is an invitation for disaster."[87]

"Wait a minute, sir," interjected Plarren as he looked more closely at Chara's list. "Don't those five things set the table a little too well? I mean, if my unit is all those things, aren't they writing books about it being the best unit ever?

"Your point?" came the slightly indignant reply from Chara.

"If everyone in my unit is Audie Murphy with a PhD, how can I fail?" explained Plarren. "And what's this about 'respect'? Is that more of the Consideration of Others junk? Forcing soldiers to hold hands and validate the idiosyncratic, Ptolemaic gripes of the most self absorbed ones in the group? Why would focusing on the individual's benefits over the team's enhance risk-taking,...er,...decentralization,...and lead to selfless service,...and...?"[88]

"Strike a cord, Johnny?" said Chara with a smile.

"First, you need to have a unit trained to do basic things well," interjected Jones as his newest captain prepared to resume his somewhat vitriolic segue. " It's easy to see that that would facilitate productive risk-taking. Secondly, don't discount the command climate in this puzzle, John. Try substituting the word trust for respect and see how that makes you feel. Brother Chara quotes my old battalion commander here. I think his thoughts here focused on climate and the idea that those who respect each other and dignify the actions of those around them are better able to look at the meat of the problems and successes. A healthy command climate makes risk fun, success easy, and occasional failures painful only in that everyone wants to succeed. Think about the dichotomy of risk for a moment. If you accept that you need individuals willing to risk themselves before you can have organizations that risk, it takes something of a secure environment to make that a reality."[89]

After the briefest of pauses Jones resumed. His quiet, but noticeable admonition preventing Plarren from continuing his diatribe and saying something in a fit of pique.

"You really need to pay attention to the concept of respect and trust, and perhaps less to the procedures developed by others in different situations that they hope will allow them to reach that vision."[90]

Chara recognized the uncomfortable silence and began anew by stating, "Another thing an old boss of mine was always pushing on us was the idea of taking responsibility when things go wrong. He thought that by assuming responsibility for errors, mistakes, failures—whatever you want to call them—in his organization, and passing the recognition for successes to his subordinates, he built a climate that encouraged aggressive initiative to achieve his intent. He worked hard to get us to differentiate between fault and responsibility. Responsibility came with the position.

Fault for error was a means of fixing future actions; a tool for learning. He didn't use fault finding as the first step in the witch hunt."[91]

"Let's talk of intent in a bit more detail," said Jones, still without a hint of annoyance over Plarren's earlier thoughts. "Our doctrine now tells us that intent should really have three elements. First, using a tactical setting, it links the mission to the concept,..."

"Sort of the concept of the concept," interjected Chara.

"I'll buy that, XO," said Jones. He continued, "Second, it should describe the nature of our audacity if we encounter unforeseen opportunity. Finally, it should paint a picture of how we should respond to everything going to hell in a hand basket."[92]

"I know this one, John," said Chara taking over from Jones. "We've got to understand how military risk-taking works. Let's face it, mission orders—the atmosphere that allows subordinates to operate using intent—is freedom, not license. That doesn't mean no constraints. It means we can take risks within the commander's intent, itself a constraint. A risk-taking environment is not just giving a leader a job and then leaving him or her alone to do as that subordinate leader pleases."[93]

"Now watch out," said Jones not missing a beat. "Some folks do see this risk-taking stuff as license to now do as they wish and think the *process* is the important piece. These people might say what's important is that they are taking risk, not that they are producing anything. This concept is a cancer. We take risks so that we can improve combat readiness; so the process is only important as it produces results.[94] That doesn't mean we don't experiment, but that sustained failure is unacceptable, and incredibly damaging—maybe fatal. Failure isn't the desired outcome. We just realize it's the occasional price of risk-taking. You see, this isn't about having the freedom to fail, it's about having the freedom to take risk--the encouragement to do things—that could end in failure."[95]

"And that is exactly what your commander has done, gentlemen," announced Jones looking at his watch. "I may just be late for my boss's meeting. Mike, tell me again what we're to discuss there."

Plarren excused himself from his commander and executive officer, crept into the temporarily vacant adjutant's office, and added some handwritten notes to his already typed risk taxonomy and distinctions list.

- It is possible to create a military environment that encourages smart risk-taking and train a cadre of leaders that embrace smart risk-taking.
- A good commander's intent facilitates risk-taking by providing freedom, but not license.
- Proficiency in basic skills and tasks—simple competence—facilitates risk-taking.
- Situational awareness may tend to erode a willingness to take risks.
- The tempo and fluidity of future battles and engagements make decentralized execution and low level initiative essential for victory.
- Better performance—combat readiness—is the goal of risk-taking. Failure is a by product of risk-taking. Accepting failure as the norm, however, is different than allowing occasional failures by aggressive, smart risk takers.
- Accepting failure as the norm is fatal to productive risk-taking--the goal of which is improved combat readiness.
- The US Army culture is word sensitive (like business) and defines words like failure, mistake, error, etc., pejoratively.

Chapter 4 The Risk Model
Army Organizational Characteristics and The Epiphany

The Plarren's quarters really occupied what John Plarren thought was ideal terrain. Plenty of shade, a nice patio overlooking a playground, not too far from the Officers Club, and astride some pretty good running routes. The location also granted him good neighbors, and in this case, drinking buddies. Plarren was taking advantage of most of

those positive attributes this afternoon as he and Barry relaxed after a run back from the gym. Sitting on Plarren's back patio, drinking a cold Miller, and idly watching some kids play and ride their bikes on the not too distant playground.

While his body relaxed, and he wished that his mind would follow suit. He couldn't shake his hunt for an understanding of risk theory in a military environment. He thought a few moments about the points that struck him from an article on the Army's environment that he'd grabbed from the table before assaulting his beer on the patio.

- Moving the Army in the direction of decentralization, of developing a supportive environment that focuses on long term results from the Chief of Staff on down, remains a monumental task. It will require changing our institutional culture in some very fundamental respects.
- In the short run a decentralized command environment is initially less efficient. The commander willing to delegate must be willing to underwrite the honest mistakes and shortfalls of these junior leaders. The officer who undertakes the challenge of putting his one opportunity at brigade or battalion level command on the line by instituting a supportive environment focused on long range organizational objectives must be considered by many of his peers to be either a fool or a hero—perhaps both.
- Obviously, mission considerations must remain at the top of his immediate agenda. How to accomplish this and at the same time provide a learning environment to develop subordinates through delegated challenges and responsibilities is the most unforgiving critical command dilemma.
- The pressure for combat readiness is overwhelming. The long term considerations inevitably take a back seat, at least in those units scheduled for early deployment.
- We don't want nor can we afford a two Army approach—training units and operational units.
- The up or out promotion policy, when coupled with short assignments, and a commander driven OER system has led to a widespread belief that "one mistake and you're out." Other pressures, such as the perceived need for advanced education, high level staff, joint duty, and so forth, contribute to widespread focus on managing one's own career and pleasing one's superiors. The consequent impact on risk-taking by commanders is obvious.[96]

This was pretty condemnatory stuff. Combined with the article he'd revisited just before seeing CSM Quarters, it pointed to an Army ill suited for risk taking. LTC Jones had been smart to tell him to think about the Army culture. His model, if he ever came up with one, would have to address these cultural attributes of the Army, as much as the abstract art of risk-taking.

Plarren's attention drifted back to the children playing. Just as he felt himself mentally slid away from his intellectual quest, he saw the penny at the bottom of the pool.

"There's the model, Barry," he blurted out to his friend. "There it is right there."

Cirone wiped with his shirt the half bottle of beer now on his chest and blurted, "Model?"

"The kids on the playground," said Plarren, now standing. "No appearance of order from the casual observer, but clear focus by the participants. They fall, but get up and learn what not to do. If someone hasn't skinned a knee off the slide for a while, there's prone to be a skinned knee again soon because they learn from mistakes, not really from the absence of mistakes. They tell their friends their lessons learned. Teachers only care about significant injuries and misbehavior, not every scratch. As long as the kids aren't really hurt, no one is punished or correction issued. Kids that don't slide down headfirst or jump off the swing, don't have as much fun as the ones that do."

"Risk, success, failure, lessons, reward, analysis,...," exalted Plarren as he leapt up and headed into his house. "Damn, Barry, it's all right there. I just needed to think about it."

Cirone gave his friend a puzzled look as Plarren scurried into his own quarters. Cirone had only the slightest clue for the origin or reason for this outburst. After an instant of thought he reached over and tried a healthy swig of the beer Plarren had been drinking.

The Outline of 100-Plarren: The Ideal Army Risk Taking Model

Plarren sat in the battalion conference room facing his battalion commander; LTC Ron Purvis, the brigade executive officer; and some gentleman to whom LTC Jones had introduced him by the name of Rusty. Spread out on the table that separated the discussion participants was Plarren's printed work. Centered in that conglomeration was his risk model, the focus of the other three gentlemen's attention.[97]

Recommended Army Risk-Taking Model

There are six requisite elements to an environment that encourages smart risk-taking; three leader imperatives and four institutional imperatives.

The leader must:
ENCOURAGE subordinates to take productive risks,
MANAGE institutional requirements at the leader's level, and
PROHIBIT failure as the norm.

The institution must:
INSULATE risk-takers from adverse actions based solely on their occasional and inevitable failures,
FRAME institutional risks, and
CAPTURE lessons learned from risk-taking experiences so as to continuously **IMPROVE** its risk-taking performance and model.

Recommended Army Risk Taking Model

Leader Imperatives

ENCOURAGE subordinates to take productive risks.
-Teach the value of failure, combat readiness as the focus of risk-taking, the anatomy of risk, potential outcomes, and methods to stratify risk authority.
- Encourage risk-taking, reward success.
-Counsel subordinates on their performance and discuss their failures.
-Identify the risk averse. Shape future events to make them proficient or to verify their inability to improve.
-Identify the risk proficient. Shape future events to more greatly challenge them.
-Set a risk-taking example.
PROHIBIT failure as the norm.
-Evaluate whether errors were aggressive (vice apathetic).
-Evaluate whether errors occurred while the risk-taker was operating within the commander's intent (vice having a dishonest or self-centered objective).
-Eliminate the truly incompetent or the proven unwilling.
MANAGE institutional requirements at the leader's level.

Recommended Army Risk Taking Model

Institution Imperatives

INSULATE risk-takers from adverse actions based solely on their occasional and inevitable failures.

-Evaluate performance and potential based on impacts that will be evidenced both during and after the rating period.

-Assume responsibility for failures resulting from productive risk-taking.

-Assess ability based on totality of performance and potential.

FRAME institutional risks.

-Establish commander's intent and define catastrophic failure.

-Resource subordinates to act decisively.

-Distribute uncertainty instead of centralizing it at one level or with one entity.

-Establish hedging actions to prevent catastrophic failure at the institution's level.

-Minimize constraints on subordinate freedom of action to the maximum appropriate level.

CAPTURE lessons learned from risk-taking experiences.

-Record events (inputs and results). Focus on errors and failures.

-Analyze recorded events and distribute the results of analysis.

-Archive records and modify practices to continuously **IMPROVE** its risk-taking performance and model.

Recommended Army Risk Taking Model

Definitions

Risk-entrance into a dynamic situation which will produce an outcome the nature of which cannot be prior determined to a large degree of certainty. Ambiguity, uncertainty, and chance together make up risk.

Catastrophic Failure- an outcome that produces prohibitive and/or unacceptable costs as determined by the risking entity's leader. It is normally an outcome that will have long term debilitating effects on an entity that will prevent that entity from surviving without significant intervention by another entity and/or that prevent the risking entity from performing its core functions for an extended period. (Catastrophic failures does produce benefits, but the associate costs are prohibitive by definition. When defining catastrophic failure we make no assessment of relative costs and benefits.)

Productive Risk-Taking-a program advocating and framing the taking of smart risks which includes a lessons learned capture and distribution system, compliance with commander's intent, stratified risk authority and identification of catastrophic failure.

Smart (vice bad) Risk-risk in which the product of the likelihood of an other than catastrophic failure outcome and the benefits of any other than catastrophic failure outcome is greater than the opportunity cost of the risk.

Recommended Army Risk Taking Model

Definitions

Framing-an act, shared concept, or decision (or series thereof) that constrains activities or establishes a common theoretical understanding.

Aim Point-the objective identified by the entity taking the risk. In the absence of the risking entity establishing an aim point, the aim point becomes that outcome which another entity with similar experiences, perceptions, requirements, and resources would establish if required to do so. The aim point is the dividing line between the negative and positive domains.

Failure-an outcome in the negative domain. An absolute concept only in theory in which it is possible to derive an outcome without any benefit. A very blunt measurement of outcome.

Success-an outcome in the positive domain. An absolute concept only in theory in which it is possible to derive an outcome without any loss. A very blunt measurement of outcome.

Responsibility-accountability based on formal or informal position, or relationship to the action or actor.

Fault-accountability for an outcome based on negligence.

"How do you quantify risk authority using this model?" asked Jones.

"I'm not sure I understand, sir," said Plarren.

"Do I just tell my troops to go out and run with scissors?" Jones expounded.[98] "Or can I somehow describe the range poles differently for the guys who are accomplished in the art versus the beginners?"

"FM 101-5 already tells us not to take a risk that would imperil our commander's intent," responded Plarren.[99]

"That's not quite that for which we're looking, John. Sometimes you have a good idea of the potential outcomes," said Rusty giving Plarren his own answer. "In those cases you can essentially line up the outcomes on a continuum and draw a line of sorts. You tell your bubbas that they can lose up to that line without annoying you; that's not too tough. When you don't know the range of potential outcomes, its a lot tougher to define someone's risk authority.[100] There are two techniques I encourage you to consider. The first allows you to define risk authority delegated to subordinates by subject. If I'm an executive officer, I could tell my adjutant that he or she has the authority to speak for me in any area involving personnel management except SIDPERS and officer assignments. The adjutant can make any deals up to the limits of my authority and I will back them up as if I had made them. This technique allows my subordinates to operate semi-independently, taking risks oriented on achieving the intent I give them.[101] Another technique is a bit more conceptually complex, but offers a more sophisticated approach. In a situation in which the range of potential outcomes is not clear, we can assume the potential costs of the risk are also unclear. Given that, we can't really frame the risk by telling our subordinates not to lose more than X. In this approach we define their risk authority by the opportunity cost."

"Is that the same concept as the opportunity cost I learned in my freshman economics class?" asked Plarren.

"Yes. If I embark on this risk, the opportunity cost is that which I lose the flexibility to do and the flexibility to avoid having to do. Many times this will take the form of a constraint on the risker's use of available resources. You might tell a subordinate that he or she is free to operate within your intent and risk as that leader sees fit as long as their actions don't prevent you from acting in a certain way or require you to act in a certain way. An example could be a subordinate's freedom to act within the intent as long as it doesn't prevent the superior from having the ability to mass the fires of the arty battalion and move two companies to conduct a hasty attack on thirty minutes notice against the enemy artillery.

"Both these techniques allow a leader a great deal of flexibility in defining risk authority and allows that leader to approach risk authority in different manners. These offer more surgical definitions of risk authority than the simple prohibition against imperiling the next higher commander's intent. That's a good upper limit for risk, but an intent

statement that meets the current doctrinal definition will already have that concept imbedded. With that let me suggest you add two more definitions."

Rusty turned and wrote on the dry erase board:

> **Risk Approval Authority**-that delegated permissive authority to an entity that quantifies the cost which, without seeking approval of another entity, the risking entity may expend.
>
> **Risk Opportunity Cost**-those actions or inactions formerly available to the risking entity (or that entity's peers, subordinates, or superiors) that are now unavailable based on the acceptance of a risk. The losses (and therefore the cost) may be temporary or permanent.[102]

"I don't agree with the 'no punishment for the risk takers' part," said Purvis moving on to another topic. "If a little bit of punishment will discourage them—they are a waste of our time. In addition, I submit that—rather than underwriting those with little aptitude for risk-taking—we should be searching for inspired or enlightened risk takers. As you allude, leaders with successful risk taking potential will always deliver a partial dividend or return on investment, so they are in relatively little danger of being pounded into the ground like a tent peg. What we need to do is look for someone with a little potential."[103]

"Insulating risk takers doesn't mean that they face no threat of a harsh word, or even punishment, sir," answered Plarren in defense. "Insulation just means you don't hammer them unless you look at the totality of their results—it's a requirement to evaluate with an eye toward the long term."[104]

"But why do that, John?" continued Purvis. "Shouldn't a professional officer be concerned about doing what's right, not what gets him or her promoted? Aren't we accepting a kind of careerism when we have this kind of element in a risk-taking system?"

"I thought about that, too, Ron," answered Jones in place of his subordinate. "I tend to agree with John, though. Many of us lament the collective and individual moral and ethical compass of our officer corps right now—a friend of mine who instructs at CGSC agrees with that estimate. But if that's the case, it will do us little good to just stomp our feet and say that our officers should not consider the effects of their actions on their careers, but should do what's right. That may be the 'truth,' but I don't see that as contributing to a willingness to take risk. John's system aspires to create an environment that will encourage risk-taking *and prevent us from losing competent risk-takers from the Army based solely on inevitable events*."

"Maybe after inculcating a generation of officers with the right values and an appreciation of risk-taking we can remove this element of his model from the way the Army operates," added Rusty.

"Give me an example of how I might do that were I the Army Chief of Staff," challenged Purvis of Plarren, perhaps not convinced of the answers to his last questions.

"So we're dealing in pure fiction, now," needled Jones to Purvis. "John, Purvis will be the CSA, I'll be an astronaut, and Rusty will be the Pope in this theoretical example."

Plarren decided this was lieutenant colonel humor and not in his domain. He answered Purvis directly by saying, "One technique is already being embraced by our OPMS XXI work. We're removing second lieutenant OERs from an officer's file after being promoted to captain.[105] Along those same lines, we might want to try allowing any officer to hide one OER from his file from a promotion board.[106] That would likely serve to encourage audacity."

"This whole thing," Plarren continued focusing again on the model, "is based on the idea that we operate in a complex environment. Inputs that produce discrete outputs are rare, if ever present. We must attack risk in a manner similar to that of management theorists. If we seek always to avoid hazards and potential pitfalls we cheat ourselves out of the potential lessons learned from the failures that would otherwise occur. In short, perfection not only causes us to dedicate resources and energy on a task or operation that would be better served making another operation or task merely 'good enough', but actually punishes us in the long term because we *do* it right, instead of *learning* how it's done right and how it might fail. This seems counter intuitive on its face, but only when considering a relatively simple and

small entity. Large, complex organizations learn by doing; by experimenting with minimal controls.[107] Large organization subgroups are dynamic components—they can act, learn and forget independently of the larger organization. As individuals look in retrospect at events without significant failures, they spend less energy figuring out, and less energy recording, why things went right, then they spend on events with tangible failures. We're loss averse by nature. This likely leads us to focus more on results in the negative domain. This increased attention leads to the opportunity to learn. Capturing the lessons allows the organization—a transient body of individuals—to improve."

Plarren paused to breathe. He assumed his evaluators were dumbfounded by his idiocy rather than impressed. With that as a backdrop he saw little reason not to continue.[108]

"If we proceed by rewarding the risk averse, those who are happy with small, safe returns, we do two things. We contribute to a vicious cycle; a reinforcing feedback loop in Senge's parlance.[109] Those leaders who take no risks and allow no mistakes 'succeed,' and then mold future leaders in their own image. Leaders reinforce timidity in action and create an environment of zero defects left in place long after they depart. In addition to developing a generation of flawed future leaders, this environment robs the organization of the payoffs productive risk taking could provide. We allow ourselves to waste resources because we could be getting a larger return. Risk may use up some resources, but the return on that investment will more than make up for it."

"Anything else, Professor Plarren?" asked the sarcastic commander of 1st Battalion, 178th Infantry to Plarren.

"A few other points, young man," said Plarren, hoping the humor went both ways. "Success and failure are not the binary exclusive set of outcomes the result from a risk. These terms are imprecise and recognize only two, precise potential outcomes. That's like saying that behavior is only either good or bad. A middle ground exists between accomplishment of the objective and catastrophic failure. This middle ground is a set of outcomes that contain a mix of success and failure. If a lesson capture system is in place, outcomes in this middle ground are productive over the long term; and likely not debilitating in the short term because they're outside catastrophic failure. Now, even outcomes that represent catastrophic failure can produce benefits, but we defined the costs of such outcomes as prohibitive. Here's a conceptual view of risk I cranked out on my computer."

Plarren placed his drawing in front of the two men.

Risk Theory Concepts

A View on the One Dimensional Result Continuum

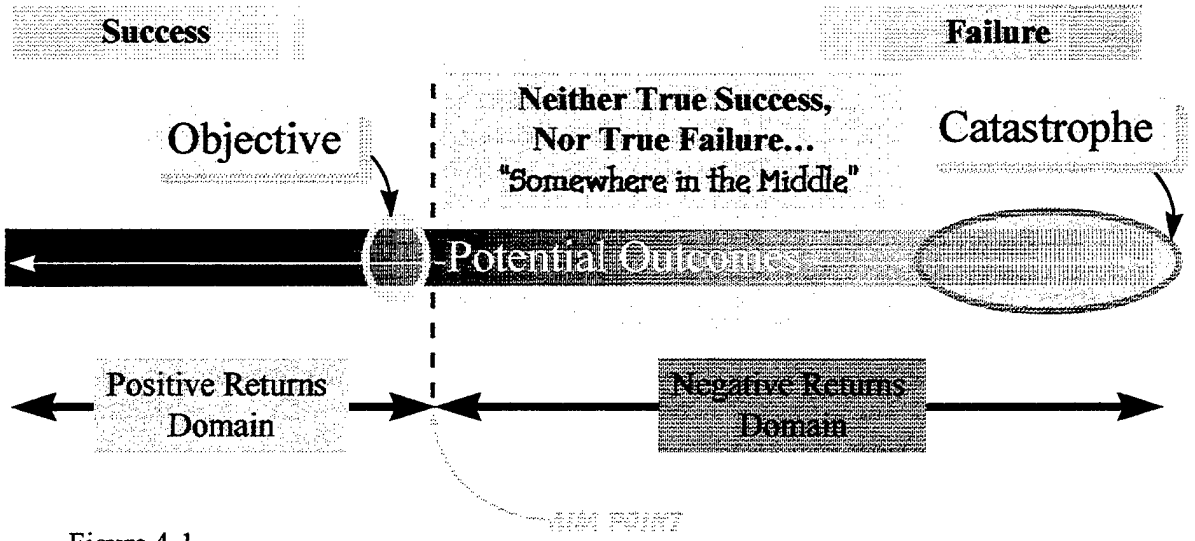

Figure 4-1

As his mentors considered the drawing he continued, "Given this and the presence of most of those conditions Major Chara wrote on Colonel Jones' board when he and I last met, constraints—other than intent—imposed by a superior on a risk or set of risks should only prevent catastrophic failure; make the situation 'good enough.'[110] This preserves resources of the higher headquarters for other actions, encourages risk taking by subordinates, and facilitates the capture and retention of lessons learned by the organization from the mistakes that *will* occur. Remember, good supervision is not a constraint, although it may enforce constraints already in place. Supervision should be a form of mentoring, counseling, coaching the risk taker."[111]

"...And if I have subordinates or a unit that doesn't live up to my old battalion commander's list of prerequisites, I can temper the risk taking to match their abilities by using the risk approval techniques we discussed earlier," said Jones continuing Plarren's thoughts.

"Do you believe in the so called 'Freedom to Fail,' John?" asked Rusty.

"As I told Colonel Jones a few days ago," responded Plarren, "we should push the freedom to risk, not really the freedom to fail.[112] We should focus on the positive potential outcomes of risk a priori, because that tends to encourage risk-taking.[113] Ex post facto we should focus on the failures because they help us learn. When a subordinate approaches us about risk we should tell him we're giving him the opportunity to succeed, not the opportunity to fail. After the risk we should discuss the elements of failure. We've got to remember that you can't *teach* risk-taking, per se. You can only create a learning environment that facilitates the process of discovery of the risk-taker within."[114]

"Tell me about risk," said Rusty. "In your model, who or what takes a risk?"

"There are two kinds of risk, " Plarren responded. "Many of the sources I used had common threads in this area. Of particular interest to me was the concept of individual risk—some speak of 'career' risk—as different from a kind of organizational risk.[115] For lack of better terms I called them micro risk and macro risk. It appears to me that one has to have the ability or willingness to do the first before the second can occur. Your focus, Colonel Jones, on command climate the other day supports this view.[116] I don't think that leaders can simply teach micro risk skills and assume that good macro risk skills exist. This would be like assuming that because marksmanship proficiency is a prerequisite for effective squad battle drills, if we're good marksmen we'll be good at battle drills."

"It sounds like you're saying that micro risk is that taken by an individual," said Jones. "These risks use individual resources and offer potential outcomes centered on effects to that individual. Macro risks are taken by an organization. These risks use collective resources and offer outcomes that directly affect the organization."[117]

"Those are better than my definitions, sir," answered Plarren.

"Tell me about catastrophic risk," continued Jones.

Plarren took a drink from his Pepsi and said, "My model focused on my fourth sphere of risk theory, with one exception. I like the concept of leaders defining catastrophic risk. That seems to have military roots."

"Leaders—at least moderately proficient ones—define success. It may come in the form of a mission statement, identification of a goal or objective, or even just on some shared concept of where that organization should go. Think of it as our target. It's important to note that success doesn't exist of its own accord; it isn't a natural phenomenon. We *decide* what success is, that for which we aim."

"Next we provide intent. Intent further refines how we will go about arriving at our target. As we unleash our subordinates out there to shoot for that target, to try ways to get there, to experiment, we need to help them not fall off the edge; help them know where absolutely not to tread. We need to tell them about the swamp that will drown us all and build a fence around it. That swamp is catastrophic failure."

"Think about taking a trip from here to the next town. Lots of potholes, ditches, bridges, curves, and other things. After announcing my objective and intent, I could look for every pothole, sharp turn, rock, and bridge that're out on the road. I could check to make sure everyone had good tires, enough sleep, and the right eyeglasses. I could, but that would be too much work; it would be paralyzing. Instead, I just ensure all the bridges are intact. I let my subordinates worry about the other stuff. If they're smart, they only worry about what would be debilitating to them and let their subordinates worry about anything less."[118]

"If the leader does all this, he/she/it/they has pointed to success, resourced that effort, and walled off catastrophe—both by effort and identification to subordinates. We can now assume that the outcome of this risk will have benefit to the organization, assuming that that organization has the aforementioned lessons learned capture system."

"Excuse me, John," said Purvis. "As your boss—if not my comments-- have no doubt made you aware, I'm something of a non-believer. Let me ask you this. How do you rationalize experimenting with your soldiers' lives? Failures kill our troops. Failure may even destroy our country on some future battlefield or in some future campaign. Isn't that a hell of a price to pay for feeling good about developing our subordinates?"

"Lots of military people shy away from embracing anything that works in the business world," responded Plarren immediately. "I'm not advocating having quality circles moving to contact here, sir.[119] I carefully evaluated the distinctions between business and the military to try to ensure I didn't get naively drawn into a false sense of security with respect to transferring business success into battlefield success. Remember that parallels exist in addition to the distinctions. When a CEO radically changes the environment of his firm, the directors and stock holders require him or her to produce bottom line results. That CEO has to show some tangible positive outcome, normally profit, and not just the promise of profit in the future. We're the same way. We have to show a bottom line tangible improvement, but ours is measured in combat readiness or the application of military power."

"Let me append something here, Colonel Purvis," Rusty added. "I know little about your performance as an officer, so this may or may not apply to you. Many, my good man, act as if the taking of no risk equals fewer friendly casualties. Sorry, my friend, but that's myopic; even cowardly. The risk averse can frequently hide casualties, and the loss of what otherwise might have been success, as if it were merely the cost of doing business. Risk aversity actually *costs* lives. How many Allied lives were lost because we didn't close the Falaise Pocket?[120] Is it possible that the Allies were too safe and deliberate? How many lives did Napoleon save when he pursued Charles to the east even though he had grave misgivings about John attacking from the Italian theater into his southern flank? He could have played it safe and waited to gain certainty about the situation to his south.[121] Didn't their respective forces benefit when Viceroy Eugene ignored Napoleon's directive to turn over command to the King of Naples, and when Staff Sergeant Tutele struck out on his own on Koh Tang Island?"[122]

Rusty's rhetorical questions hung in the air momentarily. He sighed and continued.

"Frankly, to assume risk aversion is somehow more loyal to your soldiers is itself reckless, intellectually shallow, and insidious. Sacrificing the lives of our troops by being too cautious isn't that different from killing them by being too rash. In fact, the only difference may be that the overly cautious leader can mendaciously defend his actions. He can claim to have been as careful and deliberate as possible, pretending this reflects concern and leadership instead of merely an attempt to avoid culpability for needlessly wasting soldiers' lives."

There was a noticeable pause when Rusty finished speaking. He must have sensed the uneasiness and reduced the tension by changing to small talk.

"Smart kid, Colonel," he said to Jones. "Not sure whether he's a smart ass or smart intellect."

"He's a little of both. This is good work, John," said LTC Jones. "Come back to me and tell me how you would change our doctrine to make your model a reality."

Plarren smiled at his commander while thinking, "Is this a bad dream? When will this guy ever be satisfied?"

Chapter 5 Doctrine

The Comparison of 100-Plarren to the Doctrinal Bookshelf

John Plarren had really never seen a brigade S3 who didn't look busy. Major Mike Cathody didn't break that mold, either. Though Cathody could look relaxed and interested in a conversation or activity, it seemed that his desk, the walls, his whole world, were reaching up to engulf him in a myriad of high priority projects. Were it not for the laws

of nature restraining his in box and computer terminal, Mike Cathody would never enjoy a thoughtful moment or conversation, only fits of action and decision.

"Every officer with a computer seems to have written something about risk management in the last several years, John," Cathody said. "My 'Good Stuff 4' notebook over there has half the book devoted to just that kind of article, SOP, philosophy, or concept. Fact is, though, most of them are simply some modification of the stuff the JRTC published in their Live Fire Training Pamphlet, some techniques and endless pages of numerical assessments.[123] This stuff simply looks at risk in the traditional risk management vein—as the potential for friendly harm. With that as a backdrop, no wonder we collectively shy away from taking risks. I think you're looking for risk as a component of a leadership (or even command and control) process."

"I need to research doctrine, sir," said Plarren. "I've already done a lot of research into theory."

"Approved doctrine isn't much better," continued Cathody, almost as if he hadn't heard Plarren's last sentence. "Our capstone training manuals have a pretty good conceptual outline framework for risk-taking, but only as it relates to a small entity in a simple situation.[124] The 1993 version of FM 100-5 encourages us to 'decentralize to the lowest level' while caveating that with the warning that such a move 'risks loss of synchronization.' Think about that. Synchronization is a holy word in our present day Army. So is this really encouragement to take risk or a warning to avoid it? Now, in this passage's defense it does tell us that we need 'well trained subordinates and superiors willing to take risks.' The portion of the manual that talks to Battle Command is a bit more refreshing. It actually has a little 'How To' nestled in there. It highlights visualization, motivation, discusses decision opportunity costs, and scratches the surface on complexity by telling us commanders must anticipate 'the outcomes that can be expected from the implementation of a decision.'[125] That's all reasonable undergraduate risk taking information."

"Approved leadership doctrine is a convoluted mess. It's long and boring, dated, doesn't use appropriate language, and adds little to the field of risk study in an area already devoid of much doctrinal guidance."[126]

"This isn't a pretty picture for gaining any doctrinal insight into risk taking, sir," said Plarren with a hopeful smile.

"Don't give up the fight, yet, John," Cathody said through his infectious grin. "There are three places in the doctrinal dissonance you should still look. All but one are draft doctrine, though. The latest version of FM 100-5 is in final draft now and talks some to risk."[127]

Cathody, interrupted by a quick phone call, stopped speaking to Plarren momentarily allowing Plarren to catch his notes up to the conversation. As Cathody hung up the phone Plarren said, "What are the other two sources, sir?"

Cathody wrote something on his pad in silence before continuing by saying, "Also take a look at the draft of FM 100-14, Risk Management. The focus of this work seems to be all about finding hazards in a simple environment and mitigating them, not the framing of an environment that encourages smart risk taking.[128] That's OK, though. Understanding that process may help you. Finally, reach into the latest FM 101-5. It's approved and talks about risk considerations during tactical planning.[129] If you want to compare your model against our Army's doctrine, I'd recommend you use these publications."

"Should I look at the FMs for the Infantry Squad and Platoon, or Company, or Battalion?"

"Let me save you the time, John," came the reply from Cathody. You won't find much of anything up through company level. The battalion FM warns us not to poke our eyes out, but that's about all."[130]

"I find it interesting that you didn't mention any of the leadership manuals except to trash them, sir," said a smiling Plarren.

"I'm glad you find that interesting, John" responded Cathody. "Like I said, our approved leadership doctrine is not all that interesting. I'm not sure the Army supports my 'convoluted mess' title, but there is significant emphasis on reworking that doctrine right now.[131] The draft version of FM 22-100 on leadership is in another rewrite now.[132] You should wait for that product, don't spend your time on the old stuff."

Plarren thanked Cathody, who was already embarked on two or four more projects, and left his office. His notes already written from this meaning only required a quick review.

- Approved leadership doctrine is long and boring, dated, doesn't use appropriate language, and adds little to the field of risk study.

- The 1993 version of FM 100-5 provides only a superficial discussion of risk. Its focus on synchronization may serve to discourage risk.
- FM 100-14 (FD) treats risk as does sphere one theory--traditional risk management.
- Both FM 101-5 and the final draft of FM 100-5 discuss risk, but in the same vein as FM 100-14 (FD), seeing risk as the presence of hazards—something bad.[133]

If 100-Plarren Were the Yardstick, How Short Would Be the Army?

"Dave, it's really surprising how I found the Army deals with the concept of risk in its doctrine," said a plaintive John Plarren to his battalion's S3 Air, Captain Dave Ounce. Ounce, who was honestly trying to figure out an air movement table, was somewhere between interested in Plarren's thoughts and being courteous to his advanced course classmate. "On one hand we hold as a bedrock principle that we will train as we fight.[134] But other than in one manual the only discussion in the approved doctrine I researched where we find much depth when talking about risk speaks about it like traditional risk management—the hunt for hazards and then the effort to eliminate or mitigate them. The battalion manual essentially threatens us if we embark on some risk.[135] That leaves a lot to be desired."

Ounce grunted some type of response that Plarren took for license to proceed.

"We actually tell senior leaders something of how to approach risk without placing the suffocating burden of traditional risk management on them," Plarren continued. "This manual almost sounds like Senge contributed. It talks of risking and learning, the 'opportunity to succeed' vice the 'freedom to fail,' and also the positive impact on climate that the acceptance of occasional failure can bring.[136] In another spot in the manual it says that it's unhealthy if minimizing risk has a very high value.[137] My favorite part essentially says that risk aversity is worse than making no errors."[138]

A pause from Plarren brought another guttural noise from Ounce. Plarren continued rather than seek input.

"Our training doctrine outlines three pragmatic points about taking risk, but they come from my first or second sphere of risk theory. It's the 'hazards are bad' thought process.[139] Our other leadership doctrine doesn't directly address risk. Now the base manual and the one on soldier team development do talk some about a few things that a risk-taking environment might contain—the fact that problem solving is not a science, but an art; that a vision of sorts is required; that you need to establish clear lines of authority—but these points aren't arranged in any coherent form with respect to risk-taking. The only reason they seem to be there is because someone found their relevance to some other aspect of leadership."[140]

Plarren concluded his monologue by saying, "Like I told you Major Cathody said to me, our operational doctrine doesn't help much either. Overall, only the Senior Leadership FM talked about the value of occasional failure, or really explained why we should risk at all. Our training doctrine tells us about the value of AARs in learning, but I didn't see any doctrinal smiles about occasional failures.[141] In its totality our doctrine seems to point us toward certainty, not risk-taking. We've relegated risk to something close to an administrative TTP, not what it should be: a leadership principle."

"OK, John, where else do you want us to address risk? For that matter, how else should we address it?" Ounce retorted, now firmly removed from air assault planning. "Should we have a section in the Drill and Ceremonies manual about risk-taking during column rights? Take your head out of the clouds. You, I, and every other officer has an Army to lead, not a theory to write. Should we tell our leaders to avoid something that could lead to error?"

"Maybe we should, sir," interjected Sergeant First Class Tonibay. Tonibay had evidently been doing more listening to the two officers' discussion than slaving away on the CCT MOI in front of him. "Two things come to mind. My squad leaders will probably read the D&C FM at some point. They may not ever read 100-5 or some of the others you mentioned, Captain Plarren. Each of my squad leaders carried a copy of FM 7-8 with them and they frequently referred to the squad and platoon MTP; you know, ARTEP 7-8-MTP. If we've got something important to say, let's say it somewhere that squad leaders and platoon sergeants will hear."[142]

"My other thought regards training as we fight. My platoon leader made me read a book called Common Sense Training when I took over my first platoon. One of the key things I took from that book was the idea that

everything we do is training; *everything* is training. We don't have the time to teach a skill or habit only in one environment and expect it to work on the battlefield. Collins makes this point several times. In one passage he talks of garrison details. He says not to send one NCO and eight soldiers off for some administrative detail; send the whole squad instead. That reinforces the chain of command; it trains an aspect of battlefield performance in another environment. If we intend for our leaders to take risks—I think you called them smart risks once—on the battlefield, we need to reinforce that type of leadership in all that we do."[143]

"I knew that memo could not be that captivating," said a jocular Plarren to Tonnibay.

"It's important, but I've always got a minute to learn, sir," said Tonnibay. "Think about D&C for a minute. My team leaders can only learn so much by watching their squad leaders. Occasionally, I need to have them run the squad through D&C. They will probably screw it up a bit, but that's OK. Somebody ought to be there to help ensure no permanent damage is done. Their screw ups may well motivate them to prepare more thoroughly next time. You know those privates in the squad noticed any errors and are saying, 'I'm not that dull. When I'm in charge I won't make that mistake.' If I stick with the squad leaders doing it all the time, they will get very good and you'll see pretty good D&C when you look. However, when that staff sergeant goes to school or the hospital, the D&C will be pretty rough, because the team leaders won't have learned it thoroughly by doing it."

As both officers considered his thoughts Tonnibay continued, "Lots of people think letting some more junior soldier take over and make mistakes is the lazy way out. They don't know what they are talking about! It's tougher to watch and guide someone else's learning than to do it yourself. I should supervise that trooper while he's filling that higher level position. It's not a stifling supervision, but one that allows me to help him *and those other troops* learn. So my position is that, yes, our manuals should tell us to take risks everywhere. We should remember that a mistake can create learning. I should just make sure I'm not letting someone or some unit fail awfully. I need to be a kind of safety net to prevent a real bad accident and to help learning take place."

"Seems to me you didn't take your minute to learn, sergeant," said Plarren. "Sounds like you've been teaching."

"I'm not sure I'm in a position here to teach you, sir," said a respectful Tonnibay. "If I did, that's OK. I'll note it in my leader handbook so we can get the credit."

Chapter 6 Future Doctrine
Modifications to the Engine of Change[144]

John Plarren swallowed hard,...again. He was glad that most of his audience was reading his last slide. Though the simple act of swallowing likely escaped the notice of the vast majority of officers in the room, Plarren irrationally assumed everyone saw it and knew of his anxiety and self-consciousness.

Overall, he thought that the OPD was going well so far, but he did feel a bit uncomfortable. He was relatively new to the battalion to be presenting them with the results of his minor research project into risk-taking. LTC Jones hadn't asked him to do it, though; Jones had directed him to do it.

This last portion of the presentation presented the greatest opportunity to appear self aggrandizing. His final slides presented his recommendations to change Army doctrine.

"I restricted my recommendations for doctrinal changes to a few select pieces of approved and emerging doctrine: FMs 100-5, 100-14, 22-100, and 101-5."

"Why did you just look there, sir?" came a question from one of the lieutenants in the back. "I thought your point was that this topic had universal utility. Couldn't we, no,...shouldn't we include this in the FMs that talk tactics like FM 7-8, or some the other branches publish."

"Jees, Teddy!" interjected Captain Flowers. "If we put every good idea in every manual we publish, not only would we have a few hundred FMs, but they'd all weigh a hundred pounds."

"I don't know if I can improve on Captain Flowers' rationale," Plarren said over the mild laughter. "My thoughts were twofold. First, each of these manuals now addresses this topic, albeit from different perspectives. Second, each of these pieces of our doctrine occupies a seminal position. FMs 100-5 and 22-100 should really represent an overview of how we do business. Operations is the Army capstone manual. Leadership used to be the most dynamic element of combat power.[145] Now its at least a very critical component of military power.[146] It seemed logical to me to capture this critical concept on leadership in the manual of the same name. Similarly, 100-14 talks entirely about risk and in a manner that I think excludes understanding of some of these other spheres and concepts about which we've talked. FM 101-5 is essentially the implementing document for 100-5 in terms of how we plan and apply the control part of C^2. Right now it only views risk from the risk management perspective."

"Let's see what you've got, John," came LTC Jones' directive.

Plarren nodded and put up his first slide on suggested doctrinal changes.

CAPSTONE MANUALS

FM 100-5 Operations

*Add: Definition of Catastrophic Failure and short discussion of its utility.

*Add: Commander's description of catastrophic failure to contents of commander's intent.

*Change: Discussion in Chapter 10 to include the value of risk-taking, not simply the need to mitigate hazards. Include a passage that ensures readers understand that decisive military power, not 'safer' operations, is the goal of risk-taking. Reject the use of traditional risk management for complex, dynamic situations.

FM 22-100 Leadership

Include:

*A presentation and explanation of the risk taking model. Discuss the underlying concepts and requirements. Portray examples of techniques to encourage risk-taking.

*A section advocating risk-taking, describing the benefits and the pitfalls.

*A discussion of failure and success, showing that absolute failure and absolute success are merely theoretical; every outcome includes a mix of the two.

*The anatomy of risk: ambiguity, uncertainty, and chance as the causes; intent and catastrophic failure shaping it; and the characteristics of the potential outcomes

*Specific rejection of traditional risk management as the framework for viewing risk.

"Operations has the beginnings of some graduate level risk theory, but it needs to include something other than the traditional risk management it now embraces. It shouldn't say risk is a set of potential hazards, but highlight the passages about risk being the presence of opportunity—and you can't have it both ways. The taking of smart risks should be a characteristic of successful operations. The manual should give a very broad outline of how we should approach risk. Leadership should include more information. While this FM doesn't need to discuss the taxonomy of risk theory I showed this group, it should include the risk-taking model and an explanation of the model's dynamics. Of particular importance in this discussion is an understanding of the inherent characteristics of the Army that make it risk averse and encouragement to raters to view leaders' contribution to their particular organization after the rated leader's tenure, and to the Army as a whole. The manual should discuss failure and success showing that any outcome contains a mix of the two. This discussion of that mix should lead to a consideration of short term benefits versus long term benefits of any action. This manual should also highlight the fact that hazard mitigation is *not* the primary focus of a risk-taker in a leadership context.

Lacking comments from the assembled officers, Plarren's next slide followed.

HOW TO MANUALS

FM 101-5 Staff Organization and Operations

*Add: Commander's elucidation of his/her vision of catastrophic failure to contents of commander's intent. State that while objectives and missions are often enemy or terrain oriented, catastrophic failure is often friendly oriented.

*Change: "Course of Action Approval" in Chapter 5 that speaks of one's risk authority ending at the point that "imperils the next higher commander's intent" to say that is the absolute limit. Provide at least the two examples shown earlier as other methods for establishing risk approval authority

*Remove: Traditional risk management as the method for dealing with risks in any dymanic, complex environment.

HOW TO MANUALS

FM 100-15 Risk Management

*Change: Number of FM. This FM outlines a technique with which to view mitigation of hazards in a simple environment, not a definitive treatment of risk-taking; unworthy of 100 series. (The 100 series manual should be on "Risk-Taking," not "Risk Management.")

*Add: Concept of catastrophic failure.

*Change: Step one of process—Hazard ID—so that only hazards related to catastrophic failure are considered for mitigation.

*Add: Direction to leaders to assess during the risk decision step the cumulative cost of all hazard mitigation controls. Direct leaders to ensure that cumulative costs do not now outweigh likely benefits.

*Change: The section that discusses the applicability of this process to explain that this process is better suited to static and simple situations, than dynamic and complex ones. Note that combat is dynamic and complex and this process is not well suited for that environment.

"My primary focus with respect to FM 101-5 is to remove traditional risk management as the sole tool for considering risk," Plarren began. "I didn't do enough research and testing to validate a totally new process, but I did do enough to recognize that traditional risk management only works well when you have the ability to gain relatively discrete outputs from certain inputs. Rarely will the battlefield offer that environment. My work may be a repudiation of our planning process, but I can offer no replacement right now. I do advocate inclusion of catastrophic risk as the way to determine the hazards to consider at any given echelon, and encouragement to consider the cost of all mitigation against the potential benefits of the risk. My recommendations also address more precise ways to elucidate risk authority."

Plarren paused before adding, "To really flesh this out would require a detailed study of itself."

He next turned his attention to the Army's draft Risk Management Field Manual by saying, "While my focus was risk taking in a leadership context, some of my findings would bear fruit if used in the risk management process. The concept of catastrophic failure and a requirement to weigh cumulative mitigation costs against likely benefits are two examples. The most important change to this manual would be an admission that the traditional risk management

process is *not* applicable to any decision or environment, only to one involving a rather small organization not acting in a complex environment."

"I like it, John." said Major Tommason, his battalion's S3, after digesting both slides. "We say our doctrine is descriptive, not prescriptive. We go to great lengths to brag about teaching each other how to think, not what to think.[147] I believe your recommendations do just that. Anyone have any questions?"

Again, Lieutenant Ted Wallace offered a query.

"I've listened to the whole pitch and considered the hundred pound manuals of which Captain Flowers warns. I still don't understand how your work will have any impact on the *Army* if we only make the changes you suggest. This stuff might change how staffs and field grade officers behave. It might even find its way into the officer advanced courses, but Sergeants First Class don't routinely refer to FM 100-5, do they?[148] Maybe platoon sergeants aren't going to be planning and managing the kinds of things you talked about, but they will certainly be executing someone else's grand scheme. It might be nice for them to understand what's going on."

The room was silent. Many of the officers turned to stare at the rather defiant junior officer. Plarren looked instead at LTC Jones. Jones smiled and said to Plarren, "If you truly were a risk-taker yourself you wouldn't be looking at me for permission. What was my intent and how did I define catastrophe? Good Lord, that's your system, isn't it?"

Plarren turned and rummaged through his helmet bag for a few moments. Wallace's outburst and the Jones to Plarren code had most of the audience wondering what would happen next.

Plarren broke the silence when he put up his next slide.

INFANTRY MANUALS

FMs 7-8, 7-10, and 7-20 The Infantry Squad/Platoon/Company/Battalion
*Add: In the section addressing command an explanation of the spectrum of risk techniques. Show an example that illustrates that contemporary risk management and pragmatic risk management (Spheres 1 & 2) are best suited to simple systems and small units operating over limited periods of time. Show that the more dynamic and complex the situation, the larger the organization, and the more uncertain the length of the operation, the more difficult it is to leverage risk unless leaders use intent, catastrophic failure, and delegated risk authority instead of contemporary risk management.
*Add: Catastrophic failure to the elucidation of intent in the section on planning. (Troop Leading Procedures/Decision Making Process).

"Were I to address the branch manuals, I would certainly address the infantry manuals first," began Plarren.

Jones cut him off. "What Brother Plarren means to say is that some lieutenant colonel told him he thought there was greater relevance when speaking to this group in addressing the first four doctrinal publications that he showed on those slides. He wanted to show you a few more recommendations and that same dumb lieutenant colonel told him to avoid that."

"That particular lieutenant colonel has been wrong so often I should have ignored him," said Plarren tongue in cheek. Then, addressing his slide again he said, "The treatment in these manuals should be minimal. The higher the echelon the manuals address, the more likely that the audience will have read the capstone manuals. The lower the echelon, the less information is needed. If a squad leader wants to know more, he can always refer to the first four manuals of which I spoke."

"On behalf of squad leaders everywhere I appreciate your concern, sir," said a wise CSM Commare to Plarren. "But, if one of my squad leaders hasn't read the leadership manual, I will have a first sergeant working on that problem before the night is out."

"Anyone else?" asked Major Tommason, hoping no other officer would respond.
"Pardon me, sir," came Plarren's response. "This last slide shows..."
"Good, Mister Risk," interrupted Jones. "No 'mother-may-I look' this time."

INFANTRY MTPs

ARTEPs 7-8, 7-10, and 7-20 Mission Training Plan for the Infantry Squad/Platoon/ Company/Battalion (Examples fm ARTEP 7-8-MTP)
Task: Assault
*Add: The platoon leader exploits previously unforeseen opportunities within the commander's intent which do not cause catastrophic failure.
Task: Prep for Combat
*Change: The platoon leader completes the plan....based on METT-T considerations, intelligence from the reconnaissance or other sources, *and an analysis of where and how to take productive risks.*
*Add: (The plan should include:....)
- o The platoon leader's definition of catastrophic failure for this operation.
- o Risk constraints as required.

"This last slide, continued Plarren obviously pleased with himself, "shows a general example of how we should modify our MTPs. Again, the only way to flesh out exactly what the additions or changes should be would require a more comprehensive look than I give you here."

"This one may draw the most criticism," Plarren preached. "We sometimes think that our junior leaders lack enough experience, and therefore intuition, to recognize productive risk taking. I think that's crap. The German Army made it work in WW II, why can't we?[149] In addition, platoon leaders should be taking platoon leader level risks. Company commanders should take company level risks. Given intent, a definition of catastrophic failure, and an understanding of that leader's own risk authority delegated him by his boss, I think this will work. Remember, if you have an idiot like me as a subordinate, you can always tighten up on the risk authority you grant him. Leaders decide their position on the battlefield, if you've got a subordinate who doesn't understand how to take productive risks, then maybe you stay near him to help."

First Lieutenant Wallace stirred again. He stood this time and paused before he spoke. He appeared a bit apprehensive, but spoke with conviction.

"Perhaps you should have added another task to the MTP, sir," he began. "Something like 'Operate Within Intent' or 'Take Risks Within Intent'. I can best explain this by asking you to think about how we conduct an STX. Our units do what we tell them to do, a series of tasks. There is no task or check that considers whether or not they should have done something other than what they were told to do. If a small unit commander is directed to destroy a squad in order to prevent them from reinforcing another unit, and he finds some unforeseen opportunity to achieve the intent two levels up, we give him no credit using our current T&EO system. Like Captain Plarren said a few moments ago, I haven't thought through this sufficiently to recommend exactly how to tackle it, but this seems to indict at least a piece of how we frame and evaluate training."

Wallace waited for comments from those assembled. When no one stirred, he sat down. Major Tommason made no attempt to close the session this time. He was visibly relieved when his commander assumed that role.

Jones rose from his seat, motioned Plarren to sit, and faced his assembled officers and senior noncommissioned officers. After a survey to ensure his charges were thinking about the past hour's discussion, he concluded the session by saying, "In the past hour I've learned things about my risk-taking philosophy I never knew. Go out and use it. As we experience this together we'll figure out how to make it better. We won't know how until we try."

Chapter 7 Conclusion

Aggressive Mistakes and Honest Errors: The Recipe to Live and Learn

John Plarren enjoyed this temporary respite from the stresses of his now six month long command. Pushing Mary Ann Carrol, the youngest of his neighbor's three daughters, in her swing in their backyard was relaxing and enjoyable. The sky was generally clear, a gentle breeze blew across the open field that joined the Carrol's backyard, and the routine happenings of an early fall day went on around the impromptu cookout between friends, neighbors, and professional acquaintances.

A four year old's sense of balance was not something which Plarren knew intuitively. He had started pushing Mary Ann fairly gently and gradually increased the effort of his pushes as Mary Ann proved her ability to firmly maintain her position on the swing seat.

Across the field Plarren saw another family from the neighborhood out walking their dog. He smiled and began to return their wave. He thoughts were interrupted by a burst of adrenaline brought on by the sharp words of the Carrol's second oldest daughter, Sally.

"Mary Ann!" Sally said imperatively. "Don't let go of the chains to wave when you're swinging. Don't let go until the swing stops, otherwise you will fall."

Plarren saw the youngest girl regrasp the swing chains immediately after her sister's directive. He stopped the swing gently and patted the small child on her back. He was uncertain whether her increased breathing and ashen expression were the result of almost falling or the nature of her sister's warning.

"It's OK," she said to Plarren, looking up to him with pleading brown eyes. "Please don't stop pushing me."
"Tell you what," Plarren said to his young friend. "I'll keep pushing if you'll try something for me. Our goal is to have some fun without you hurting yourself badly. Maybe you can wave with one hand if you hold on tightly with the other. I'll start by pushing you very softly so you can see if it will work. We both may learn something here."

Appendix 1-Monograph Writing Style

1. This monograph is written using a modified Socratic style. This appendix contains the definition of that style, reasons why writing in this style will best accomplish the objectives for writing a monograph, and refutes some arguments that this style is an unsatisfactory approach to monograph writing.

2. The author defines the style as follows:

> ***Modified Socratic Style-The use of a fictional vignette to expose the thoughts and concepts of the author, and thoughts and concepts of documented sources as the speech and thoughts of fictional actors; and the portrayal of fictional events as a vehicle to describe the likely effects of the author's or the documented sources' theories on a dynamic system. All non-original thoughts and concepts are documented by endnote using the style identified in the SAMS monograph book. Monographs written in this style are single spaced.***

3. There are precedents for writing in this style.

a. BG (then LTC) Charles Viale wrote "A Conversation at the Club" as a monograph while attending AOSF in 1988. The style used by BG Viale in his monograph is much less formal than the style the author uses herein. BG Viale used no footnotes and only referred to three sources. This monograph endnotes the origin of every non-original thought or concept in the body of the monograph. It contains as many or more cites of outside sources than are found in an "average" monograph.

b. Works outside the realm of the monograph have used a style similar to that the author uses. The Defense of Duffers Drift, by Swinton; Complexity, by Waldrop; and the writings of Plato all provide examples of some of the techniques employed by the author.

4. Using this style helps accomplish the author's objectives for writing a monograph.

a. My monographs are supposed to contribute to the body of knowledge. That contribution does not occur when the work is published, but when it is read. The body of knowledge exists in the collective understanding of those with whom I share a common professional interest. To so contribute my work must be read and understood; and it must find from those who have read it their recommendations to others to read it. An interesting and unique style contributes to this.

b. I recently had a discussion with one of the most prolific writers of the current cadre of active duty officers, LTC Dan Bolger. LTC Bolger has written extensively, both in what might be termed a literary prose style--clear articulation of facts while maintaining the reader's interest (his books on his CTC experiences provide one example)--and in the common style used for academic advanced degrees (his masters degree and doctorate stand in evidence). After we discussed the writing style I hoped to use, he urged me to use such an interesting style. He advocated using this style rather than the dry argumentative tone frequently found in such works because it would increase readership and therefore better contribute to the profession.

5. Some faculty members and other officers have said that this modified Socratic style is an unsatisfactory method in which to write a monograph.

a. Some consider that this method is too easy a style with which to write a monograph. I've occasionally said that I think writing in this style will be easier for me. Each time I've been admonished that the reason for crafting the requirement for monographs was not to facilitate greater ease for the students. That writing in this manner may be easier for me is not the reason I embark on this course, it is merely a characteristic of this style of writing. (Interestingly, BG Viale told me he believes that using this style is more difficult than the standard style.) Even were it true that I chose this as the style only to ease my ability to write, such a rationale is far from unique.

(1) AMSP students each choose topics which interest us as authors. A characteristic of this subject selection is that writing such a monograph is easier than writing one in which the students have no interest. The author has received no counsel to avoid topics of such interest in fear that this might ease the process for him. Instead students are encouraged to seek topics of interest to them.

(2) One of the considerations for selection of a monograph director for student monographs is a feeling that the right director will make the whole process easier. While this particular consideration is more directly linked to the sole desire to ease the writing than to any thought of intellectual purity, no one to date has objected to this dynamic as diabolical.

b. Some have suggested that this style lacks the substance required to display academic rigor. However, academic rigor is not a standard that professionals measure and assess by the style of writing. Webster envisions rigorous proof in terms of accuracy and precision. We shouldn't find ourselves frightened by quotation marks in a fictional setting if the message, proof, logic, and sources do not vary from that that would be used in the dry prose to which we have grown accustomed. Simply put, this style does not prevent the display of academic rigor.

Endnotes

[1] Prosser, Brain D., The Need for Training for Uncertainty, (SAMS Monograph , Dec 96). Prosser shows that the battlefield is complex and that uncertainty exists there. One of his themes is that if soldiers and units are exposed to uncertainty in training, they will perform better in combat when they *will* be so exposed. See also, Hodges, Frederic B., Training for Uncertainty, (SAMS Monograph, Dec 92).

[2] Holder, LTG (R) Don, letter to author, undated (received 17 Oct 97), in possession of the author. A major part of this letter contains evidence that the Army has no common understanding of how to apply risk theory and practice in a coherent manner to produce superior sustained results. The author considers Holder's statements as those of an expert on the Army, with thirty plus years of research in the field including command through division level and in combat.

[3] US Army, FM 100-5, Operations, (Washington, D.C., 1993) pg 2-14 describing Battle Command and pg 2-6 to 2-7 describing initiative and agility. See also the description of leadership on pg 2-11 to 2-12.

[4] US Army, FM 100-14, Risk Management, (Unpublished "Line Out" Draft dtd 19 Sep 97), pg 6-7. Though this manual is focused primarily on the potential drawbacks of poorly managed risks, it acknowledges the potential for "opportunity" from "uncertainty, ambiguity, and friction." In US Army, FM 25-101, Battle Focused Training, (Sep 90), pg. 3-19, Army doctrine provides similar emphasis. Telling commanders to "accept risks if the mission benefits outweigh the costs" provides testimony to the potential gains from risk, albeit only by deduction *reductio ad absurdum*. See also Hartman, Sandra J. And Beverly H. Nelson, "Group Decision Making in the Negative Domain". Group and Organizational Management, June 1996, pg 147 for a brief explanation in theoretical terms of the utility of risk versus return.

[5] Holder, letter to author.

[6] Conversation between LTG(R) Frederick Brown and author, February 1997. LTG (R) Brown interviewed the author as part of Brown's work as a contractor for TRADOC. Brown was exploring leadership issues particularly as they addressed the Army in the future. This phrase consists of the author's summary of several points about which Brown spoke with the author.

[7] Conversation between COL Dave Washechek and author, July 1995. COL Washechek as the commander of an engineer battalion in Germany generally focused discussion on events or situations in which the commander in question did not expect or had not encountered success during his training meetings and QTBs. He tried to focus attention away from tasks assessed as "Trained" and training events which were executed to standard. This led to his subordinates' willingness to discuss failures and his unit's ability to learn from mistakes and prevent their future occurrence. See also Hequet, Marc, "Your Risk Taking Initiative", Training Magazine (Jun 96), pg 89.

[8] Hequet, pg 89. Hequet states that merely acting in a generally risky manner will not generate gains. Hequet believes that risk of itself has little utility unless it "creates value" (Hequet quoting a Kodak Senior Vice President). He also illustrates some procedures necessary beyond mere dangerous behavior that an entity should use to attempt to create value from risk.

[9] Jones, Archer, Civil War Command and Strategy, (New York: The Free Press, 1992), pg 48; Hattaway, Herman, and Archer Jones, How the North Won, (Chicago: University of Illinois Press, 1991), pg 71-75; and the author's recollections from the Fort Donnelson National Military Park Service presentation attended by the author during a staff ride he led there in Fall 1988. Generals Pillow and Floyd, the senior Confederate generals present at the Battle of Fort Donelson, initially found their situation to their liking and saw a bright future. The early battle seemed to validate their optimistic appraisal. Within hours they were reduced to relinquishing command to the third most senior officer and then asking his permission to sneak away during the night. Their initial expectations of easy success gave way to a drastically different result.

[10] Petersen, Dan, Analyzing Safety Performance, (Deer Park, NY: Aloray, 1984) pg 36-41 discusses the "Hazard Hunt" and provides both a form and methodology for the same. Lieutenant Tringle's comment may represent an oversimplification of the many elements the modern safety specialists use. Petersen, for example, states that Hazard Hunts, using employees as the hunters, are best used to identify mechanical hazards.

[11] Captain Plarren's "definition" of a hazard represents a paraphrase of several definitions. Funk and Wagnall's Dictionary on the author's Infopedia CD defines hazard as

1 : [*Unrelated and omitted by author*]
2 : a source of danger
3 a : CHANCE, RISK b : a chance event : ACCIDENT
4 obs : STAKE 3a
5 [*Unrelated and omitted by author*] at hazard : at stake 2 hazard vt(1530) : VENTURE, RISK <~ a guess as to the outcome>

See also Geller, E. Scott, Working Safe, (Radnor, PA: Chilton Book Company, 1996), pg 45-58 for a discussion of how perceptions modify our view of hazards, and by extension, our definitions. Interestingly, Geller makes little attempt to precisely define the term. Haimes, Yacov Y., Barry W. Johnson, and James H. Lambert, Risk, Uncertainty, and Reliability of Engineering Systems: What is Risk Assessment and Management?, found on the World Wide Web Page @ The Center for Risk Management, University of Virginia, pg 1 of 3. Haimes, et al, say that "Risk is often defined as a measure of the probability and severity of adverse effects."

[12] US Army, Force XXI Risk Management Reference Card, Apr 96 (Prototype). The reader may find the author's use of an Army reference confusing here since Captain Plarren will later consider military risk theory separately from the civilian spheres explored here. This use of Army risk management references is not the contradiction it initially appears. The current Army risk management doctrine represents the Army's formalized doctrinal acceptance of the traditional risk management theory the author assigns to this sphere, not the development or elucidation of some purely or greatly military theory about risk. The Army's current doctrinal focus embraces the practices and procedures of this sphere. The author is therefore free to use it as an example of the characteristics of this sphere. This distinction is important for the reader to understand, particularly when considering recommended changes to Army doctrine and practices.

[13] Major Gallion makes this statement based on his knowledge of FM 7-10, The Infantry Rifle Company, (Washington, DC: Hq, Department of the Army, 1990), pg 2-13; and FM 7-20, The Infantry Battalion, (Washington, DC: Hq, Department of the Army, 1992), pg 2-7, 2-9, and 2-23 to 2-25. US Army, FM 101-5, Staff Operations and Procedures, (Washington, DC: Hq, Department of the Army, May 97), pg 5-2 calls the terminal step in the Military Decision Making Process "Execution and Assessment". Chapter Five does not further explain this step. Various civilian sources copy this military step. See Occupational Safety and Health Administration , OSHA Handbook for Small Businesses, (Washington, DC: US Govt Printing Office, 1996), pg 4-7.

[14] Grmaldi, John V., "Hazards, Harms, and Hegemony", New Directions in Safety, edited by Ferry, Ted, pg. 23, (Park Ridge, IL: American Society of Engineers, 1985).

[15] Ford, Daniel F., Three Mile Island: Thirty Minutes to Meltdown, (New York: Penguin Books, 1982), pg 47-50 . See also Defense Intelligence Agency, An Assessment of the Soviet Response to the Chernobyl Nuclear Reactor Accident (U), Dec 88. (Assessment is classified SECRET. All references and quotations used are unclassified portions of the report in the possession of the author.) The last paragraph of 3. "Plant Design (U)" criticizes the one aspect of the Chernobyl design because these automatic features were not included. Paragraph 4. "Accident Events (U)" describes some of the rules, checklists, and automatic features in greater detail.

[16] Fahy, Tim, a manager in United Airlines' Airport Services Planning Division, conversation with author on 23 Sep 97. Fahy stated that United Airlines has a corporate goal of having "no fatal accidents ever." Fahy enjoys some understanding of the Army as he served as an infantry company commander in 1-187th Infantry during Operations

Desert Shield/Storm. See Taylor, Thomas, Lightning in the Storm, (New York: Hippocrene Boos, 1994), pg 342-345, for a generally non-fiction account of some of Fahy's combat actions.

[17] Grimaldi, pg 22 refers to perceptions—particularly those of the public—and their effect on risk-taking. See also Geller, pg 45-58.

[18] Of interest is the frequency with which safety theorists describe their work as one would a science *vice an art.* See generally the essays by Grimaldi; Cohen, B., "Hazards, Harms, and Hegemony"; and Business Roundtable, "Improving Construction," in New Directions in Safety.

[19] Interestingly the author found few definitions of hazard and risk outside military references on this subject. (One exception to this statement found at the end of note 3 above.) Given that, and that the author places current Army doctrine on risk management in this sphere in his risk theory taxonomy, the doctrinal definitions satisfactorily represent these terms' use in this sphere. US Army, FM 101-5-1, Operational Terms and Graphics (Final Draft), (Washington, DC: Hq, Department of the Army, Sep 97), pg 1-76 defines a hazard as "Any real or potential condition that can cause injury, illness, or death of personnel, or damage to or loss of equipment or property." The same reference defines risk as "Chance of hazard or bad consequences; exposure to chance of injury or loss. Risk level is expressed in terms of hazard probability or severity."

[20] This sentence of Captain Campbell's is a paraphrase of a statement made by Mr. Darwin Ricketson, US Army Safety Center at a Risk Management Seminar in the BCTP Hqs on Fort Leavenworth for BCTP O/Cs attended by the author on 29 Oct 97. Ricketson responded to a comment that any situation had an astronomical number of hazards present by saying, "There is no way you can identify all the hazards out there." See also Defense Intelligence Agency, Assessment. The last paragraph of 2. Nuclear Reactor Safety Regulations (U) states that "The Western systematic approach (defines) all reasonably probable accidents for consideration in the plant design..." By extension, Maggart, LTC Lon E. makes the same point in paragraph one of his undated memorandum addressed to the leaders of his battalion entitled "Gas and a Slick Forehead–The Price of Decentralization" in the possession of the author.

[21] Ford, pg 29-31. See also Army Regulation 385-61, The Army Chemical Agent Safety Program, (Washington, DC: Hq, US Army, Feb 97), para 2-2. This section discusses "maximum credible event" and offers a similar definition of credibility as does the initial reference.

[22] Captain Campbell is outlining a risk theory to which the author assigns a distinct sphere (Pragmatic Risk Management) in his taxonomy of risk theory. This sphere finds its genesis in Comar, Cyril L., "Risk: A Pragmatic DeMinimis Approach", Science, Volume 203, pg 319. Comar recommends an approach of " ...how to deal with risk in the real world." His approach contains four elements focused primarily on an actuarial example. First, he says to eliminate any risk that carries no benefit or is easily avoided. Second, he tells us to eliminate any large risk (he says 1 in 10,000 or greater frequency of occurrence per year) that does not carry clearly overriding benefits. His third recommendation is to ignore for the time being any small risk (1 in 100,000 per annum) that doesn't match his first criteria. His last recommendation encourages his reader to actively study risks falling between these limits, with the view that the risk of taking any proposed action should be weighed against the risk of not taking that action. It's interesting to note the consideration Comar advocates for studying risks in this last category. Note that he doesn't weigh potential costs with potential benefits. Instead he weighs potential costs of taking the action with the *potential costs of not taking the action.* See also Kastenberg, William E., and Douglas Gleichman, Studies on Quantitative Risk Acceptance Criteria and Comparative Risks, (UCLA School of Engineering and Applied Science, Jan 1983), pg 11-12. (This reference obtained by the author under the Freedom of Information Act through The Department of Energy, from the DOE/NV Coordination and Information Center, Las Vegas, NV.). In this vignette Captain Campbell modifies Comar's argument in line with the earlier distinction between a hazard and a risk.

[23] Fahy, conversation with author. As earlier noted, Fahy stated that United Airlines has a corporate goal of having "no fatal accidents ever." The author only notes the United Airlines policy goal of zero fatalities and includes that example

in Lieutenant Tringle's sphere one discussion. The author specifically researched a set of "fatal" industries whose membership in this subset was a function of the lethality of potential accidents in their field *and* the likelihood of persons other than their employees and property other than their own to be damaged in accidents. Most of the "fatal" industries which the author researched—nuclear safety, hazardous material transportation, structural engineering, and commercial airline safety—generally matched the characteristics outlined in sphere one. Because the author did not research the specific practices of every firm (or even a majority) or the individual firms in this subset, and because it is possible that such an industry might use an approach similar to the DeMininis Approach outlined in sphere two, the author leaves open the possibility that "fatal" industries may reside in either sphere.

[24] This represents the author's synthesis. See also Cohen, Jerome B. , Edward D. Zinbarg, and Arthur Zeikel, Investment Analysis and Portflio Management, (Homewood, IL: Irwin, 1987), pg 3-5. Cohen, et al make a similar point, albeit by extension.

[25] Bernstein, Peter L., "How We Take Risks", Across The Board, Feb 1997, pg 25. Tom Phillips quotes Amos Tversky directly here. Tversky, along with Daniel Kahneman, are the originators of Prospect Theory. Bernstein calls this "the most influential research into how people manage risk and uncertainty." See also Hartman and Nelson, pg 148 for another short summary of Prospect Theory as it relates to Tom Phillips' point. Prospect Theory and its relationship to choices were originally presented in Kahneman, Daniel, and Amos Taversky, "Prospect Theory: An Analysis of Decision under Risk," Econometrica 47, Mar 1977.

[26] Bernstein, pg 24-25

[27] Ibid, pg 25

[28] Hartman and Nelson, pg 148.

[29] Lee, Don Y., "The Impact of Poor Performance on Risk Taking Attitudes: A Longitudinal Study with a PLS Causal Modeling Approach," Decision Sciences, Winter 1997, pg 61. The author defines aim point as Lee defines reference point.

[30] Ibid, pg 60.

[31] Real Dollars-an amount adjusted for inflation so that some dollar amount from different periods of time can be compared on an absolute scale. Opportunity Cost-an assessment of what the investor cannot do because his money is tied up in the investment.

[32] Hartman and Nelson, pg 147-148, and Schultz, LTC James V., A Framework for Military Decision Making under Risks, (SAAS Monograph, Jun 96), pg 16-22. Schultz explains both the loss aversion characteristic that differentiates Prospect Theory from Rational Actor theories and the nature of perception of changing marginal gains or losses with respect to their "distance" from the reference point.

[33] Downes, John, and Jordan Elliot Goodman, Barron's Finance & Investment Handbook, (Woodbury, NY: Barron's, 1986). pg 5-84 and the introduction make this point. Pages 5-84 are dedicated to thorough research of the different instruments and performances thereof. The book's authors make the point in the introduction that research and understanding are requisite for trading success.

[34] Cohen, et al, pg 5-6. While the author found the concept of *beta* as the most commonly referenced procedure, see also pg 140-141 and 156-157 for amplification on the use of beta and other possible measurements. See Bagamery, Anne, "Alpha, Beta, Gotcha", Forbes, June 17, 1985, pg 208, for a brief discussion of another alternative called "value oriented investing."

[35] Dewar, James A., and Morlie H. Levin, Assumption Based Planning for Army 21, (Santa Monica, CA: Rand Corp, 1992), pg 5-9 describes the inherent difficulties with trend extrapolation for complex systems in operation for long time periods.

[36] Cohen, et al, pg 131-136 and 157; see also Williamson, Gordon, Low Risk Investing, (Holbrook, MA: Bob Adams, Inc., 1983), pg 8-9 and 301. Thankfully, Williamson provides a sports analogy to explain portfolios on page 8. It is interesting to note from pg 131 in Cohen, et al, that the "father" of portfolio theory, Dr. Harry M Markowitz, did not distinguish between risk and uncertainty. The author chooses not to accept Markowitz' characterization of risk in this sphere as merely uncertainty because of the date of Markowtiz' work (1959) and Markowitz' use of rational behavior as the baseline for his ideas. Prospect Theory has proven rational behavior is not a firm basis on which to posit deductions.

[37] Tom Phillips' analysis here is the author's. While a "perfectly diversified portfolio" might not pay off huge dividends, nor lose vast amounts of money with market swings, it would likely not be a poor investment. The Dow Jones index for decades has performed above inflation. This would mean a real dollar gain for such an investor. Tom Phillips does not question the value of the investment in this statement. He only makes the point that diversification reduces risk—the chance for great gain and great loss. The author presents this analysis based on the author's knowledge of rudimentary market concepts learned while earning his BS in economics, and on data displayed in Downes, pg 732-735. This section displays the performance of the Dow Jones Industrials Stock Average from 1897 through 1985. From a close in its first year of 49.41 the Average generally rose to 300 in 1928, dipping to less than 100 during the period 1931-1933, then resuming a general rise to greater than four digits in 1973. With a short dip during the mid-70's oil crisis, the Average resumed its general rise to 1546 in 1985. See also Cohen, et al, pg 7, for a graph comparing common stocks to the cost of living from 1900 to 1985.

[38] The author's analysis based on the nature of risks in spheres one and two

[39] Ford, pg 31-34 briefly discusses the nature of the potential nuclear accident called the "China Syndrome". This description provides the reader with some understanding of the difficulty of assessing the impact of such an occurrence. See also Defense Intelligence Agency, unclassified portions of pg 41-50, "Medical Response (U)", for a description of the human suffering and casualties associated with the Chernobyl accident. Despite the obvious difficulty of measurement, Sinclair, Warren K., Effects of Low Level Radiation and Comparative Risk, (Argonne, IL: Biomedical and Environmental Research, Argonne National Laboratory, Jan 81), pg 5-7, suggests "lifeshortening" as a potential measure of harm for a similar event.

[40] The author defines catastrophic failure as an outcome that produces prohibitive and/or unacceptable costs as determined by the risking entity's leader. Catastrophic failures also produce benefits, but when defining catastrophic failure the leader makes no assessment of relative costs and benefits. (There is no relationship between the maximum credible event and a catastrophic failure.)

[41] March, James G. Decisions and Organizations, (Oxford: Basil Blackwell Inc., 1988), pg 178. Ambiguity refers to the contradictions, inconsistencies, and fuzziness of reality, preferences and identities. Uncertainty refers to imprecision in estimates of future consequences which are conditional on present actions.

[42] Wildner's drawings represent the a finite set of potential outcomes in one dimension. The author developed these conceptual drawings.

[43] Jones, Major Mark, former commander, Company B, 1-160th SOAR, conversation with author, 23 Oct 97, reference the concept of catastrophic failure. This concept finds its genesis in risk management programs in the Army's 160th SOAR. Leaders only concern themselves with avoiding hazards that could produce catastrophe. This technique shares a similar concept as found in Comar's DeMininis approach, restricting hazard consideration to a subset of the total both smaller than the whole and directly related to success. The author also finds parallel in the conceptual underpinnings of

this approach to those espoused in Dewar, James A., Carl H. Builder, William M. Hix, and Morlie H Levin, Assumption Based Planning: A Planning Tool for Very Uncertain Times, (Santa Monica, CA: Rand Corp. 1993) and Dewar and Levin, Assumption Based Planning for Army 21. In both these works the authors attempted to look to the future. They adopted a procedure that allowed them to identify potential futures based on aspects of those futures with direct bearing on their intellectual quest, instead of developing a picture of the future and then culling the elements to find those with relevance.

[44] Senge, Peter, The Fifth Discipline, (New York: Currency Doubleday, 1994), pg 212-218.

[45] Wildner's discussion here and his second drawing are the author's. Although the author did not derive this specific concept of catastrophic failure from business management risk theory, the drawing and its explanation evidence the author's synthesis of the business sphere's view of risk, success, failure, and learning.

[46] This sentence comes from a plaque kept on the wall of Ed Land, founder and former president of Polaroid Corporation as quoted in Senge, pg 154.

[47] Bennis, Warren and Burt Nanus, Leaders: The Strategies for Taking Charge, (New York: Harper and Row, 1985), pg 69.

[48] Province, Charles, Patton's One-Minute Messages: Tactical Leadership Skills for Business Managers, (Novato, CA: Presidio, 1995), pg 31; and Collins, James, C. and Jerry I. Porras, Built to Last, (New York: Harper Collins, 1994), pg 31 and chapter 7. See also pg 231-232 for a discussion of the rationale of being "visionary"—taking risks and looking long term.

[49] The author's research discovered no accepted practice or standard among the members of this risk sphere for graduated approval of risk.

[50] Collins and Porras, chapter 7.

[51] Bennis, pg 208. This aspect of management and leadership theory—mentoring the inexperienced to assist in the development of intuitive skills and risk understanding—provided an interesting insight for the author as he developed the taxonomy of risk theory. Medical *administration* generally follows the theoretical constructs and procedures of the first sphere, traditional risk management. See web page links from the Yale and New Haven Hospital web site at http://pandora.med.yale.edu/claim/risk/handbook/ rmh_useful_links.html to show the clear parallels between the medical administrative aproach to risk and that of the author's sphere one. Medical *practitioners* tend to behave as do those in sphere four, leadership and management—the ingrained mentoring and coaching practices practiced with junior doctors stands as the most obvious parallel (the assignment of an experienced physician to interns and residents as they learn the profession). The author's rationale for this dichotomy appears to further validate prospect theory. Administrators look at risk as potential accidents; the see malpractice suits offering the chance for them to *lose* money. Doctors and nurses see risk as the potential to make a patient feel *better*. See Cowdrey, Mikki, Chief Nurse, University of Missouri-Kansas City/Truman Medical Center, Department of Emergency Medicine, conversation with author, 26 Nov 96. Tom Phillips uses the same word—mentoring—found in Bennis' work. Some members of the military profession ascribe a pejorative meaning to the word "mentor." See E Mail message from Lacombe, LTC Dave to author, dtd 5 Dec 96 outlining the beliefs of both LTG Holder and COL Spears, then Director, Center for Army Leadership, in their conversations with author of the same day. Both officers contend that a mentor favors his or her mentored subordinate over others with or without a showing of merit. After checking the accepted definitions of the term, the author discusses his unwillingness to accept Holder's and Spear's characterization of the term in the message referenced above. Further use by the author of the term "mentor" in this work will refer to a voluntary relationship into which two people enter in which the senior seeks to develop the junior for the benefit of their organization or cause.

[52] Senge, pg x and 3-6. This is the central thesis of Senge's book.

[53] Ibid, pg 10.

[54] Ibid, pg 139.

[55] Ibid, pg 10. In the case of team learning, Senge says that the members of the team must learn to "dialogue," not discuss, before team learning can occur. On page 11 Senge points out a distinction in his theory from other management disciplines is that "they are all 'personal' disciplines."

[56] Dorner, Logic of Failure, (New York: Metropolitan Books, 1997), pg 34-35; Waldroup, Complexity, (New York: Simon and Schuster, 1992), pg 145-147, and Senge, pg 7.

[57] Kelley, Kevin, Out of Control, (Reading, MA: Addison-Wesley, 1994), pg 27. Kelley identifies some examples of solutions to problems that are clearly counterintuitive and were discovered, not hypothesized. It is important to note that Kelley's work here is not offered as business risk theory, but only to provide an example of a "solution" that is counterintuitive. See also Collins and Porras, pg 140-168. All of chapter 7 is testimony to the concept of experimentation.

[58] Senge, pg 57.

[59] Bennis, pg 80.

[60] Senge, pg 89-92.

[61] Hartman and Nelson, pg 148-150. This section discusses how framing of the consideration of risk greatly varies how different entities view risk and their willingness to take risk simply with respect to the framing. See also Sinclair, pg 7.

[62] Fahy, conversation with author.

[63] Hammer, Michael, and Champy, Reengineering the Corporation: A Manifesto for Business Revolution, (New York: Harper Business, 1993), pg 102-116.

[64] Fehrenback, T. R., This Kind of War, (New York: Bantam, 1961), pg 407-426 (Chapter 25 entitled "Proud Legions"). This entire chapter outlines Fehrenback's contention that an effective army consists of legions. See specifically pg 409 and 419.

[65] Quarters' character is modeled after a real NCO. The author believes that officers too frequently ignore the talents of the NCO corps and overlook great potential for gain. This pool of talent plus even a small penchant for risk-taking can produce tremendous results and free officers for other roles. Nichols, CSM Robert G., CSM 3d Bde, 101st Abn Div (ASSLT), conversation with author, 23 Oct 97. See also Santoli, Al, Leading the Way, (New York: Ballantine Books, 1993), pg 210-212 and 332-334; and Hill, MG James T., conversation with author, 23 Aug 97.

[66] Holder, undated letter to the author. Holder read the characterization Plarren read and an assessment that the Army was risk averse. He wrote in his letter that these were "demonstrably true."

[67] Both descriptions are the author's. The author referenced US Army, TRADOC Pam 525-5 Force XXI Operations, (Fort Monroe, VA: Hq, TRADOC, Aug 94), pg 1-5 and 2-8; DA Pam 600-3, Commissioned Officer Development and Career Management, (Washington DC: Hq, Dept of the Army, Jun 95), pg 6, 8, 9, and 32-33; AR 600-20 w/ic 04, Army Command Policy, (Washington DC: Hq, Dept of the Army, Sep 93), pg 5; Holder, letter to author; Faith, MG (R) Jack, letter to the author dated 12 Oct 97; Ulmer, LTG (R) Walt, E mail message to author dated 1 Oct 97, and his experience to generate this characterization. (Just as he does Holder, the author considers Ulmer and Faith as experts in this area.

Ulmer has more than thirty years of military experience including command through corps level and in combat. After active duty he served as the President, Center for Creative Leadership. Faith, too, has three decades of military experience that includes command through division level and in combat.) The portrayal of the Army's leadership as "filled...with Type A personalities..." is a reflection of the leadership at and below battalion level in combat units. Many of the Army's general officers are Type B personalities. See Hewitt, LTC Glenn, E mail message to author dated 4 Sep 97 for insights into the composition of the Army's general officer corps.

[68] The first seven characteristics of the Army vice civilian employment comes from Malone, COL (R) Dandridge M., Small Unit Leadership: A Commonsense Approach, (Novato CA: Presidio Press, 1983) pg 30-32. Bolger, Daniel, Savage Peace, (Novato, CA: Presidio Press, 1993) pg 106-110 amplifies on number seven and provides a description of number eight. S. L. A. Marshal, Men Against Fire, (Glouster, MA: Peter Smith, 1978) pg 123-137; and Kellett, Anthony, Combat Motivation, (Boston: Kluwer Nijhoff, 1982) pg 97-116, 334, and 336, identify the central importance of team membership to soldier willingness to act as compared to Hosmer, LaRue Tone, The Ethics of Management, (Chicago: Irwin, 1996) pg iii and 2, (also see generally chapters 1 and 2 through page 50 for a comprehensive and balanced presentation of the totality of influences on a business or perons employed by one) describing the profit motive for business. (Although Kellett begins chapter 8 by saying that over emphasis on primary group cohesion has fogged a better understanding of motivation, he then proceeds to outline why cohesion has received such attention.) The author derives number ten from several sources. The uncertainty of the Army's future enemies and environments is best summed up by a quote from General (R) Sullivan during a 24 Oct 96 briefing to CAC personnel at Fort Leavenworth. When General Sullivan's was asked by a CGSC instructor about the future operating environment of the Army he responded, "What is our wartime mission?" The author derives the last distinction from his own experiences commanding four infantry companies for a period of four and one half years in peacetime and in combat. See also Bolger, Dragons at War, (Novato, CA: Presidio, 198.6), pg 67-71 and 151-153 where he describes the difficulties replicating the combat environment even at NTC. If the experience at a training center—in theory the most realistic combat training available in the US Army—only generally replicates the environment of combat, and these rotations are generally limited to one every two years per combat arms brigade, then what the Army's combat brigades spend most of their time doing only has a mild semblance to warfighting in a combat environment. Perhaps firefighters and some rescue workers share this characteristic with the Army's combat brigades, but the author believes the distinction is greater for Army combat brigades than for these civilian disciplines.

[69] An infantry rifleman would refer to three US Army manuals to find every task so described. He would find tasks, conditions, and standards required of every soldier of his skill level in STP 21-1-SMCT, Soldier's Manual of Common Tasks-Skill Level 1; every infantryman of his skill level in STP 7-11BCHM14-SM-TG; tasks , Soldier's Manual, Skill Levels 1/2/3/4 and Trainer's Guide, CMF 11, Infantry; and of every infantryman in his squad as part of a collective in ARTEP 7-8-MTP, Mission Training Plan for Infantry Rifle Platoon and Squad.

[70] Occupational Safety and Health Administration, Job Hazard Analysis, (US Department of Labor, 1992), pg 3 provides an example.

[71] The analogy comes from Bolger, LTC Daniel, E mail message to author dated 14 Sep 97. The concept of experimentation deriving unforecasted lessons and benefits from Collins and Porras, and a suggestion from Ulmer message.

[72] Senge, pg 142.

[73] Chura, LTC Michael F, conversation with author, Jul 95.

[74] The author uses the term "combat brigades" to describe units commanded by colonels in TO&E units. Using this definition, the term does not exclude the DISCOMs of the Army nor exclude their subordinate units from consideration regarding the author's assertion about training mismatch.

[75] The leadership and positional tenures noted by Captain Plarren are based on the author's eleven years experience in brigade level or lower infantry units; briefing to CGSC 96-97 class by Mr John Miller, Chief OER Branch, PERSCOM, notes in possession of the author; and DA Pam 600-3.

[76] Dupuy, T.N., A Genius for War: The German Army and General Staff, 1807-1945, (Englewood Cliffs, NJ: Prentice-Hall, 1977), pg 307.

[77] Gabriel, Richard A., and Paul L. Savage, Crisis in Command, (New York: Hill and Wang, 1986) pg 34. Gabriel and Savage cite Janowitz, Morris, and Edward A. Shils, "Cohesion and Disintegration in the German Wehrmacht in World War II," Public Opinion, Vol. 12 (1948), pg 280-315.

[78] DePuy, General (R) William, Generals Balack and von Mellenthin on Tactics: Implications for NATO Military Doctrine, (McClean, VA: BDM Corp, Dec 80), pg 25-31.

[79] Hand written notes accompanying Holder letter; Bolger, "Zero Defects: Command Climate in First US Army, 1944-1945," Military Review, May 91, pg 63-64; Kellett, pg 240; Weigley, Russell, Eisenhower's Lieutenants, (Bloomington, IN: Indiana University Press, 1981), pg 76; Province, Charles M., The Unknown Patton, (New York: Hippocrene Books, 1983), pg 101; Cooper, Matthew, The German Army 1933-1945, (Chelsea, MI: Scarborough House, 1978), pg 143-145; and MacDonald, Charles B., A Time for Trumpets, (Toronto: Bantam Books, 1985), pg 599. The author considers that any student of history would accept these leaders as risk-tendent and only offers citation of a few vignettes or testament to illustrate their willing forays into battlefield risk.

[80] Wade, Major Gary, CSI Report No. 5., Conversations with General J. Lawton Collins, (CSI, 1983), pg 11; Bolger, "Zero Defects: Command Climate in First US Army, 1944-1945," pg 61-73.

[81] Wade, pg 10.

[82] Bolger, Dragons at War, foreword by GEN (R) Paul Gorman, pg vi-vii. The last several words of Jones' are quoted directly from Gorman on pg vi. See also Chapman, Anne W., The Origins and Development of the National Training Center, (Washington, DC: Center for Military History, 1992), pg 15-17.

[83] Hill, conversation with author. Hill said that he didn't like to say "freedom to fail," but instead spoke of "freedom to succeed." See also FM 22-103, Leadership and Command at Senior Level, (US Army, Jun 87), pg 10

[84] Brown, LTG (R) Frederick, conversation with the author. Brown thought it likely that the ability of several of a junior leader's superiors to view that junior leader's actions in real time would cause those junior leaders to attempt to avoid taking risks since that could lead to very visible errors.

[85] Glenn, Russell E Mail message to author dtd 31 Oct 97 and author analysis. This is a very pronounced difference between the way traditional risk management views the environment and how do military personnel. Grimaldi, pg 21, writing as a theorist in the author's first sphere of risk theory, contends says that true accidents are very rare—he doesn't accept the presence of chance. Clausewitz, Carl, On War, (Princeton, NJ: Princeton University Press, 1984), pg 89. Clausewitz famous trinity indicates the primary role that military theorists say chance plays in battle. Clausewitz states that "As a total phenomenon its dominant tendencies always make war a paradoxical trinity--composed of...the play of chance and probability with in which the creative spirit is free to roam...(this mainly concerns) the commander and his army..."

[86]Dubik, James K., "Decentralized Command: Translating Theory into Practice, Military Review, Jun 1992, pg 27-28. See also Maggart memo and Blades, John W., Rules for Leadership, (Washington, DC: National Defense University Press, 1986), pg 19. Blades' Rule 1 discusses the positive relationship between group member ability and motivation to the effect of non-directive leaderhsip producing above average results.

[87] Lieutenant Colonel Jones quotes directly from Stewart, Steven, Leader Development Training Need Assessment of US Army Battalion Commanders, (Alexandria, VA: US Army Research Institute for the Behavioral and Social Sciences, Nov 1992), pg viii. See also pg 6-7 for a range of descriptions brigade and battalion commanders in the study used to describe risk-taking.

[88] "Consideration of Others" link from the US Army Military District of Washington web site (http://www.mdw.army.mil). This link provides the conceptual overview of the program and examples of the implementing programs by subordinate headquarters. Captain Plarren's venomous attack considers an event publicized on this web site under sample newspaper articles (http://www.mdw.army.mil/co2/articles.htm) in article #2. In this particular story a senior NCO relates a vignette in which during a session prescribed by the Consideration of Others program one individual used "inappropriate language" and apologized for the same by saying, "Excuse my French." Another member of the group objected to this comment based on the French heritage of the objecting member..

[89] Dubik, pg 36-37; Ulmer, "Leaders, Managers, and Command Climate," Military Leadership, edited by Taylor, Robert L. And William E. Rosenbach, (Boulder, CO: Westview Press, 1992), pg 144-145 and 148-150; and Warner, Mark J. And Lee Ward, "Beyond Fear," Executive Excellence, Mar 96, pg 19 on the effects of climate; Ulmer message; Faith letter; Holder letter; Berglas, Dr. Steven, "The Risk-Averse Entrepeneur," Inc., Feb 97, pg 35; and Hartman and Nelson on the distinction between individual and organizational risks.

[90] Lieutenant Colonel Jones points out an example of a logic flaw the author calls "The Tyranny of Universal Standards." Captain Plarren took an example of how one organization (US Army Military District of Washington, an Army MACOM drastically distinct in composition and mission from every tactical formation in the Army) attempted to instill in its members the ability to look out, to value the other members of the team by understanding their frame of reference. Jones attempts to get Plarren to understand that Plarren's experience is in the tactical Army; at echelons below brigade level. Plarren's attempt to impugn what may work in an organization like MDW (an organization with a regional crisis, base operations, and ceremonial mission, installations flung over a three 'state' area, and a comparatively large civilian membership) by applying his understanding of what works in combat battalions is a flawed attempt at reason. Plarren would rightly find the reverse—the attempt to take procedures and methods that work in US Army MDW and apply them directly to below brigade combat units—ludicrous, so he should not be caught in the same logic trap. Jones understands that it's easy to fall into a similar trap when considering risk. Given the complexity of most environments in which one takes risk, the assumption that what "works" in another drastically different environment will work in the environment in which the risk-taker operates is another flawed piece of logic.

[91] Van Fleet, James K., The 22 Biggest Mistakes Managers Make, (West Nyack, NY: Parker Publishing Company, 1973) pg 42-43. Two events to which the author was a party lend credence to this point. Kinnison, LTC Henry L. IV, during his inbrief to his company commanders when Kinnison assumed battalion command told the assembled officers that he would pass the credit for successes to his subordinates and assume responsibility for their errors. During an AAR for an operation in which an air assault was initiated by order of the regiment's executive officer without authorization from the higher headquarters, the regiment's commander, Huntoon, COL David H., told those present that he was, "...happy to take responsibility for initiating the air assault." Both these events, the first when the author was a company commander and the second when the author was the regiment's S3, had a dramatic and positive effect on the climate of the organizations, and the results each achieved. See also Lanza, Stephen R., Myth or Reality: Is Our AAR Process Fixing the Problem or Fixing the Blame?, (SAMS Monograph, Dec 94). Lanza's conclusions and recommendations on pg 37-40 are particularly apropos.

[92] FM 101-5-1, pg 1-34. Jones' and Chara's descriptions present the author's synthesis of the definition in this reference.

[93] Dubik, pg 33-34. Major Chara paraphrases Dubik's article prose. See also Holder's comments to AMSP 97-98, Seminar One, 4 Aug 97, notes in possession of author. Days before retiring from active service, Holder, renowned as a

practitioner of decentralized command and risk-taking, said that one of the only rules he gave to his squadron commanders upon assuming command of his cavalry regiment was, "You do what I say." He further explained that he, as the commander, described what the organization wished to accomplish. He would provide a concept of how to accomplish his vision. His subordinates were free to work around his concept *inside his vision* to accomplish it. His subordinates were not free to alter his vision or ignore the objectives he set.

[94] Holder letter.

[95] Ulmer, phone conversation with author, 23 Oct 97. Ulmer responded to the author's question about what type of risk tending environment we should seek said, we should "encourage the opportunity to do things that could end in failure."

[96] Faith, unpublished manuscript, 1996. The author here condenses and places Faith's prose in bullet form. See also Stewart, pg 8-9 for supporting evidence.

[97] The model Captain Plarren suggests is of the author's creation. Several sources led him to the creation of this model—most of which are cited earlier in the text. The other sources include Fisher, James R. Jr., "A Culture of Contribution," Executive Excellence, Jan 97, pg 16; Goldberg, Beverly, "Paths to Flexibility," Executive Excellence, Feb 97, pg 12; Donohue, Major Kevin S., Developing Initiative in Junior Officers, (CGSC MMAS Thesis, Jun 93), pg 108-120; and Warner and Ward, pg 19. The definitions that follow the model are also of the author's creation. Some of these definitions are hybrids of accepted definitions and others refute currently accepted definitions in one or more spheres of risk theory. The author's decision to create his own definitions reflects his judgment that existing definitions were inadequate and oriented generally on pejorative views regarding risk.

[98] Hequet, "Your Risk-Taking Initiative", pg 89. Hequet states that "merely telling one's subordinates to run around with scissors" will not produce valuable results.

[99] FM 101-5, pg 5-26

[100] Both Holder, letter to author, and Ramsey, LTC Donald, Chief Leadership Instruction Division, Center for Army Leadership, USA CGSC, conversation with author, believe that a small unit tactical leader will normally be confronted with situations on the battlefield in which he or she will have a good understanding of the possible outcomes. Rusty describes risk approval authority delegation systems here that do *not* require a reasonably certain understanding of all the possible or likely outcomes. The author does this for two reasons. First, a system that does not require clear understanding of the potential outcomes is more universally applicable; the user is not first required to ensure understanding of all possible outcomes before using it. Second, the author is not as certain as Holder and Ramsey that small unit tactical leaders will have this understanding. It is possible that they *could* or *should* have this understanding, but their experience limits their acuity. Perhaps the author is simply more skeptical than Holder and Ramsey.

[101] This technique originates from counseling to the author from his then battalion commander, Colonel Louis Huddleston. Huddleston considered it essential for a superior to inform a subordinate of the circumstances in which the subordinate "could speak for" the superior. The author adopted this technique and found great utility in the concept in practice.

[102] These definitions are also of the author's creation.

[103] LTC Purvis quotes Washechek, E mail message to author, dtd 24 Oct 97.

[104] Thaler, Richard, H., Amos Tversky, Daniel Kahneman, and Alan Schwartz, "The Effect of Myopia and Loss Aversion on Risk-Taking: An Experimental Test," The Quarterly Journal of Economics, May 97, pg 647. Thaler, et al, describe "myopic loss aversion" as " the combination of greater sensitivity to losses than to gains and *a tendency to evaluate outcomes frequently* (emphasis added)." One of the implications the authors of this work found of this myopia was that

entities would be more willing to accept risks if they evaluate less often. They conclude that when risking entities "learn from experience," the above is true. They also conclude that risking entities that "got the most frequent feedback (and thus the most information) took the least risk and *earned the least*...(emphasis added)."

[105] Miller briefing.

[106] Gildner, conversation with author, Feb 95. Gildner's father worked as a Foreign Service Officer. Gildner stated that his father was able to do what Captain Plarren suggests before his records went to a formal selection board.

[107] Collins and Porras, make this point throughout their book. The author found this to be one of the central treatises.

[108] The careful reader may note that Prospect Theory predicts this very effect. Captain Plarren sees himself in the negative domain; he is looking at potential outcomes that can only improve his situation. Prospect Theory predicts loss aversion. Since Plarren characterizes the potential outcomes of his risk as positive, he is very willing to embark on the risk.

[109] Senge, pg 80-83.

[110] Captain Plarren refers to the list of five characteristics that Major Plarren wrote on the board in Chapter 3 in the section titled "Discovering Key Aspects of Military Risk Theory." The author does not believe these conditions must be met before any risk-taking occurs, but that these conditions greatly facilitate risk taking. Another way of saying it through the use of a military theoretical analogy might be that Clausewitzian "absolute risk-taking" could only occur if these conditions were true.

[111] Sifers, Steven C., Tactical Level Supervision: Ensuring Success by Foiling Failure, (US Army SAMS Monograph, Dec 91), the entire work is applicable, but see specifically pg 33 where Sifers concentrates on the effects of oversupervision. See also Hequet, pg 86, quoting David Newton, a professor of finance and entrepreneurship at Westmont College, "Risk-taking is a behavior you develop. It isn't a gene you inherit."

[112] FM 22-103, pg 10 and Hill, conversation with author.

[113] This is an element of Prospect Theory already discussed.

[114] Captain Plarren quotes Gary Benson, Professor of entrepeneurship at the University of Wisconsin-Whitewater (From Hequet, pg 86) with the exception of the words "per se".

[115] Ulmer message and Faith letter. See also Faith, unpublished manuscript.

[116] Ulmer, "Leaders, Mangers, and Command Climate," pg 144-145 and 148-150, and message to author; Dubik, pg 36-37; and Warner, Mark J. And Lee Ward, "Beyond Fear," Executive Excellence, Mar 96, pg 19.

[117] The "micro" and "macro" modifiers for the different kinds of risk are the author's convention.

[118] Jones, conversation with author.

[119] Charlton, Major John, comments made during class discussion in AMSP Seminar One, 22 Sep 97.

[120] Weigley, pg 216.

[121] Epstein, Robert M., Napoleon's Last Victory: 1809 and the Emergence of Modern War, (Fort Leavenworth, KS: SAMS Readings, 1992), 153-154.

[122] Ibid, pg 134; and Guilmartin, John F., A Very Short War, (College Station, TX: Texas A&M University Press, 1995), pg 115-116. Rusty purposely mentions examples of both micro and macro risk. In addition, he mentions two examples of micro risk that deal in different currencies. Eugene's decision did not provide evidence of any physical courage, whereas Tutele's actions were physically courageous in the extreme.

[123] US Army Joint Readiness Training Center, Live Fire Complex, (Fort Polk LA: Hq, JRTC, Jan 96).

[124] FM 25-101, pg 3-19, provides three rules for risk management. This framework falls into Captain Plarren's first sphere of risk theory and as earlier discussed is best suited for use in the environment of which Major Cathody speaks.

[125] FM 100-5, Operations, (Washington DC: Hq, Dept of the Army, Jun 93) pg 2-6, and 2-14 & 2-15. See Bolger, The Battle for Hunger Hill, (Novato, CA: Presidio, 1997), pg 302-305 for a description of how the Army's doctrinal fascination with synchronizing "everything" serves to quash risk-taking in favor of a flawed search for certainty, and likely the associated paralysis or untimely execution.

[126] Memorandum, Hq, CAC, 20 May 95, "Program Directive for FM 22-100, Military Leadership", signed by LTG L. D. Holder. Cathody's description of approved doctrine as "boring" and "add(ing) little to the field of risk study in an area already devoid of much doctrinal guidance" are the author's words, not Holder's.

[127] FM 100-5, Operations (Final Draft), (Aug 97), chapter 5 addresses the core function of "Shield." This is defined as "Deny(ing) opponents the ability to threaten the force or interfere with operations and preserve strength through preventive action." Page 10-1, in the section entitled "Seize the Initiative" discusses the importance of commander's intent if subordinates are able to take risk and force the enemy to fight on friendly terms.

[128] FM 100-14 (Line Out Draft). The whole manual addresses risk as does the author's sphere one theorists.

[129] FM 101-5, addresses risk in many places, albeit as would a sphere one entity. The manual does differentiate between accident risk and tactical risk, but conceptually approaches both types in the same manner. See pages 4-3, 4-5, 4-7 thru 4-9, 4-13 thru 4-14, 4-17, 4-28, 5-3, 5-5, 5-7 thru 5-18, 5-24 thru 5-27, 5-30, and Appendix J.

[130] Major Cathody speaks of FMs 7-8, 7-10, and 7-20. These field manuals cover doctrine for infantry squads through battalion. The characterization of FM 7-20's safety focus comes from Bolger, E mail message to author, 17 Nov 97. See specifically FM 7-20, The Infantry Battalion, (Washington DC: HQ, US Army, Apr 92), pg 1-3.

[131] Memorandum, Hq, CAC, "Program Directive for FM 22-100, Military Leadership". Enclosure 1, paragraph G. "Reason for initiating revision." This paragraph states that "in March 1995, LTG Stroup, the DCSPER, and GEN Sullivan, then the CSA, directed that the leadership doctrine be revised....the DCSPER & the CSA opted to assign two extra people, with academic leadership backgrounds, to Fort Leavenworth for at least a two-year tour to conduct the leadership revision."

[132] Challans, LTC Timothy, Leadership Doctrine Division, Center for Army Leadership, conversation with author, Oct 97.

[133] FM 100-5 (FD) does offer some healthy insight into risk-taking on pg 10-5, but only after embracing the sphere one traditional risk management definitions and procedural theory.

[134] FM 25-100, pg 1-4.

[135] Captain Plarren specifically refers to FM 7-20. In this FM on pg 1-3 the reader will see the traditional risk management approach. In chapter 2 on pg 2-4 the FM begins to talk favorably about initiative, aggressiveness, and the ability to adapt to changing situations. This language is quickly countered by saying that "Subordinate initiative and

independence, though encouraged, is limited..." and those who "*disobey* orders due to a perceived change in the situation must accept responsibility for their actions (emphasis added)." The manual later echoes FM 100-5 by warning against actions not synchronized. It's ludicrous to view any doctrine that equates risk-taking with legal disobedience, and that patronizingly reminds leaders they must take responsibility for their actions, to encourage risk-taking in any way.

[136] FM 22-103, pg 10.

[137] Ibid, pg 87.

[138] Ibid, pg 33. Captain Plarren refers this manuals quotation from the 1944 edition of FM 100-5 that says, "...inaction and neglect of opportunities will warrant more severe censure than an error of judgment in the action taken."

[139] FM 25-101, pg 3-19.

[140] FM 22-102, Soldier Team Development, (US Army, Mar 87), pg 31; and FM 22-100, Military Leadership, (US Army, Jul 90), pg 46-47.

[141] FM 25-101, pg G-1 and G-2.

[142] Bolger, E mail message to author, dtd 17 Nov 97. Bolger encouraged the author to include a short discussion of other than capstone field manuals because, "Platoon sergeants don't read 100-5."

[143] Collins, Art, Common Sense Training, (Novato, CA: Presidio Press, 1978), pg 1, 12-13, 69, and 70-72.

[144] TRADOC Pam 525-5, pg 1-3 characterizes doctrine as that which drives change within the Army.

[145] FM 100-5, pg 2-10.

[146] FM 100-5, Operations (Final Draft), pg 4-2. This latest draft version of FM 100-5 doesn't identify the components of combat power. The elements of "Military Power" are found by reading the paragraph describing maneuver as a characteristic of Army operations.

[147] FM 100-5 (FD), pg iv; and FM 100-5, pg iv and v.

[148] Bolger, E mail message to author, dtd 17 Nov 97.

[149] van Creveld, Martin L., Fighting Power, (Westport CT: Greenwood Press, 1982), pg 35-37.

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