

The **GHOST** and **GENERAL SMITH**

Jordan Miller
Matt Tweedy
Scott Weibling

www.themanueverist.org



The contents of this book are the responsibility of the authors. Their ideas do not constitute endorsement by the United States Marine Corps or the Department of Defense.

This is a work of fiction and should not be construed as an official publication of the United States Marine Corps or the Department of Defense. Duplication is encouraged. Portions of this book may be reproduced. Please reference the source and the authors.

The Ghost and General Smith

December 2021

The Warfighting Society

www.themaneuverist.org

Jordan Miller, Matt Tweedy, and Scott Weibling

Table of Contents

Preface	4
Chapter 1	5
Chapter 2	7
Chapter 3	9
Chapter 4	11
Chapter 5	15
Epilogue	18

Preface

Be slowly lifted up, thou long black arm,
Great Gun towering towards Heaven, about to curse;
Sway steep against them, and for years rehearse
Huge imprecations like a blasting charm!
Reach at that Arrogance which needs thy harm,
And beat it down before its sins grow worse.
Spend our resentment, cannon,-yea, disburse
Our gold in shapes of flame, our breaths in storm.
Yet, for men's sakes whom thy vast malison
Must wither innocent of enmity,
Be not withdrawn, dark arm, the spoilure done,
Safe to the bosom of our prosperity.
But when thy spell be cast complete and whole,
May God curse thee, and cut thee from our soul!
-Wilfred Owen

'On Seeing a Piece of Our Artillery Brought into Action'

August 2023.

General Smith slumped into his desk chair at the official residence. Boxes, papers, and unhung pictures clutter his office. There was hardly time to unpack since assuming commandancy. Tonight's evening parade finished on time and without incident. The Marines did well – no one fell out despite the heat and humidity – but he wondered how to sustain his own excitement for the parades to come. Tradition was important but he had work to do.

General Smith picked up the hand-written note on his desk, reading it for the 4th time.

Dear 39 (Eric),

Congratulations on becoming our commandant. The hopes and security of millions of Americans are in your hands. You are the right man for the job. I can think of no one better suited for this moment.

This office is unique – unlike any other in the profession of arms. Very few know the burden and challenges you will face. Expect trials and critics daily but keep the faith and do what you know is right. Marines past and present are entrusted to your care. I know you will succeed.

Semper Fidelis.

David Berger, 38th CMC

General Smith put the letter in his top drawer. He looked at the stack of unread briefs and pulled out a notebook. A 0900 briefing with the Senate Armed Services Committee meant 0400 reveille.

Chapter One

April 2041. The Pacific.

General Smith wakes in his dress blues. In mud. The air is thick with smoke and rot. There is an oily smell of death. He cannot see more than ten feet in front of him and doesn't know the time.

"Welcome, commandant."

Smith turns and slips in the volcanic mud. He pushes off the ground until face to face with an apparition.

"Where am I?"

"This is hell, my son," answers the ghost.

"This is a dream."

"This is the future, general."

Suddenly, he shoots into the air, arms locked to his side and legs frozen at attention. He climbs above the smoke until a shoreline is in view. The voice follows.

General Smith sees what looks like a controlled burn spreading across a small island. He'd spent enough time in III MEF to know this was the Pacific. Water-filled craters dot the landscape, remnants of trees and undergrowth scattered across uneven ground. And bodies. Some charred, some crawling, some still.

"Where am I?" Panic oozes from the commandant's voice.

"You're looking at a Marine Expeditionary Advanced Base, general. Or what's left of it."

vAcross the horizon are ships. Gray hulls and black hulls and cigarette boats and landing craft moving closer to shore. Nothing visible is flying.

"What happened here? Someone must be coming."

"No one is coming, general," pointing to the ships, "except them."

General Smith closes his eyes trying to wake up.

"Three weeks ago, the satellites stopped. Two weeks ago, Internet protocols failed. Last week, a series of enhanced electromagnetic pulses triggered across the Pacific. Within 6 hours, every expeditionary advanced base was bombarded with naval gun fire. Thousands of awakened cannons with nothing to stop them. Your autonomous logistics crafts and small boats became erratic after losing satellites. They are nothing more than silent buoys



and anchors now. No one in Washington or Hawaii knew for hours, and by the time they did, it was too late. You see, general, even your redundant systems failed.”

General Smith could not know from surveying the carnage that the EMP destroyed every chip in every programmable piece of equipment. Analysts back in the Pentagon weren't certain if anything could be resurrected and if a reboot was possible.

“Those Marines have HF! They should be reporting and calling for help. For God's sake, they have advanced missile systems on that island.” General Smith is screaming and flush. “You're telling me they can't sink a Chinese junker?”

“General, you took those options away from them years ago. Harris radios are black boxes. They're closed systems designed to prevent Marine tinkering. Besides, no Marine has cut an antenna or programmed a radio by hand in a decade. You made it so. It's the same with the Navy/Marine Expeditionary Ship Interdiction System, your so-called NMESIS. Even though the Naval Strike Missile is immune to electronic countermeasures, the sensor-to-shooter link was taken out when we lost Link 16 two weeks ago. Manual operation is no longer an option without targeting data, and since the introduction of out-of-the-loop multi-domain weapon systems, the rest of their weapons can't range. You spent the better part of 40 years professionalizing a force, prizing elite warriors of superior fitness, resourcefulness, and intelligence – but you built a mirage. Everything they are is touched by something they are not. All they can do is try to survive, but your avoidance of iron mountains left meager rations and supplies.”

“You're telling me the Marine Corps equipped a helpless force? No. I don't believe it.”

“*You* built a helpless force, general,” the ghost whispers as it moves within inches of General Smith.



“The only thing they have that wasn't affected by the EMP are carbines, grenades, and e-tools.”

Dozens of rusty landing craft approach the island under methodical naval gun bombardment. Chinese troops scramble ashore without resistance and swarm the island. The last thought General Smith had before a white light consumes him was about the warfighting principle of mass.

Chapter Two

June 2035. Aberdeen Proving Grounds, Maryland.

General Smith stands in a crowd. He's in a drafty mid-20th century hangar, looking up at a stage. The Ghost stands next to him. A middle-aged man in an expensive suit is speaking at the lectern. Weapon displays flank the stage, ranging from Remotely-Operated Ground Unit for Expeditionary Fires (ROGUE-Fires) vehicles mounted with GBASMs to modified steel containers, housing pods of Land Based-Tomahawk cruise missiles and High Mobility Artillery Rocket Systems. There is nothing to distinguish the weapons from anything he's seen before as CG III MEF and at Marine Corps Combat Development Command. The general recognizes the Raytheon product that combines the fourth-generation missile capabilities of the SM-6 (surface-to-air) with Tomahawk cruise missile (surface-to-surface) capabilities into the fifth-generation NSM. This new missile uses the Autonomous Target Recognition (ATR) seeker to ensure that the correct target is detected, recognized, and hit at sea or on land. Stacked pelican cases holding ruggedized laptops (Weapons Control System), ROGUE-Fires leaders kits, and Tactical Communications Adapters seem to outnumber the audience.

Non-surface-based platforms are the hot topic. Loitering and palletized munitions are being displayed, demonstrating launch capabilities on a variety of platforms. Loitering munitions allow the Marine Corps to pre-launch munitions into a designated area for extended periods of time. This autonomous system searches for targets, then decides which targets and when to engage in such a way that no human can intervene.



The general also sees himself, albeit with grayer hair and more wrinkles, seated comfortably on the stage next to other well-dressed men and women. He knows that every other VIP on stage is a former military officer. This is one of the more distasteful elements of the military-industrial marriage. He hates coming to these dog and pony shows but they are necessary. You never get the actual price tag, and you never get what you pay for, but it all serves a purpose.

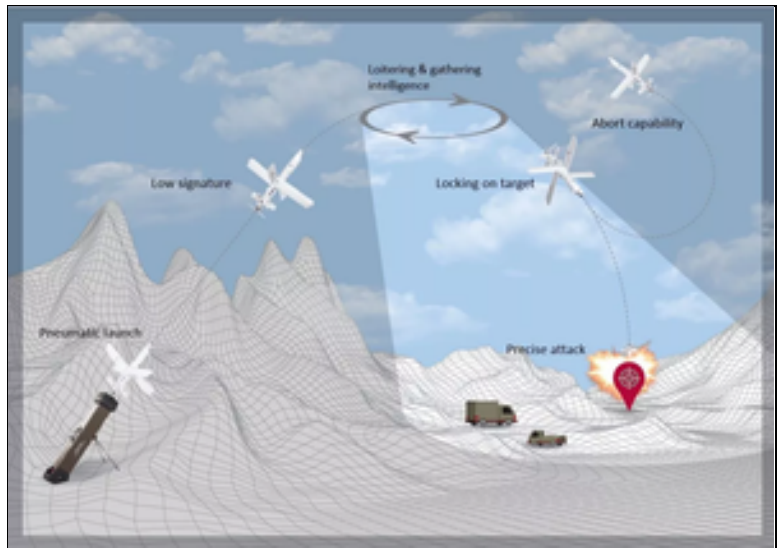
General Smith listens to the speaker:

"...this represents the pinnacle of warfighting and another step to ensuring the security of America and

her allies. Though the models we're displaying here are designed for the Army, the maritime variants are already fielded in the Marine Littoral Regiments for their Expeditionary Advanced Base Operations. Marines got a head start on the Army, you might say." The man chuckles. "But you might be asking yourself, 'these look identical to the systems we already have', and you'd be right. They do look the same, but the difference with the new systems will change how we fight forever. These missile suites are the first out-of-the-loop multi-domain weapon systems designed for conventional forces. We have responded to the challenge of the kill-chain in a truly impressive way. This is the technological offset from our adversaries that we've been working towards. Not only are these systems more accurate and reliable than earlier models, but they're also faster and more discriminating in targeting. By removing the threat of human error and empowering the narrow artificial intelligence within our suites, war just

became easier and security more assured. We worked closely with the folks at DARPA to implement state-of-the-art encryption that virtually ensures no one can fire these that shouldn't - so there is no risk of hacking.

The best news for the Pentagon, from a budgetary angle, is we don't need four separate systems for air, land, sea, and subsurface, just one! Working closely with the Army and Marine Corps we've fielded a system that *knows* what to launch even before we do. Just like some of us remember as lieutenants at TBS or down in Benning, it's as simple as supplying target engagement criteria and engagement zones. That's it. This innovation frees commanders and the guys on the ground to worry about more pressing things."



"You're still impressed" asked The Ghost, "even though you know what happens next?"

"Well, we need to do this before the Chinese do. Every analyst and intel report confirms the Chinese and a few others are willing to push boundaries for an advantage. We're far from perfect, but to deter aggressors you need to give them a reason to fear you no matter how distasteful. Without crossing an ethical line, of course."

The Ghost is silent.

"How is this any different than moving from horse cavalry to tanks? Was it unfair that we invented stealth technology before the Russians in the Cold War? If we don't push autonomous systems to the frontiers, someone else will." General Smith turns to The Ghost and says with conviction, "No one wants to imagine the consequences of falling behind!"



"Someone did think through the consequences, general. The problem is you did not. Every new system that prioritizes speed, accuracy, and security is a zero-sum proposition for human operators. This speech says the quiet thing aloud: The goal of military hardware is no longer to enable the warfighter; it is to make the warfighter redundant. Why? Because the experts say humans are unreliable, prone to errors, and slow."

General Smith is confused by this. "I don't understand. If there is a better way to do something, why wouldn't we do it? If autonomous systems are better options, it's malpractice to reject them! All we need to do is make sure the Marines have a backup if a system fails. It's simple: We need robust redundancies for everything."

The Ghost smiles. "Your redundancies, general, are always the first to go."

The bright flash takes General Smith again.

Chapter Three

November 2030. Marine Corps Combat Development Command.

Catching his breath and regaining balance, General Smith instinctively brushes his uniform, fixes the ribbons on his dress blue coat, and combs his hair with his hand. He is still caked in mud from the island and his shoes are damp. Now in a large conference room, he looks around to gain his bearing. He recognizes his former chair as Commanding General of Marine Corps Combat Development Command (MCCDC). A familiar routine unfolds. Across the room a lieutenant colonel and major in woodland cammies are going through the pre-brief rituals he is so familiar with: placing printed slides in front of each chair, checking the PowerPoint, and nervously chatting about the brief in a final cram session.



Smith chuckles to himself and spins the leather chair in front of him. “I know this room.”

“Yes. You are about to watch the crossing of a Rubicon, so to speak. A point of no return, really.”

General Smith has no idea what that means. Caesar and the Rubicon and the fall of the Republic, from a Quantico office? He’s attended important briefs and made critical decisions here, but Rubicons are crossed at executive offsites or the Pentagon. He taps his fingers on the back of a chair impatiently.

The Lieutenant Colonel and Major leave. The conference room TV reads, “Force Design 2040: In Progress Review 3.”

“This seems standard to me,” says General Smith. He picks up one of the slide packets and starts thumbing through the pages. “I don’t see how this is any different than anything else. What is supposed to happen?”



“Today will bring a consequential concession from a deputy commandant. The general will realize it costs too much to sustain enterprise-wide analog redundancies. She will reach this point begrudgingly, not because she is a futurist or unaware of skill deterioration amongst Marines, but because the Deputy Commandant of Programs and Resources will convince her the math does not work. It’s an old story, really. The Marine Corps cannot field new systems without cutting old ones – and that doesn’t just mean

Marines. It means gutting training budgets for military skills and further altering MOS standards. It costs too much for every Marine to be a rifleman now, what with the exploding manpower costs. As the CG of MCCDC, she will make the determination that the Marine Corps’ best investment of time and resources is autonomous systems, not Marines.”



"I don't know about autonomous systems, but we've known for a while that you can't win future fights like it's the 1940s. Mass is not possible. Slow and heavy weapons must be replaced with faster and more accurate ones. Marines must be smarter, fitter, and more mature to contend on the modern battlefield. If that means fewer people, then so be it. We still want Marines. They will win the battles, but we need to invest in technologies and weapons to enable that victory."

The Ghost did not seem to hear him. "After today's brief, she will call the commandant and recommend the Marine Corps divest the artillery MOS. And he will, but it is only the start of the cuts."

"What? Why? Who is going to run those new systems we saw at Aberdeen? I saw ROGUE- Fires and HIMARS on that island. I know they were destroyed, but I saw them! Who is going to operate and maintain these things?"

"Don't you understand, general? Anyone can guard and polish an autonomous system. Why would the Marine Corps need a specialist to do something equivalent to parking and protecting a steel box or JLTV? All targeting is done offsite, the system decides when and at what to shoot, and it is networked into the Joint All-Domain Command and Control system. MCCDC just figured out that the only artillery Marines it physically needs to operate these systems are incidental vehicle operators."

"I can't imagine the artillery advocate will let this happen. Those guys won't roll over like the tankers. How the hell is this possible?"

Just then, The Ghost reveals herself as Saint Barbara, the patron saint of artillerymen. General Smith knows her but doesn't know how he knows. He bows in reverence, shielding his eyes in fear.



"The artillery community did itself no favors," Saint Barbara speaks in a firm but enchanting voice, "but in truth, the fault is not solely with them. The moment manual gunnery was sacrificed on the altar of Force Design 2030, the artillery community's days were numbered. And they are not alone in this shame but will feel it to their bone. Not enough decision-makers recognized that some redundancies are more than simple backups. Some redundancies can be the final link to ancestral knowledge. Traditional firing procedures and systems have the memories of generations of cannoneers embedded in them, all the way back to the fields of pre-Westphalian Europe. When we gave into automated systems, we erased memory. The absence of memory is a form of insanity. General Smith, today in this conference room, the Marine Corps crosses the Rubicon into insanity. The sharper the tools of war, the duller the minds to wield them."

This time, when the bright light consumes him, General Smith has one thought: is he insane?

Chapter Four

February 2026. Fort Sill, Oklahoma.

General Smith stumbles into a dark room. His arrival clouds the air with dust. Mildewed boxes crowd the floor and rows of bookcases filled with old military publications line the walls. He stares at what must be hundreds of old aiming stakes and firing tables, randomly strewn about the floor.

Frustrated and tired, General Smith calls out, "Get to the point! I'm tired of getting jerked around! Tell me what you want or send me back!"

St. Barbara, unaffected by the dust, appears. "We are in beautiful Fort Sill, Oklahoma, at the Fires Center of Excellence. Before you are what's left of the Tabular and Graphical Firing Tables. The rest were sold to surplus shops, private collectors, or put in the Fiddler's Green Museum. Manual gunnery has not been taught to Marine Artillery Officers (0802s) or Field Artillery Control Marines (0844s) in six months. A modest resistance has emerged, though. A group of senior officers and enlisted artillerymen are keeping these relics safe in hopes that manual gunnery is re-instated. I've brought you to see their last stand. Come with me."



General Smith follows St. Barbara into the biting Oklahoma wind. The base was alive with US Army activity. He saw drill sergeants in smokey bears moving formations, privates in shirtsleeves on working parties, and instructors moving smartly between buildings. The best way to understand an 0802 was to spend a week on this old frontier base, its grounds haunted by the Indian Wars and soldiers teaching violent mathematics.

St. Barbara brought him to one of the fort's newest buildings.

"This building houses the NMESIS program, an unmanned and networked capability, enabling distributed ground-based fires either via the NSM or the Land-based Tomahawk. This is the world's first fifth-generation anti-ship and land attack cruise missile. The defunct classrooms we just left are no longer needed. This building is for the rare occasion that we do anything in person, though within five years Marines will stop coming to Fort Sill. The die was cast to cease funding manual gunnery and analog systems the moment NMESIS was funded. The Army no longer sees the benefit of spending their money to train, feed, and house Marines since we do not operate common systems. The DOD budget has been flat for 5 years. The NMESIS program required all the fires program funding once artillery regimental motor pools were refitted to account for additional maintenance and storage space. Plus, the majority of NMESIS training and readiness tasks are now accomplished through simulation, which required additional facilities and software upgrades."



St Barbara grabs General Smith by the collar and forces him through a wall. On the other side and unscathed, The Ghost and General Smith stand in another conference room. The Commanding General of Training and Education Command (CG TECOM) sits flanked by the Fort Sill Marine Detachment Commander (CO MARDET Ft Sill), a seasoned colonel. The colonel is sweating and struggles to hide obvious frustration.

CG TECOM: "Colonel, I'm still not clear on why you think we should keep manual gunnery in your curriculum. We maintain only one cannon battery per artillery battalion. The cost vs benefit just doesn't add up. The Army did away with manual gunnery years ago and reaped substantial cost savings. Their folks are saying performance has improved in junior soldiers and

officers from additional time on simulators and online modules. Almost all the kids coming in today are at home with tablets and computers, and that's where we need to be to maximize our future systems."

CO MARDET Ft Sill: "General, that one cannon battery per battalion is the only option we have left to employ indirect fire support in a GPS-denied environment. Manual gunnery skills are an essential analog capability if automated computational means fail. Sir, as recently as 2018, a cannon battery resorted to manual cannon operations in Syria. In the fight expected for tomorrow's wars, electronic attack is a reality. If the howitzer's Digital Fire Control System or Advanced Field Artillery Tactical Data System (AFATDS) gets compromised by electronic attack, we'll need manual computation."



CG TECOM: "Colonel, howitzers are not part of the plan. We've moved past them. This debate has been had and decided. Shit, we don't employ howitzers in any of our EABO simulations and wargames. They're too heavy, slow, and can't range targets from the first island chain."

CO MARDET Ft Sill: "Sir, even the Tentative EABO Manual says that 'the FMF as a whole is capable of EABO rather than designed exclusively for EABO' (TM-EABO). I believe we need to preserve a cannon and manual gunnery capability for contingencies outside of the EABO construct. We both know the arc of instability is as volatile as ever. Our recent history shows that persistent fire support gave us an asymmetric advantage over our enemies."

CG TECOM: "I understand your position and appreciate your passion, but that call has been made. We're focused on China and cannons are not part of that fight. Before you retire, you'll see the last cannon battery roll up their colors. Manual gunnery is dead. The NMESIS and HIMARS are automated for ease of use. Artillery lieutenants can understand everything to know about these systems from on-the-job training. There's no manipulation or tinkering that a Marine can do to these systems. You know, I spoke with the Raytheon representative at a luncheon the other day and he told me that, once the system receives targeting information, all we need to do is push a button. We'd remove the Marine completely if the public wouldn't throw a fit about robots indiscriminately killing everyone...but that's coming. Given where we're going, I wonder whether there's utility in having the Fort Sill detachment at all. Why do we need to send lieutenants or Marines to Fort Sill? This six-month school puts a significant dent in our budget. If I were you, I'd focus more on saving the artillery school and less on archaic functions like manual gunnery."

CO MARDET Ft Sill: "General, the curriculum can be shortened. At a minimum, we still need three months to train lieutenants in the fire support and Joint Fires Observer curriculum."

CG TECOM: "I don't think we're on the same page, colonel. My budget's not increasing, and we're still trying to mature the force. The artillery MOS looks like a great place to save training money since we are implementing automated push button systems. My understanding is that, once AFATDS is fully integrated with the Joint All-Domain Command and Control system (JADC2), fire support coordination will be a thing of the past. AFATDS will receive targeting data and automatically pick the best weapon to target match. Once the system is fired, the missile's built-in sensors will see and avoid friendly systems with encrypted IFF codes. No one's hanging mission cards and calculating 'stay aboves' and 'stay belows' anymore, colonel. What will you teach Marines here? Lieutenants can take a JADC2 course virtually before executing orders to their first duty station after TBS. Eventually, the only Marines on this base will be a small staff for integrating with the Army. Build some COAs and send them my way. I want to know how you think we can divest equipment and return the instructor cadre to the fleet. These automated systems will save us millions by not having to send artillery lieutenants and enlisted Marines to Fort Sill. On the job training will suffice. Thanks for the brief, colonel. Oh, and one other thing. I'd like one of those old sticks with the numbers on it. And a 105mm case for my desk...if you have some lying around."

The general abruptly stands, forcing the others in the room to jump to attention. He puts them at ease and shakes every hand before hurrying out the building towards a waiting SUV. Some of the Fort Sill Marines are shocked. Others, including the colonel, had reached acceptance before the general left the room.

"There you have it, General Smith," says Saint Barbara curtly, "14 years before the disaster in the Pacific, analog artillery died. Memory and skills mothballed alongside the cannons. Only the most

senior artillery Marines remember the procedures, but their memories grow less reliable and valuable each day.”

“But we were assured that the systems were resilient to electronic attack. We knew the adversary would try to shut us down. We were confident the lights would never actually go out.”

Saint Barbara and General Smith then walked through Fiddler’s Green, into the white light, and disappeared.

Chapter Five

November 2022. King Hall, Naval Postgraduate School.

“Do you recognize this auditorium?” asks Saint Barbara.

General Smith looks across the crowd of mostly Naval and Marine officers and nods.

“I do. King Hall. Where the NPS students receive all-hands briefs. Guests range from Congressmen to scientists, astronauts, and senior defense leaders. I’ve spoken here a handful of times. We send bright officers to NPS for graduate degrees so they can work on complex problems.”



“General, this brief is about the future. It takes place a few months from now.”

“Everywhere you’ve dragged me has been the future! What am I supposed to do about some briefs at NPS? There are briefs everyday all over the place about the future. All I think about is the future and how the hell to prepare for it!

Saint Barbara dismisses General Smith’s frustration and smiles. “The head of the Office of Naval Research is giving a brief called

‘Re-Imagining the Future Force’. Remember, I’ve shown you a future and its future force.”

On stage, an admiral in khakis speaks dispassionately about the latest technological innovations and projects. He uses highly technical terms, assuming his audience can follow mathematical, programming, and engineering concepts. He speaks freely with little care for dumbing down the message.

“I think digital engineering needs to be fundamental to everything we do,” says the admiral. “That way, we could maintain configuration control and ensure that the standards used at the interface are understood by those that need to understand and not everybody else. There are some critics who worry

about silos of knowledge centered in technology. They're afraid of some *Terminator 2* 'Skynet' scenario, where our machines turn against us."

The crowd laughs. A handful, nervously.

"Most of those fears are from luddites," continues the admiral, "and we need to ignore them. We're at a pivotal moment in history. We're in the middle of a new transition in technology, and I think we must adapt rapidly to succeed in this new world we're entering, a new world where the character of war demands uncomfortable choices to outcompete our adversaries."



Saint Barbara pulls General Smith out of King Hall into the central California air. A light fog blankets the campus. General Smith is tired and struggling to keep his tattered uniform presentable. The ground starts to shake, and the air around becomes a furnace. General Smith struggles to keep his balance as he shields his eyes. Saint Barbara now stands twenty feet tall and her eyes aflame.

"The time for showing is over!" Her voice assaults the general to nausea.

"Do not be taken in by the promises of technology. These mythmakers of easy war have walked the earth forever. They are tricksters and cheats all! Do not be fooled by their pretty slides and fancy studies or their demonstrations and simulations. You are all frogs slowly boiling! These charlatans preach certainty in numbers, that systems will never fail. They speak of the endless ascent of technological progress. You sacrifice your children to an automated idol and call it good. The price of progress, general, is your Marines."

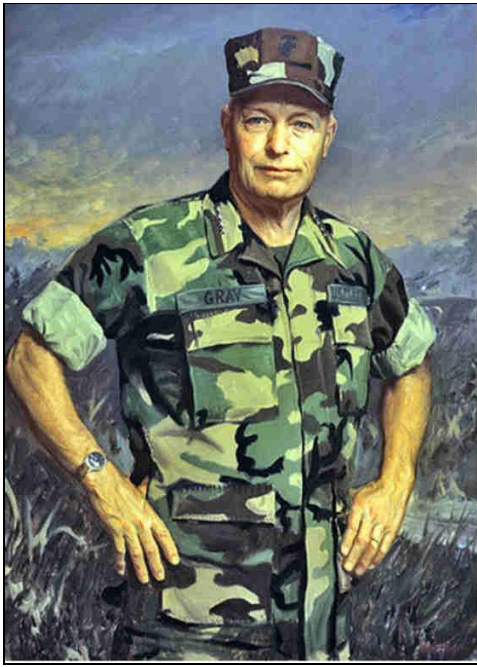
General Smith responded, "There are always risks! We cannot fall behind the Chinese. If we don't do these things, someone else will. We are in an arms race, don't you see?"

"Yes, you are in an arms race. But you are choosing to climb a mountain without a plan to get back down. General Gray warned you about overreliance on technology. Don't you remember him saying, 'There will always be a tendency for some to want to solve all problems through technology. Advantages from technology are seen as only temporary. Long term results come from people.'"

Saint Barbara smiles and whispers, "Tell me, general, what happens when the lights go out?"

"We are making fitter, smarter, more mature Marines to adapt if that happens! We are thinking about these things!"

"Your future Marines are the product of the world they live in, a world where cognition depends on screens and skill is ceded to machines. Automation makes them complacent. 'The progressive effect of automation is first to relieve the operator of manual effort and then to relieve him of the need to apply continuous mental effort'. The sharper the tool, the duller the mind, general! And then you speak of a future where Marines are better warfighters but give them tools designed to remove human agency. You assume Marines can be taught without realizing that the skills they need are fading from their reach—and your institutional memory. You will force an age of re-discovery. A DOD dark age. General, I showed you the future if you do not change. I showed you what it looks like when the lights go out. It's carnage and defeat!"



General Smith said nothing. Nothing made sense anymore. He felt helpless and hostage to this ghost. The proposition was simple but not easy. He had to modernize the force to compete, had to adopt new technologies, and had to take risks with automation. And that's OK. We don't use sails or steam power anymore; cavalry is in the air and soon enough it will be drones. The problem is that the more technology we adopt, the less we need humans. The less we need humans, the less humans are capable of. If our systems fail...we'll be left with Marines capable of very little. He tried to wrap his head around this until a bright light once more consumed him...

Epilogue

Home of the Commandant, Washington, D.C.

General Smith is back in his office. His uniform is no longer stained with island mud or wrinkled from traveling across space and time. It was all a dream, it seems.

The 39th Commandant stands uneasily from his chair. He leans over his mahogany desk, right hand in his pocket and left hand scratching his head. A bugle plays. He checks his watch. 2100. Taps. He writes himself a note and heads to bed, still shaken by the intensity of the dream.

The general's note reads just five words. A simple question. "Do we need artillery Marines?"



Photographs

The Enemy Approaches

<https://www.globaltimes.cn/page/202103/1218837.shtml>

What Didn't Break: Guns, Grenades, and E-Tools

<https://www.pinterest.com/pin/471611392206032244/>

The ROGUE-Fires Vehicle

<https://twitter.com/ScottGourley1/status/1045007565082505221/photo/1>

Loitering Munitions at Work

<https://uvisionuav.com/our-technology/>

American and Chinese Flags

<https://news.cgtn.com/news/2020-07-20/Who-is-America-s-enemy-It-is-not-China-Shge01mywo/index.html>

Emblem of the Marine Corps Combat Development Command

https://en.wikipedia.org/wiki/Marine_Corps_Combat_Development_Command

Caesar Crossing the Rubicon, Adolphe Yvon, 1875

<https://www.wikiart.org/en/adolphe-yvon/caesar-crossing-the-rubicon-1875/#>

Marines and Machines

<https://www.businessinsider.com/marines-train-with-darpa-squad-x-autonomous-robot-battle-buddies-2019-7>

Saint Barbara, Patron Saint of Artillerymen

<https://www.facebook.com/1RegtRAA/photos/happy-saint-barbaras-day-to-all-gunners-past-and-present/saint-barbara-is-the-pat/1888140048168346/>

Logo of the Ft Sill Fires Center of Excellence

https://commons.wikimedia.org/wiki/File:Fires_Center_of_Excellence_Logo.jpg

Emblem of the Marine Corps' Training and Education Command

https://en.wikipedia.org/wiki/United_States_Marine_Corps_Training_and_Education_Command#/media/File:Seal_of_the_United_States_Marine_Corps_Training_and_Education_Command.png

A Marine artillery gun and its crew in Syria, 2017

<https://www.businessinsider.com/marines-in-syria-fired-more-artillery-than-any-battalion-since-vietnam-2018-2>

King Hall, Naval Postgraduate School

<https://www.tectonics-ae.com/portfolio/king-hall/>

The Skynet Logo from *The Terminator* Universe

https://commons.wikimedia.org/wiki/File:Skynet_Terminator_logo.png

General Alfred M. Gray, 29th Commandant of the Marine Corps

<https://www.txdevildog.com/marine-general-al-gray/>

Marine Artillery Firing in Operation Phantom Fury, November 2004

https://en.wikipedia.org/wiki/Second_Battle_of_Fallujah#/media/File:4-14_Marines_in_Fallujah.jpg

*“The absence of **MEMORY** is a form of insanity...The **SHARPER** the tools of war, the **DULLER** the minds to wield them...*

*...Where will **YOU** be when the lights go out?”*

www.themaneuverist.org

