

DESTINATION UNKNOWN

Volume 2, Fall 2020



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Front Cover Artwork:

SSgt William Bradley

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UNKNOWN**

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DISCLAIMER

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All stories were written before the current COVID-19 outbreak. Any similarities to the pandemic are coincidence.



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AWARDS

RECOGNITION

In 2019 and 2020, several organizations within the Department of Defense recognized the *Destination Unknown* team and Marine Corps University for offering innovation in education, writing, and thinking. We believe these awards are more than a recognition of past and current work, but what may lie ahead if we continue to pursue this intellectual path . . .

CITATION

“[Innovative Marines] assembled a writing and illustration team, with support from Marine Corps University’s Brute Krulak Center for Innovation and Creativity, to develop and publish a graphic novel series—*Destination Unknown*—that explores future moral, tactical, and leadership challenges in warfare. Unlike other military graphic novels, which are primarily developed by industry professionals, *Destination Unknown* relied solely on the talent of individual Marines, where officers and enlisted paired together into creative teams while civilian mentors provided professional guidance. This graphic novel is crafted by the warfighter for the warfighter; and its grassroots approach is purposefully designed to generate broad interest across all military ranks and defense professionals. The overall goal is to improve the creative thinking of warfighters and generate discussion on important military topics.”



**Assistant Secretary of the Navy for Research, Development, and Acquisition—
Naval X Agility & Accountability Award in the Agile Authorship Category (October 2019)**



Department of the Navy - A+ Awards Program



Department of Defense - Gears of Government Award

FIELD MESSAGE

U.S. MARINE CORPS FIELD MESSAGE

TIME FILED	NO.	SENT BY	TIME	RECEIVED BY	TIME	CHECK
— THESE SPACES FOR SIGNAL OPERATORS ONLY —						

From General Alfred M. Gray (Ret)

At Marine Corps University, Quantico, VA

Date 03 Nov 2020 Hour 0800 No.

To All Hands

Warfighting, Fleet Marine Force Manual 1, stated, “War is both timeless and ever changing.”¹ Because the character of war changes, we must be willing to evolve our warfighting philosophies and the character of our professional education as well. I am proud of Marine Corps University and the types of warrior-thinkers we have become. Projects such as *Destination Unknown* keep us thinking outside the box, enabling the Marine Corps to gain new perspectives and to keep our ideas fresh. I urge all Marines and their partners to continue exploring new frontiers and challenging your assumptions. In a world that is ever changing, remember, our source of stability will come from our leadership principles and warrior ethos. Also, never forget that sometimes when studying the future, it helps to study the past by reading an old book. Work together, inspire each other, and stay in the attack.

General Al Gray (Ret)
29th Commandant of the Marine Corps

¹ *Warfighting*, Fleet Marine Force Manual 1 (Washington, DC: Headquarters Marine Corps, 1989), 13.

FOREWORD

In his recent book, General James N. Mattis writes that “there’s no substitute for constant study to master one’s craft.”¹ From his earliest days, he understood the importance of honing the body and the mind of himself and his Marines. Among other things, this means that we must develop professional, thoughtful, and committed leaders. It means we need to develop cohorts of leaders that create an environment in their units and formations where even our most junior people are encouraged to be creative, to think about new ways of doing things, and then nurture those new ideas for the betterment of the institution.

This was an approach that General Al Gray took when he created an environment where old ideas of methodical battle could be challenged, and new ideas such as maneuver warfare could be examined from all angles, tested, pulled apart, and reconstructed before it entered into the formal doctrine of the United States Marine Corps. This commitment to new thinking and innovative ideas is not new to the Corps. It has a very proud history of developing novel ideas and approaches that have led to better combat outcomes and more effective Marines. Our generation of leaders shares this obligation and this profound commitment to thinking about the future of our military institution and how it might improve and better serve our nation.

I would expect that every reader has some appreciation of the massive changes in geopolitics and technology that are swirling around us. And while humans are a race that is endlessly inventive and always changing things, something about the current era is different. That is the pace of change. Back in 2003, Ray Kurzweil wrote that we are living in an era of acceleration.² Perhaps few of us were thinking about this pace of change then; we certainly are now!

This has many implications for military institutions and for our people. We need to train and educate our people to a higher level than we have before, and we must retrain our people on new technologies more often. We need to reexamine our institutions to ascertain whether they remain fit for an environment where the balance of violence and influence in our profession is constantly changing. We are locked in a competition of ideas—from the highest of geopolitics to those relevant to us as members of the profession of arms.

But underpinning all this, and the ongoing development of an exceptional military institution that is the servant of our people and our nation, is the capacity to have a clear-eyed look into the future. In other words, we should look down many different pathways and examine many potential futures, asking questions about who we are and what we do, fleshing out the essential idea of ourselves as the twenty-first century progresses.

Destination Unknown should spark in Marines—and in all military professionals—the questions that must be asked and the desire of leaders at every level to pursue the essential truth in all

¹ James N. Mattis, *Call Sign Chaos: Learning to Lead* (New York: Random House, 2019), 237.

² Ray Kurzweil, “Perspectives on Business Innovation,” KurzweilAI.net, 1 May 2003.

the issues associated with building a world-class future military institution. It has been a great honor to be part of this effort. And it has been a collaboration between allies—an exemplar of cooperation and the sharing of ideas between two nations that have fought together in the past and will do so in the future.

The editorial team, advisors, writers, and illustrators have produced a magnificent publication. I trust that their efforts in this second volume of *Destination Unknown* will pique the curiosity of Marines, generate innovative ideas, and help leaders at all levels lead the way in embracing and investing new ways of thinking about the future.

Major General Mick Ryan, AM

Commander, Australian Defence College

PREFACE

In the twenty-first century, militaries are grappling with how to leverage new kinds of intelligence, from classic intelligence such as open source intelligence to the emerging landscape of artificial intelligence (AI). Increasingly, they are turning to “FICINT” (fiction + intelligence), which uses creative writing to imagine future scenarios grounded in reality. As writers focused on the future, we have had the honor to speak throughout the U.S. and allied defense communities about how reading and creating speculative fiction can help envision an increasingly uncertain future. The stories in this graphic novel explore such topics as Marine-manned satellites, laser communication, and artificial intelligence (AI) selecting potential recruits and assisting Marine Corps Special Operations Command (MARSOC) operations in real time. By doing so in fictional comic book form, the results are far more accessible, inventive, and engaging than any white paper could be.

Always an innovator, the Marine Corps is doing this its own way, which you are viewing now. This year will mark the second volume in two years of *Destination Unknown*, a crowd-sourced graphic novel about the Corps’ future operating environment. A product of the Brute Krulak Center for Innovation and Creativity at Marine Corps University, *Destination Unknown* is written and drawn by Marines and their creative allies. The stories within this volume go right at the operational and strategic questions the Service is wrestling with.

From drones helping to contain a pandemic in Asia to Marines transitioning from amphibious to space-based assaults, the stories in *Destination Unknown* illustrate today’s Marines preparing imaginative solutions to tomorrow’s problems. By doing so with visually and viscerally compelling graphic narratives, these stories will engage an audience in a way a white paper may not be able to.

Typically, our role as writers is to encourage military personnel to experiment with fiction. In this case, we were brought in to consult on a project that was already Oscar Mike (on the move). Even more notable, *Destination Unknown* represents a ground-up movement, envisioned and executed by Marines on their own initiative.

Yet, this book has plenty of top cover. Continuing a disruptive line of thinking that began with the prior Commandant, General Robert B. Neller, the most recent *Commandant’s Planning Guidance* puts a heavy emphasis on innovation. This innovation will not be cloistered away, but emerges as a product of Marines who will be on the front lines of future conflicts. It is these wars of tomorrow—depicted in this very volume—that compel creativity at all levels in the Corps. “We cannot afford to continue to admire problems or fail to take the necessary decisive actions; our strategic guidance is clear, and so is mine. The time for action is now,” wrote Commandant David H. Berger in his latest *Commandant’s Planning Guidance*.¹

¹ Gen David H. Berger, *Commandant’s Planning Guidance: 38th Commandant of the Marine Corps* (Washington, DC: Headquarters Marine Corps, 2019), 23.

The 29th Commandant, General Alfred M. Gray Jr., once stated, “Every Marine is, first and foremost, a rifleman.” *Destination Unknown* proves that many Marines are writers, artists, and futurists as well. Our hope is that every Marine will be a reader of *Destination Unknown*, finding inspiration from their comrades’ imaginations. We certainly have.

August Cole

Author of *Burn In: A Novel of the Real Robotic Revolution* and MCU Krulak Scholar

Mark Sable

Graphic Novelist and Futurist

LETTER FROM THE EDITORS

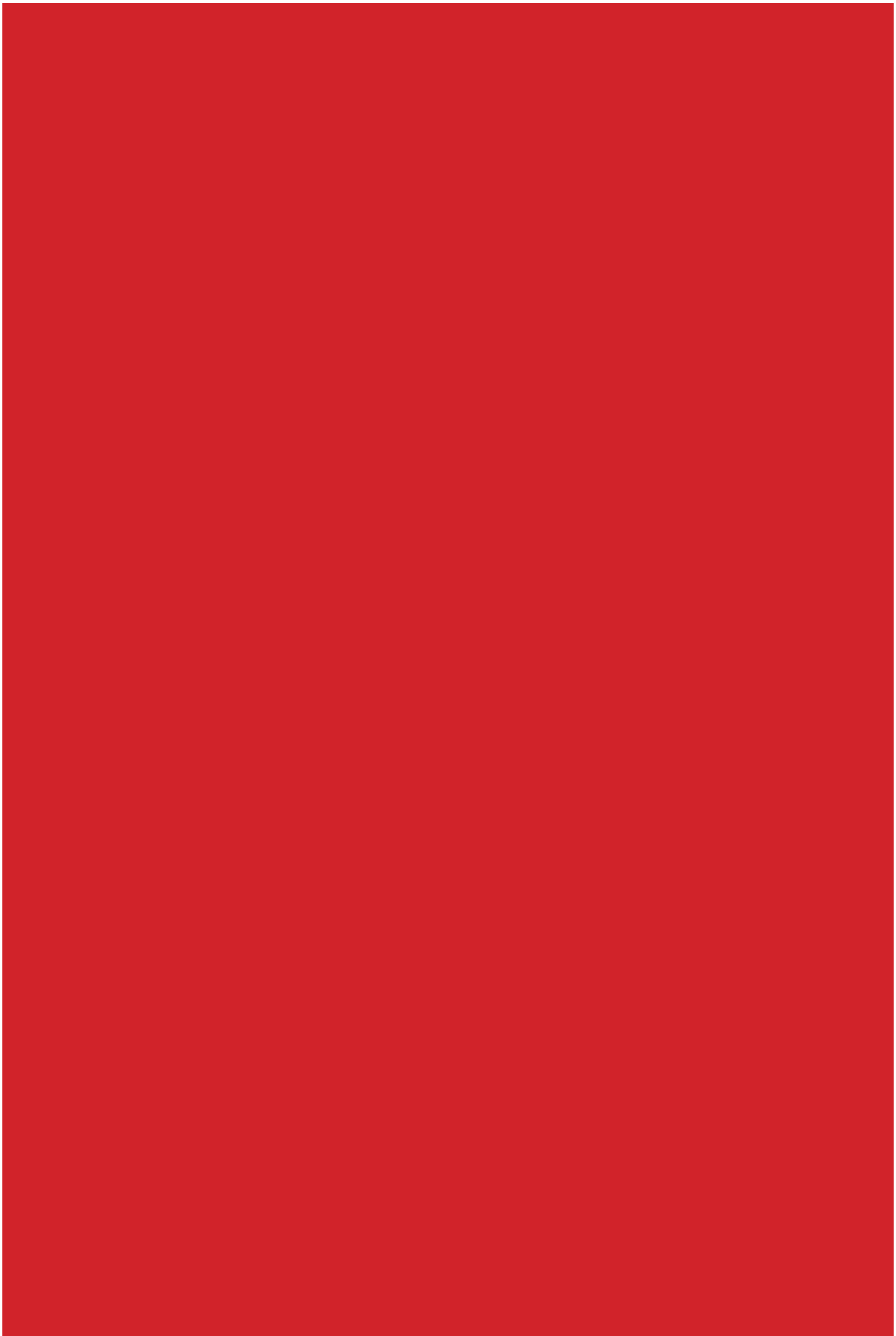
By the warfighter for the warfighter. What started as a passion project and an innovative take on professional military education has exceeded expectations and started conversations concerning future military challenges and the integration of new technologies. It has been one year since volume 1, and the destination is still unknown. The initial volume allowed our authors and artists to stretch their creative boundaries, challenge thinking and assumptions, and create a safe space for novel perspectives. The project succeeded in spades, and with this new volume we continue to push the boundaries of traditional thought.

In July 2019, the Commandant, General David H. Berger, published his planning guidance in which he slayed many sacred cows. He also laid down the gauntlet and challenged Marines to provide critical feedback and ideas. Then, in February 2020, the Marine Corps published *Learning*, Marine Corps Doctrinal Publication (MCDP) 7, which established guidelines for a more holistic and robust professional military education culture. The *Destination Unknown* project seeks to answer the Commandant's challenge and provide new pathways to achieve the intent established in *Learning*. The graphic novel format provides an engaging and captivating subject that also drives toward critical thought and contribution to professional military education. We use both fiction intelligence (FICINT) and science fiction to set our sights deeper into the future, unshackle our minds, and abolish the idea that something cannot be done.

Destination Unknown has unleashed the imaginations of the military servicemembers, both officer and enlisted. The first volume was designed, written, and illustrated by Marines. In volume 2, we have expanded to a truly joint and combined approach. U.S. Navy, Air Force, and Marine writers and illustrators have all joined forces. We also have a first-time international contribution from our Australian allies, Major General Mick Ryan, commander of the Australian Defence College, and his talented team. These professionals have entered the arena and have pushed both their imaginations and skills to bring the reader stories of possible military scenarios and moral and ethical dilemmas.

This project would not have been possible without hard work and dedication by a large number of people who all hold day jobs. We could not have done it without the talents and courage of our contributing authors and illustrators; we are humbled to work with such excellent professionals. We also want to express our appreciation for the continued support, mentorship, and involvement of August Cole, Mark Sable, Gabriel Pons, the Brute Krulak Center for Innovation and Creativity, Marine Corps University Foundation, Marine Corps University Press, Marine Corps Information Operations Command, Naval X, the Naval Postgraduate School, and many others.

We hope readers enjoy this offering toward advancing the discussion of the future of warfare. We hope it expands imagination and invokes lively discussions, and it lights a path as we all move forward toward a Destination Unknown.





China's Engineered Emergency

Story by
Major Austin Duncan, USMC

Illustrations by
Staff Sergeant Shannon Winslow, USMC

Written in November 2019

**44TH LITTORAL EXPEDITIONARY UNIT
DEPLOYS TO SOUTH CHINA SEA**

**Release Date: 11 November 2030
From: Department of the Navy, Communications Directorate**



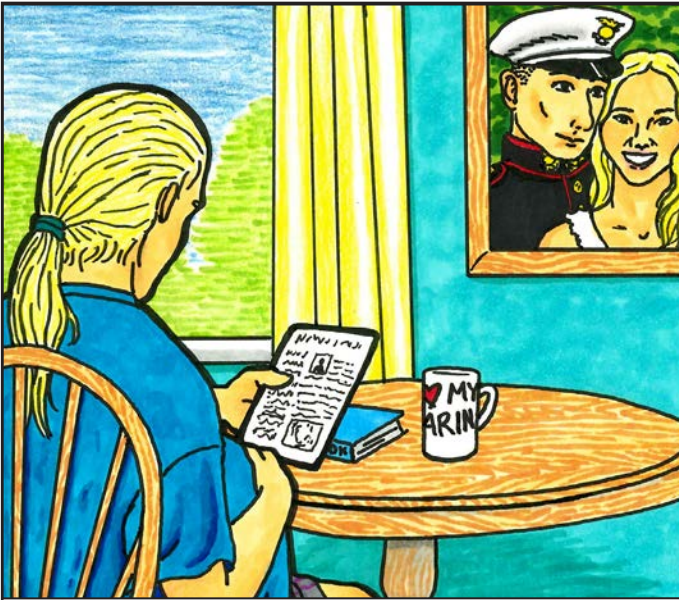
Sailors and Marines of the 44th Littoral Expeditionary Unit (LEU) departed from Southern California for a 10-month deployment to the South China Sea. The 44th LEU will be responsible for maintaining regional stability through the protection of key maritime terrain throughout the South China Sea, the Philippines, Indonesia, Malaysia, and Vietnam.

The 44th LEU is commanded by Colonel Audrey Prospero. A native of Alexandria, VA, Colonel Prospero is a highly decorated Marine who is believed to be on a fast track to senior positions as a general officer. She received the Silver Star in 2026 against Chinese-proxy forces at the height of tension between the United States and China.

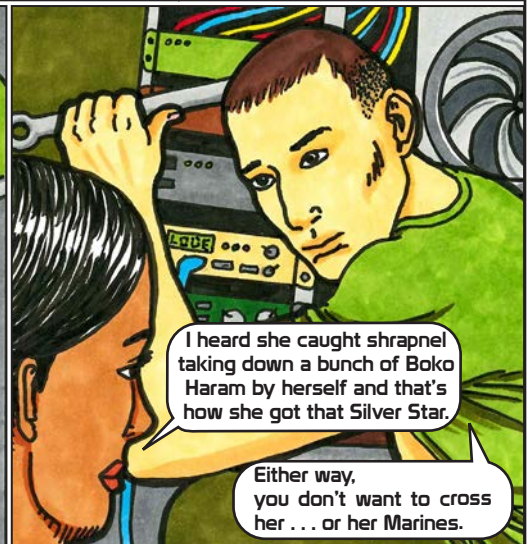
Colonel Prospero added, "Our naval forces have trained for over 18 months to conduct this critical mission. We are ready for anything that comes our way, and I have the utmost confidence in the sailors and Marines. We look forward to the opportunity to build on the legacy of our unit and our nation."



THE
BIG BABY

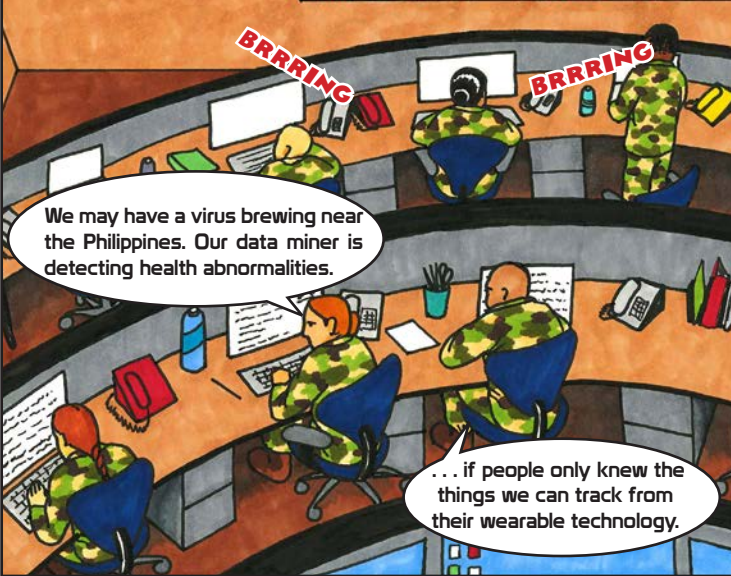


SOMEWHERE IN THE SOUTH CHINA SEA ...





0753 0853 20301217 351
OKINAWA GUAM PACIFIC EASTERN ZULU



We may have a virus brewing near the Philippines. Our data miner is detecting health abnormalities.

... if people only knew the things we can track from their wearable technology.



Ma'am, you are going to want to take a look at this.

Intelligence Report

Classified//
South China Sea/Operation Brave Shield//
44th LEU/USS *Mattis*//
National Intelligence//

Elevated body temperatures and increased heart rates indicate a viral infection is spreading on Luban Island, Philippines.//

Abnormalities found in close proximity to an undercover Chinese laboratory responsible for developing and testing biological weapons.//

MEANWHILE . . .

Finally . . . a chance to actually do something.

I can't wait to hear about my wife's prenatal appointment.

We have been tasked to prepare for a very important mission in the Philippines. I need everyone to get their game face on.

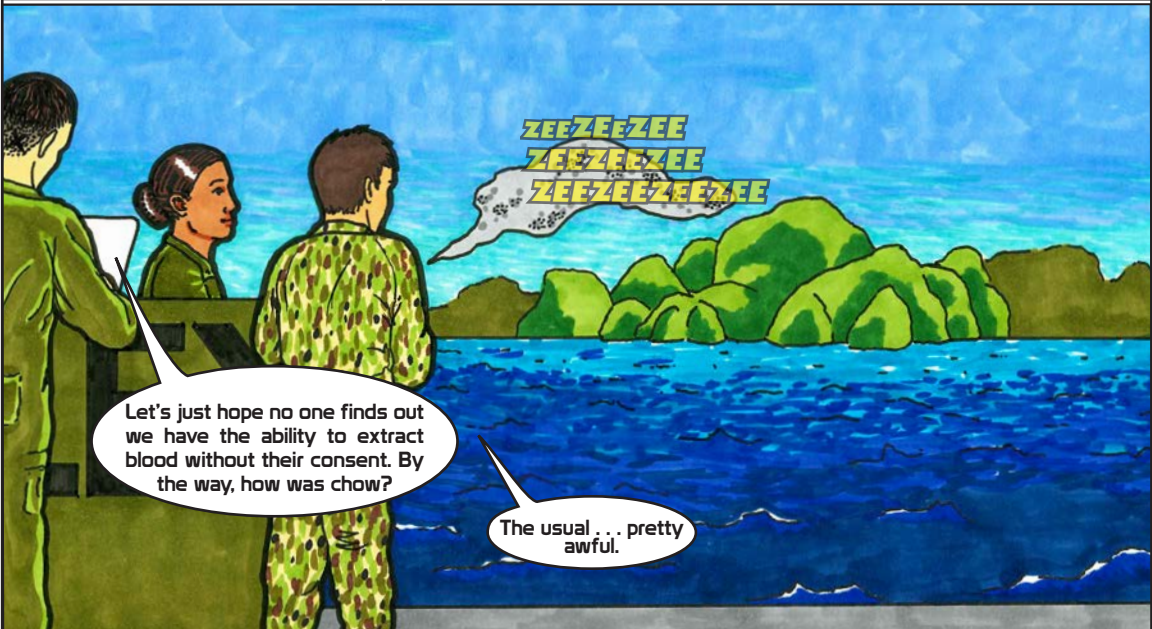


All units in position and prepared to begin reconnaissance.

YOU ARE AUTHORIZED TO RELEASE THE CULEX

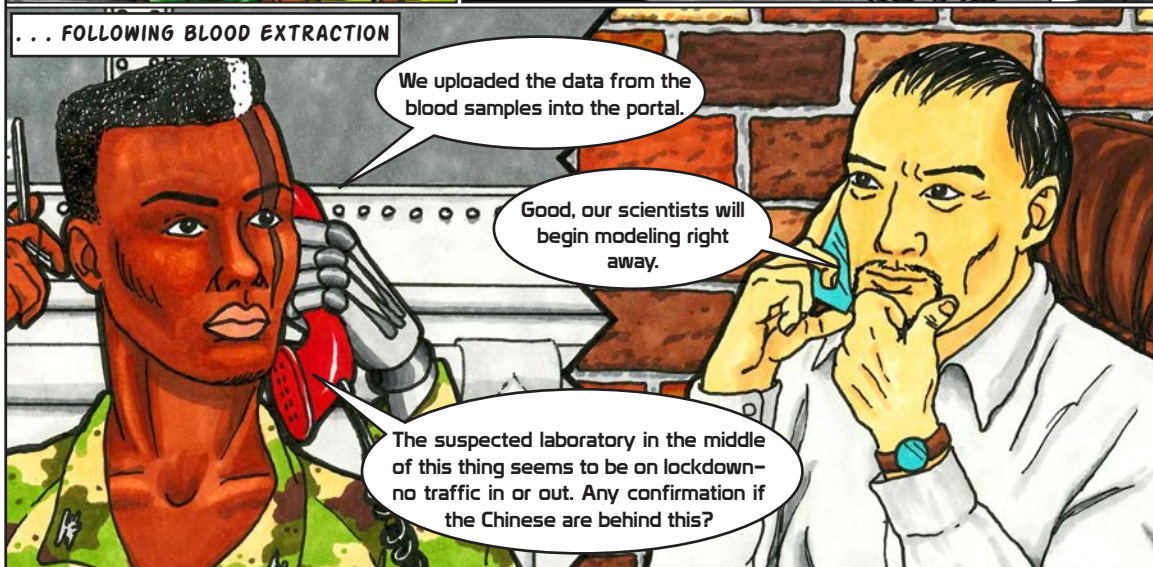
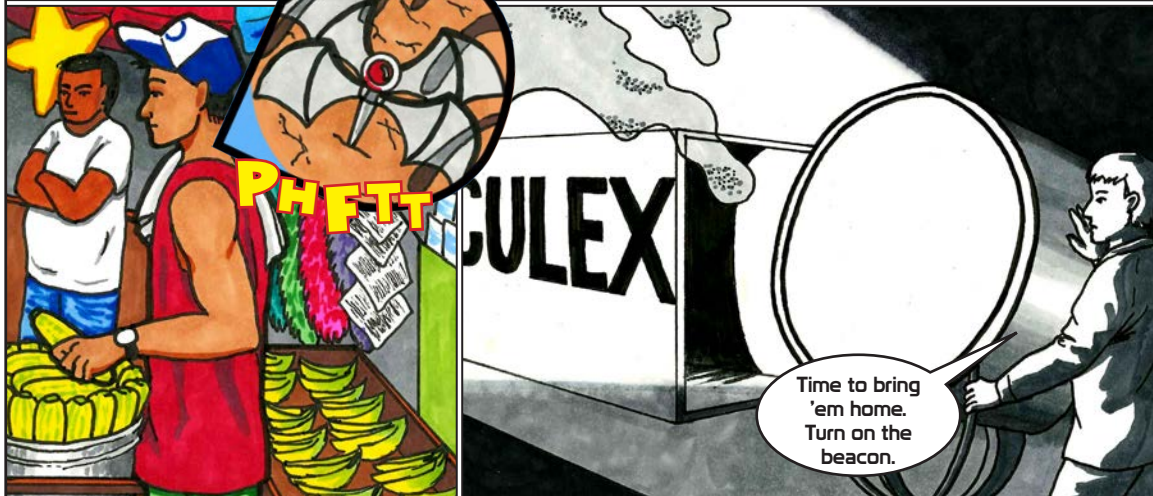
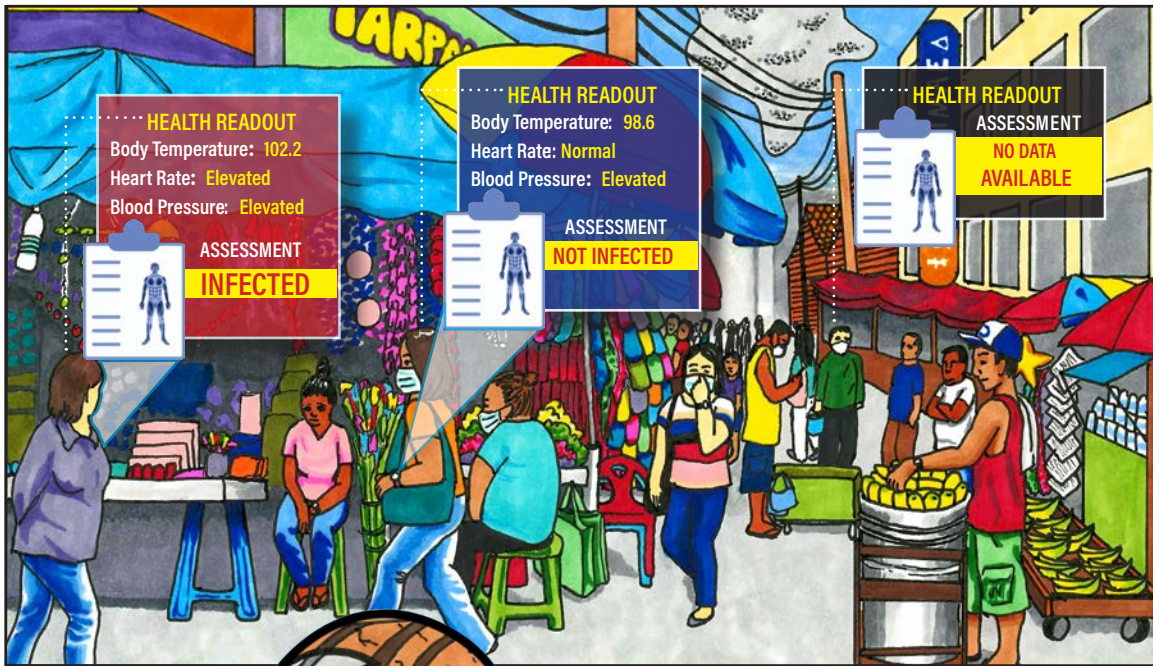


These things really do look like mosquitos. Time to see if they actually work.



Let's just hope no one finds out we have the ability to extract blood without their consent. By the way, how was chow?

The usual . . . pretty awful.





I've never seen anything like this.

We could have a manufactured pandemic on our hands. Whoever engineered this bug had bad intentions.

Let's just hope they put as much thought into developing the antidote as well.

Send the full report to the director. We can't waste any time on this.



Sir, we really need to recover the lab materials and notes from that Chinese facility.

This is a complex pathogen—it will take at least a week before we can develop and test initial vaccines.

Okay ... I'm going to contact the National Security Council to request military assistance securing that lab.



I haven't heard from John in a while . . .



MEANWHILE, BACK ON THE SHIP

Eww, these skin suits are disgusting, and they creep me out.

They are awesome—I can't believe we figured out how to make protective suits out of lizard skin.

Lizards are nasty.

Stay focused, Marines, we have an important mission.

Mr. President, there is a deadly pathogen in the Philippines. Intelligence indicates the Chinese are developing biological weapons at a secret laboratory and the virus was transmitted to the local populace.



We need the notes and material from the laboratory to reverse engineer a cure and prove that China is guilty of international crimes.



Mr. President, we have Marines and sailors of the 44th LEU prepared to secure the Chinese lab on your command.



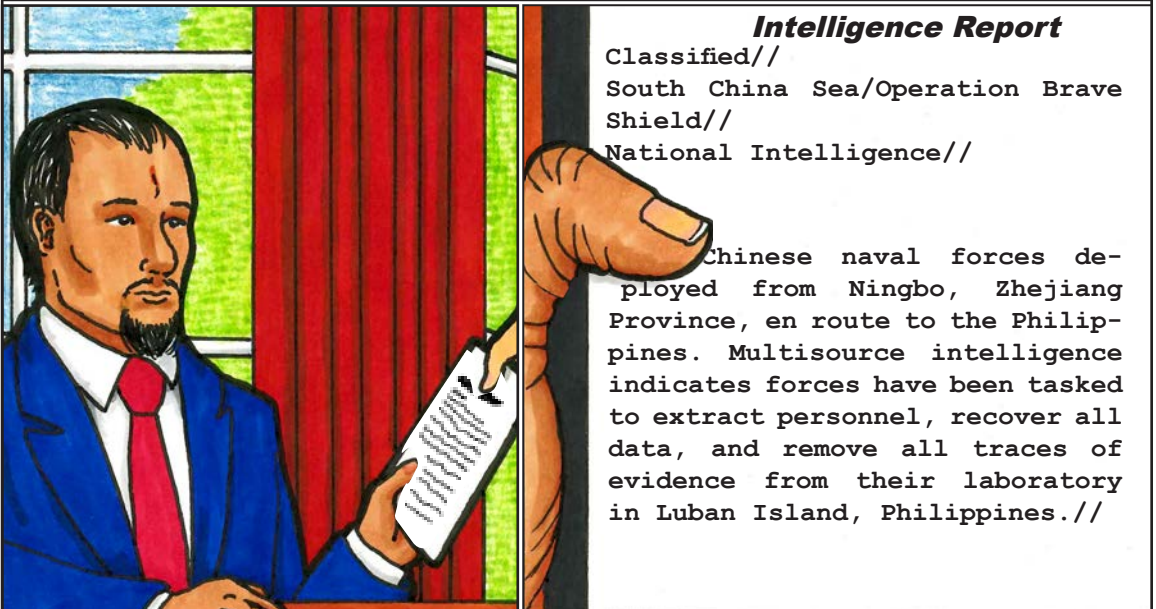
What are the risks to personnel if I authorize the mission?

Mr. President, our forces could be infected, but we should be able to mass-produce a cure once we secure the lab notes.

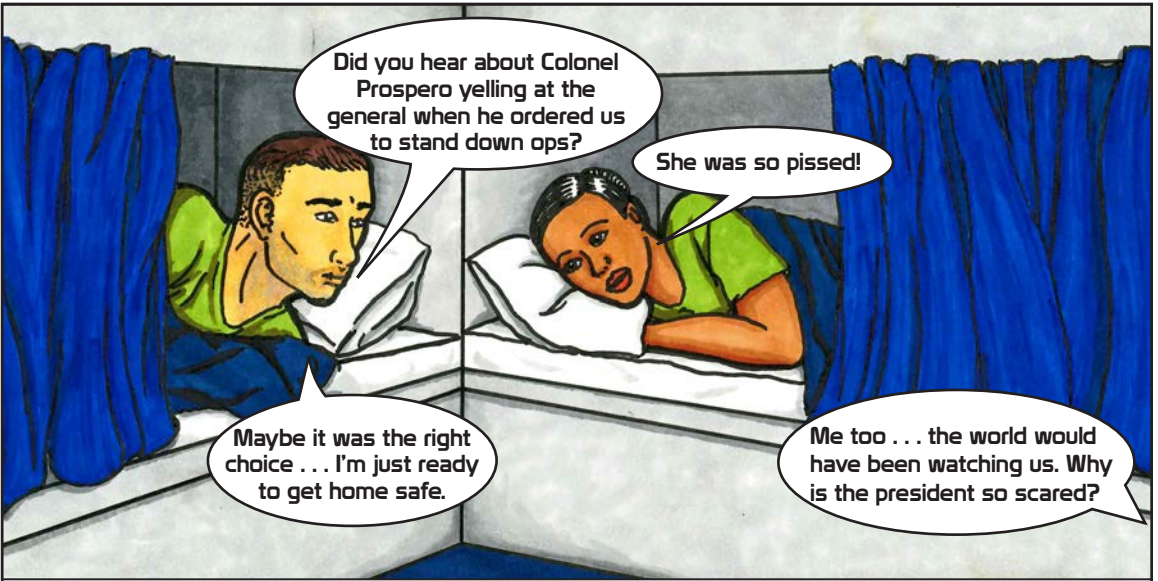


... and what if we can't?









Did you hear about Colonel Prospero yelling at the general when he ordered us to stand down ops?

She was so pissed!

Maybe it was the right choice . . . I'm just ready to get home safe.

Me too . . . the world would have been watching us. Why is the president so scared?



Two weeks until homecoming . . .

CC: The celebrations continue in the Philippines and around the globe after Chinese scientists developed a cure to what modeling forecasts called the deadliest virus of our lifetime.



BREAKING NEWS U.S. officials reiterate that China is responsible for engineering biological weapons to cause an emergency, but they lack proof for their claim. Meanwhile, the world continues to celebrate China's development of a vaccine and swift response to prevent a global crisis.

China's Engineered Emergency

Discussion Questions:

1. How can we use emerging technologies to monitor, predict, and isolate future potential pandemics? Are there privacy concerns collecting intelligence from wearable technologies, or do people inherently consent by wearing these technologies and linking them to other data systems?
2. Put yourself in Colonel Prospero's shoes and identify the problem and intent. What are the main risk factors? How do you mitigate those risks?
3. Should the president have authorized the mission even though U.S. forces were at risk of being infected? Did the risk calculus change when it was apparent that Chinese forces were attempting to cover up an illegal biohazard operation and gain credit for rendering humanitarian aid?
4. What are the implications for perceiving and using the military as a fix-all or the primary tool to resolve problems that require expertise that resides outside the military? How can we build informal and formal structures to allow for more collaboration and cohesive implementation across the whole of government?
5. What makes a good Marine? Should they have specific personality traits and characteristics? Based on this situation, was the colonel's response appropriate? Were they providing good leadership? If not, what could they have done differently?



Urquhart Redux: A Story from the AugoStrat Corps Saga

Story by
Major General Mick Ryan, AUS, and Therese Keane, PhD

Illustrations by
Midshipman Alvin Do, AUS, and Officer Cadet Natasha Silver, AUS

! COGLINK INITIATED !

In the second half of 1944, the Allies prepared for their next great operation. They would mount an air and ground thrust into Holland to seize a route that would take them directly into the heart of Germany.

Called Operation Market Garden, it featured an armored thrust along a single route into Holland, and airdrops by three allied parachute divisions deep behind enemy lines to seize bridges across rivers along the route.

Before the operation was launched, aerial intelligence indicated that German strength in at least one of the drop zones was stronger than originally estimated, including the presence of armored forces.

Major Brian Urquhart, an experienced planner and the 1st Airborne Corps intelligence officer, brought this change in situation to the attention of Allied planners.

Planning was well advanced, and Urquhart was unable to mount a case to modify or call off the operation.

It was not the first time that insights of one person, missed by everyone else, have failed to prevent catastrophe.

It won't be the last...history does not repeat, but it does rhyme . . .

THE ANOMALY AND THE GREAT REALIGNMENT

As we saw in chapter 1, the early decades of the twenty-first century were a period of great societal, technological, and geopolitical tumult. The world order reacquainted itself to a new era of major power competition, something that it had not been accustomed to for more than a generation. The rise of an old power in the East, in retrospect, was the catalyst for much of the change in the first half of the twenty-first century. A dynamic new power, which grew rich at a historically unprecedented speed, resulted in a decades-long competition. Late last century, this competition acquired the term the Great Pacific Competition. This competition had many sides. There were competing ideological views, which at least from the historical perspective, appear to have been very difficult to reconcile and a natural source of tension. There was a technological competition, with the world fragmenting into two technological camps, and the eventual fracture of the global information net into two spheres. There was commercial competition. Trade and intellectual property disputes were perhaps the inevitable outcome of the rise of the new Eastern power. But this struggle became generational, debilitating both sides. And, the pressure of climate change was ever present. The Great Fire of California in the 2040s, and the Great Deluge of Guangzhou, China, and London not long after, finally forced world governments to act. This placed greater pressure on societies, national budgets, and military forces globally. But perhaps no event of the twenty-first century had the impact of the August Anomaly. This was a catastrophe that still remains under investigation for its source, and it magnified the tensions of the Great Pacific Competition. Not since the asteroid struck near the Yucatan Peninsula 65 million years ago has a single event had such an impact globally. Not only did it cause widespread disruption and destruction, it led to the fall of governments, the realignment of alliances and relationships, and the rise of a New World Order. Two key blocs rose to prominence. First came the West Dragon Federation, which included the nations of the West, North America, and the Indo-Oceanic Coalition. The second bloc was the Red Accord, an aggressive techno-dictatorship, and an opponent of Western, democratic governance and ideals.

Sir, Red Accord forces have intercepted multiple RoboCorps carriers over the past 24 hours. Swarms of stealth hunter-killers attacked and have destroyed most of the force!

OK, let's hold the war game there while the RoboCorps resets for the next phase of operations. AugoStrat Jason, let's continue this wargame later this afternoon.



Jason and his team were AugoStrats: humans with cognitive implants that allowed them to link their brains to various databases. It also allowed autostrategists to link together through COGLINK, a hive mind that could outthink any nonaugmented human-AI teams. Jason and his team had been running these wargames for their chief of Defense Force for many years, as well as advising senior leaders on strategy.



But not all senior military leaders were impressed by the AugoStrats.



AugoStrat Jason, there is a reason why it is prohibited to augment Service chiefs or senior officers. We still need to be "fully human." Your technological prowess—again—has not allowed you to build an imaginative wargame.



Admiral Cairns was a constant obstacle to Jason fulfilling his responsibilities

Jason was also the head of the military's AugoStrat Corps, responsible for recruiting new members and ensuring they were prepared to be senior leader advisors.

THE ANOMALY AND THE GREAT REALIGNMENT

Before the development of augmentation, finding first-rate strategists was a hit-and-miss process. The convergence of breakthroughs in neurotechnology, artificial intelligence, miniaturization of high-performance computing and techno-ethics had made the development of augmented strategists—AugoStrats—possible. They were all volunteers. Next, they were subject to intensive cognitive and behavioral screening to identify those with the propensity for strategic thought. Normally single, with limited family ties, they also forfeited their own family to assume the role of AugoStrats. Initial experiments with this approach had been promising but had still seen a high failure rate, with many candidates withdrawing their consent due to social isolation even within the close family that is the military. Early in the program, there had also been concerns in academia and the clergy about the ethics of augmenting humans. Safety and the potential for medical complications was one area of worry. Perhaps more concerning had been issues about the humanity of augmented people. Were they still humans or robots? And of course, there was the question of whether this procedure was reversible—and would reversing it in the future be moral? But the August Anomaly and the accompanying disaster of 2039 had seen the government pass the new Technical Augmentation and Addition of Human Persons' Cognitive Functions laws that had overridden these concerns. Sensing the first mover advantage in this area, other nations had quickly implemented similar legislation in the following years. It took a year to identify candidates from across society, recruit them, provide the implants, and condition newly augmented personnel to using their enhanced cognitive skills. They would then have them travel the world to gain experience by speaking to some of the greatest academics and strategists as well as senior military leaders across the alliance. And there were still some in the military opposed to augmented humans providing advice to strategic leaders. Some did not believe that it was possible to build a strategic adviser from such young and inexperienced personnel. Others did not believe the cost of investing in this program had a good return on investment for military forces and strategic decision making.

Excerpt from Tina Van Riper's *A Short History of the Twenty-first Century: Accelerations, Anomaly, and New World Order* (New London, CT: Oxford-Cambridge University Press, 2106).

Jason's thoughts drifted back nearly two decades. He had been a young crew commander of one of the new Maximus armored transports. It had been a dream come true for the young officer.



But the Manus Island debacle in Papua New Guinea had changed everything. One day, he had been a popular junior leader on a peacekeeping mission. The next, his entire task force had been surprised by the Red Accord and overrun. He remembered waking up in the hospital, a senior officer leaning over him . . .

NEURO-PROSTHETICS AND TRAUMA SUPPRESSION ALGORITHM INITIATING . . .



Jason jerked awake as these thoughts rose into his consciousness. He scratched the small scar from his augmentation surgery at the base of his skull. After almost two decades in the program, Jason believed totally in the AugoStrat programming and approach. They were ultimately rational humans, exemplars of military science in an era of rapid technological change. Human intuition, even if it had use, was just too slow for military strategy.



It was time to get back to work . . .

Jason called up his priority task list on COGLINK. Today was his biweekly meld-session with a U.S. counterpart in Washington, DC, AugoStrat Natasha. No words were spoken—every thought was transferred through their neural interfaces.

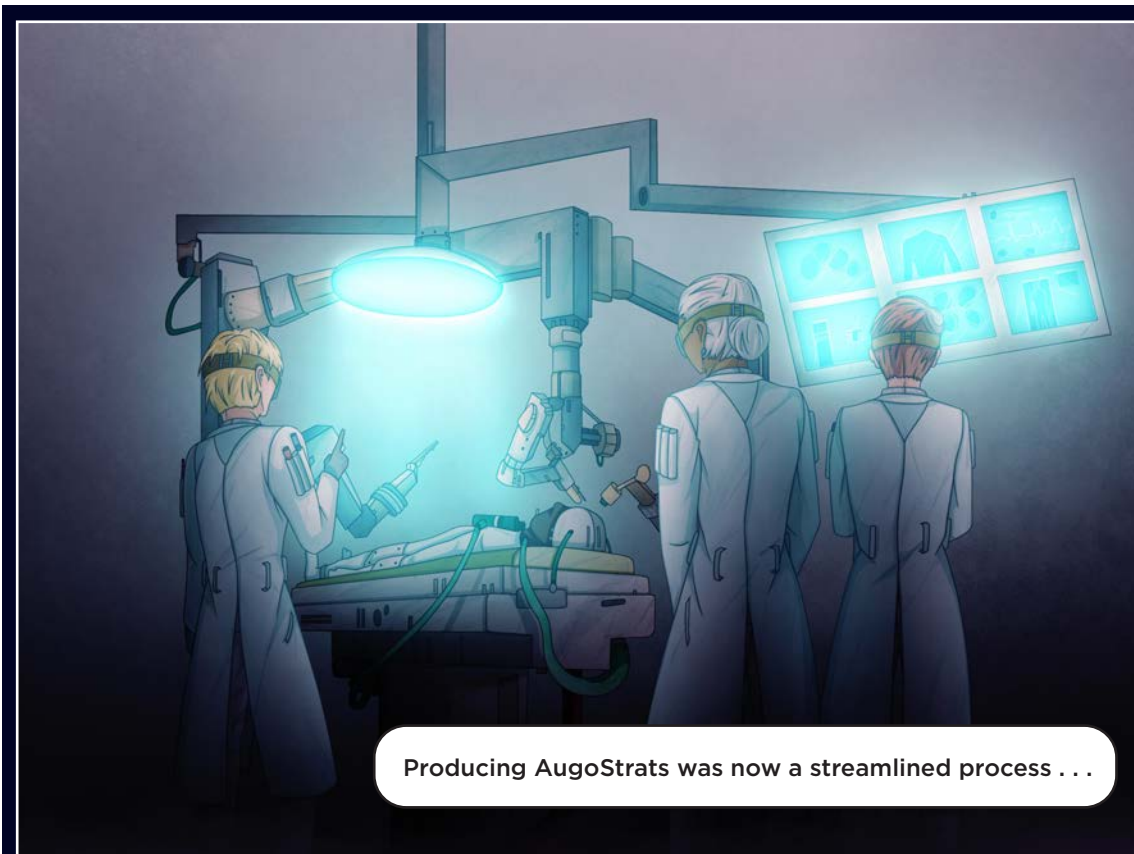
Hello, Jason. I got your note asking about anything odd happening in WESTPAC. There have been some cyber murmurs but nothing unusual. Our operations in Europe are also proceeding well >>>



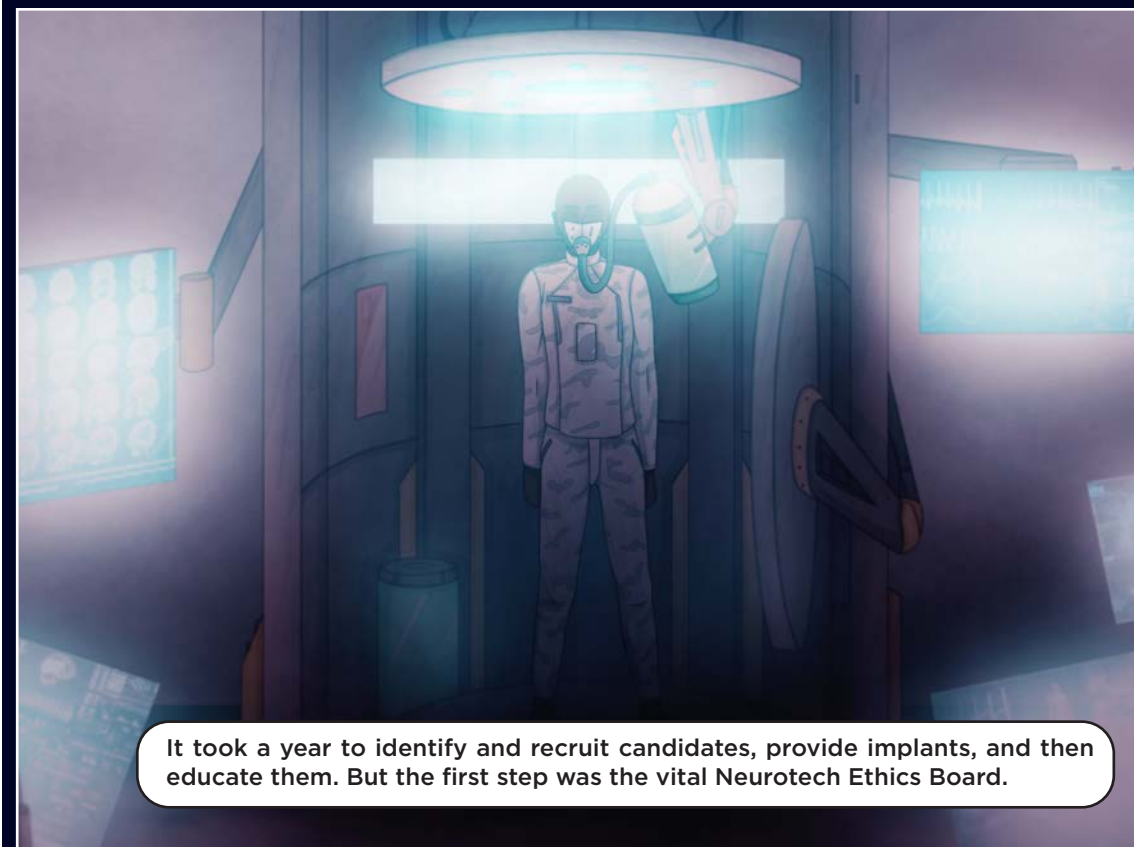
TRANSMITTING

Thanks, Natasha. The AugoStrat at the Northern Task Group advised on Red Accord behaviors in today's wargame that was not based on any logic paths. This is highly irregular. To complicate things, Admiral Cairns is still resisting AugoStrat input >>>

Jason disconnected. There was nothing to support the theories of the Northern Task Group AugoStrat. Something for later. Time to select the next batch of AugoStrats and prepare for the Neurotech Ethics Board.



Producing AugoStrats was now a streamlined process . . .



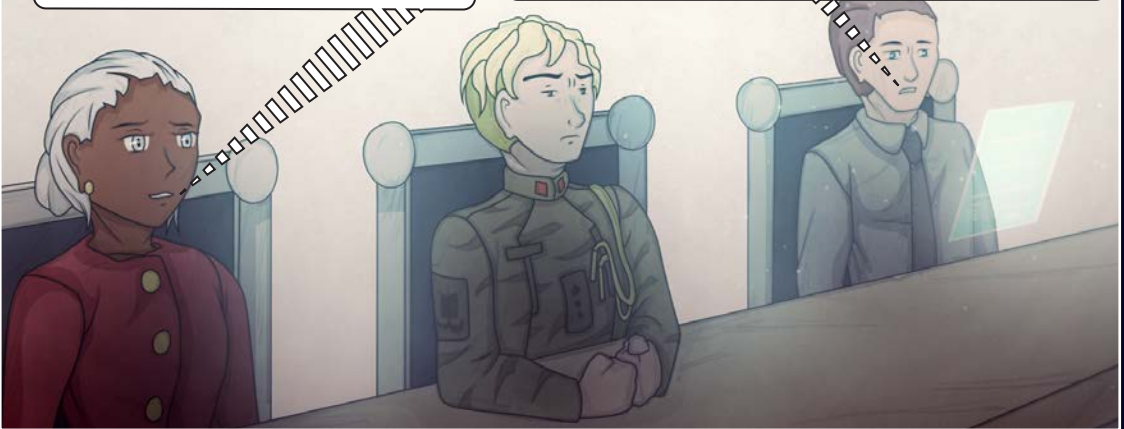
It took a year to identify and recruit candidates, provide implants, and then educate them. But the first step was the vital Neurotech Ethics Board.

Jason accessed the military personnel net from COGLINK and reviewed profiles of his AugoStrat candidates. He placed his preferred candidates in the feed for the Neurotech Ethics Board and walked into the board meeting.



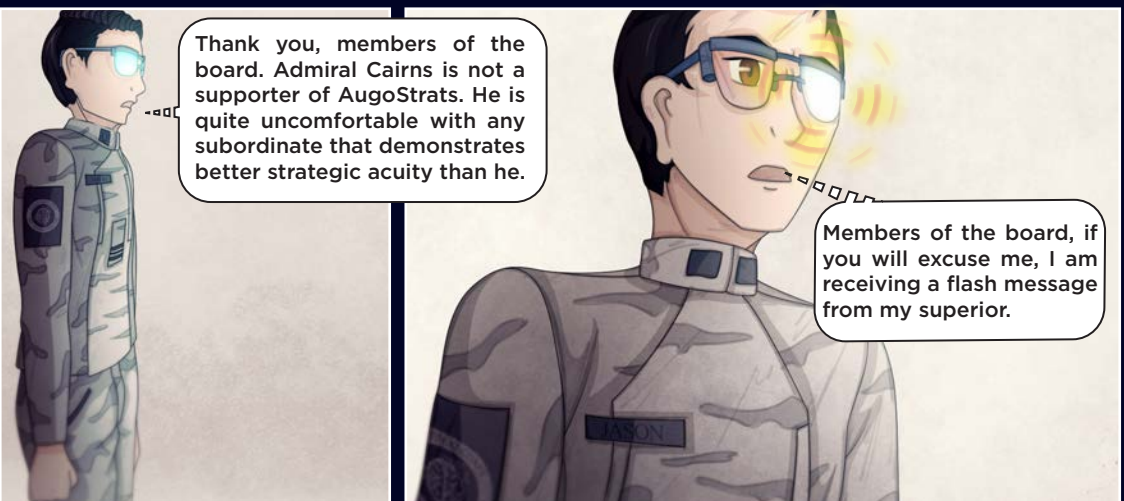
The board is now in session. Are there any issues with the latest AugoStrat candidates proposed by Jason?

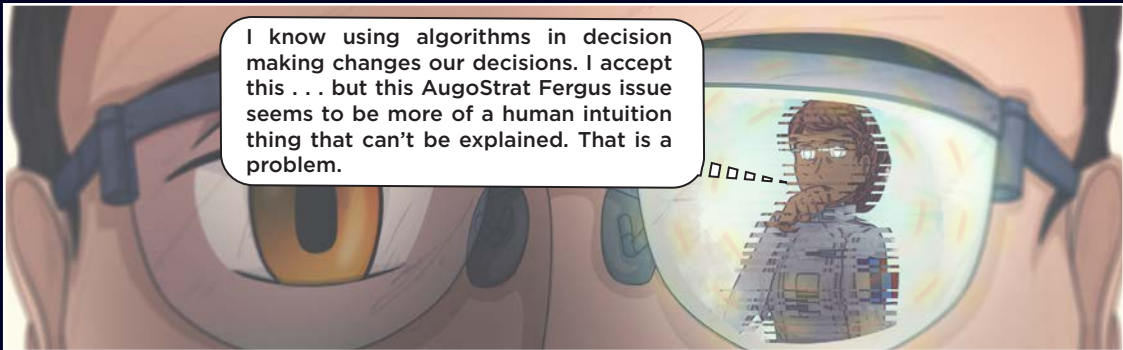
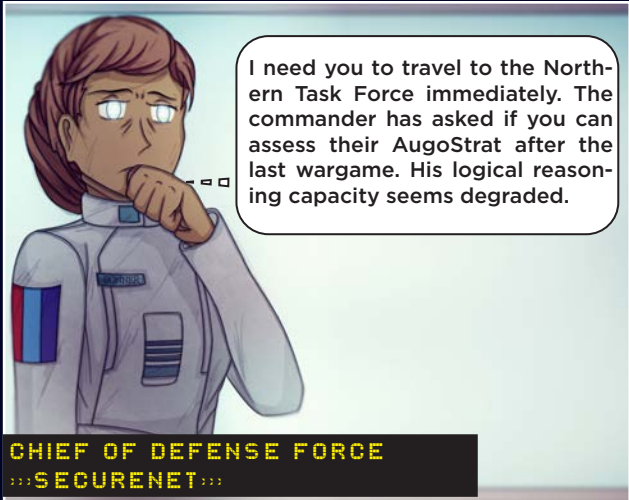
I note that one candidate, while recommended by Jason, has received a less than glowing reference from their Service chief.



Thank you, members of the board. Admiral Cairns is not a supporter of AugoStrats. He is quite uncomfortable with any subordinate that demonstrates better strategic acuity than he.

Members of the board, if you will excuse me, I am receiving a flash message from my superior.





Twelve hours later . . .

Jason and AugoStrat Fergus talked for hours, going over all the evidence that Fergus had collected to support his intuition that a Red Accord attack was imminent.

What is going on here, Fergus?

AugoStrat Analysis Report

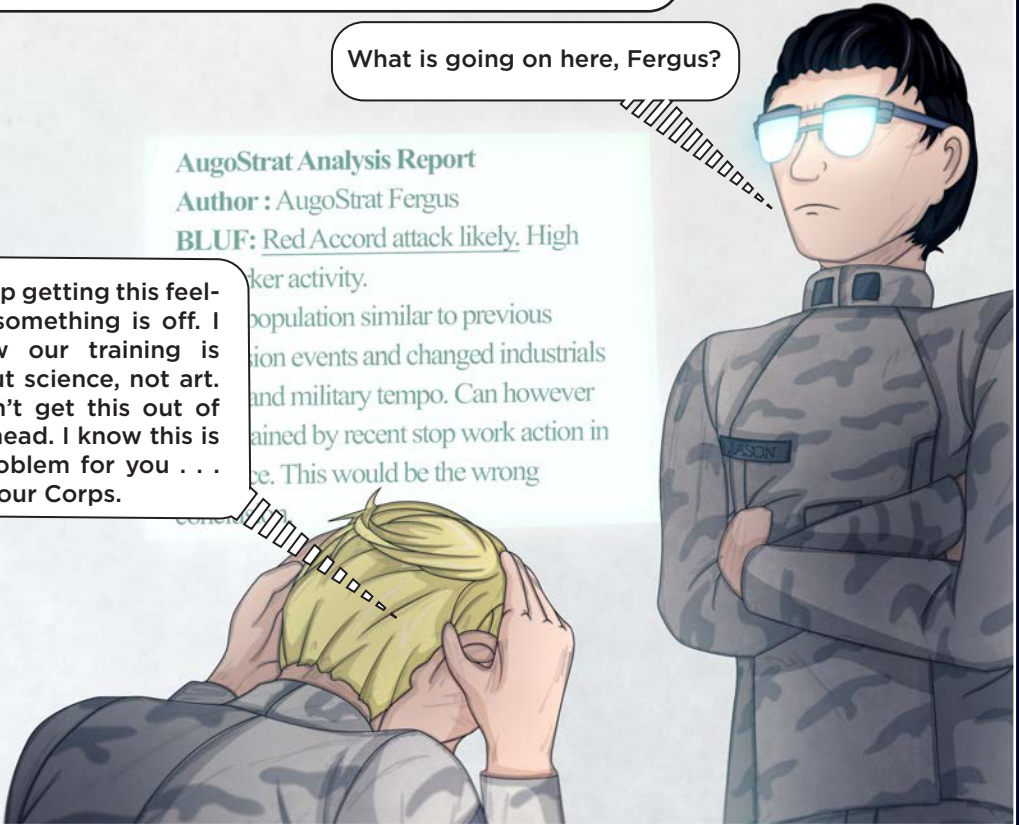
Author : AugoStrat Fergus

BLUF: Red Accord attack likely. High

biomarker activity.

population similar to previous aggression events and changed industrials and military tempo. Can however be explained by recent stop work action in population. This would be the wrong

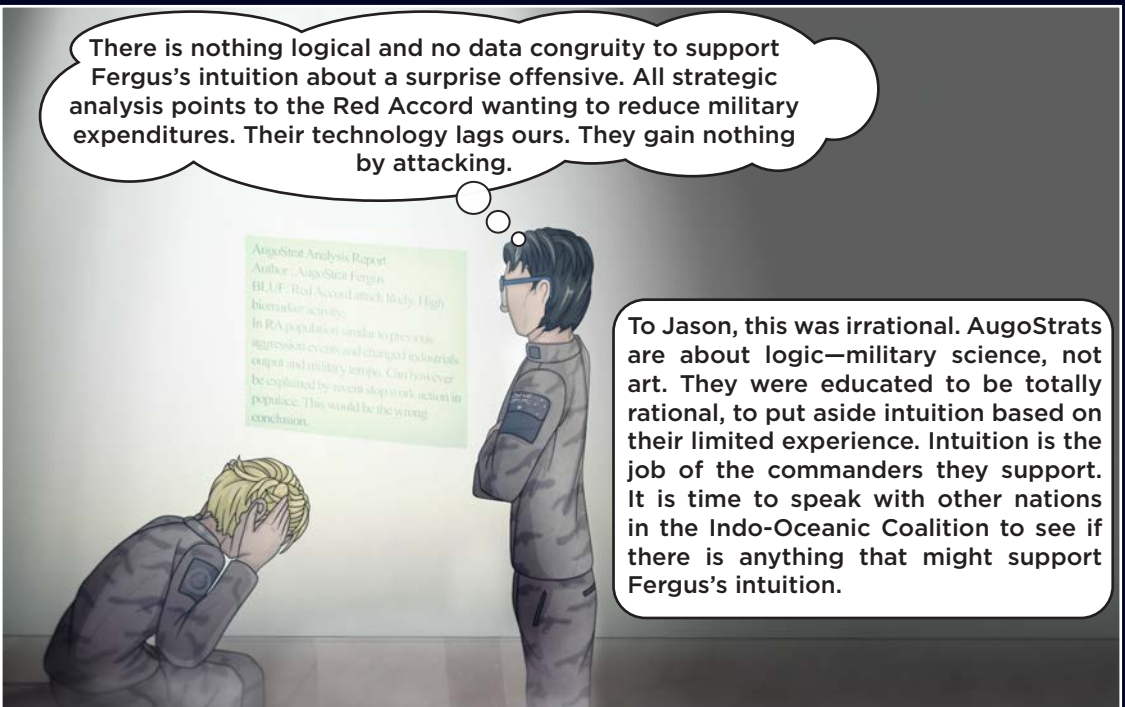
I keep getting this feeling something is off. I know our training is about science, not art. I can't get this out of my head. I know this is a problem for you . . . and our Corps.



There is nothing logical and no data congruity to support Fergus's intuition about a surprise offensive. All strategic analysis points to the Red Accord wanting to reduce military expenditures. Their technology lags ours. They gain nothing by attacking.

AugoStrat Analysis Report
Author : AugoStrat Fergus
BLUF: Red Accord attack likely. High biomarker activity.
In RA population similar to previous aggression events and changed industrials and military tempo. Can however be explained by recent stop work action in population. This would be the wrong conclusion.

To Jason, this was irrational. AugoStrats are about logic—military science, not art. They were educated to be totally rational, to put aside intuition based on their limited experience. Intuition is the job of the commanders they support. It is time to speak with other nations in the Indo-Oceanic Coalition to see if there is anything that might support Fergus's intuition.



THE ANOMALY AND THE GREAT REALIGNMENT

... and will now explore one of the principal conflicts in AugoStrat programming—the battle between rational and intuitive decision making. Military science overwhelmed the age-old conduct of the military art. As we explored in the preceding pages, the AugoStrat Corps gradually developed a unified approach to how it prepared its members to serve as strategic advisors to senior military leaders. The internecine battles over rational versus a more human and intuitive approach were resolved by more selective pairing of the high-rationality AugoStrats with commanders who had high level intuitive decision-making capabilities. So the AugoStrats would be the exemplar for totally rational decision making. This blind faith in their education, programming, and marriage with technology should have been a warning sign. After 200 years of studying the ideas of Clausewitz, Sun Tzu, and Jomini, ignoring some of the most human aspects of conflict—the interplay of opposing actors, fog of war, and friction—seems in retrospect now, at a minimum, foolish and even negligent. Unfortunately, the AugoStrats by now had acquired such a reputation, even mystique, that few would challenge their observations or advice. This very human failure to question (except by a very few senior leaders like the discredited Admiral Cairns), would lead to a very human battlefield failure. There would be a failure by the Indo-Oceanic Coalition to adapt as the security environment changed. It was ultimately a failure of the coalition to learn from history. This arrogance and almost blind faith in the advice and strategic decision support of the AugoStrat Corps would have devastating consequences.

Excerpt from Dr. Jane Sagan's *Technology and Change in the 21st Century* (New Princeton, NJ: New Princeton University Press, 2108).

COGLINK COGLINK COGLINK

COGLINK COGLINK

Selamat pagi, Pak
Jason | Good
Morning, Jason
>>>

COGLINK COGLINK

COGLINK COGLINK

COGLINK COGLINK COGLINK

COGLINK COGLINK

शुभ %भात | Good
morning >>>

COGLINK COGLINK

COGLINK COGLINK

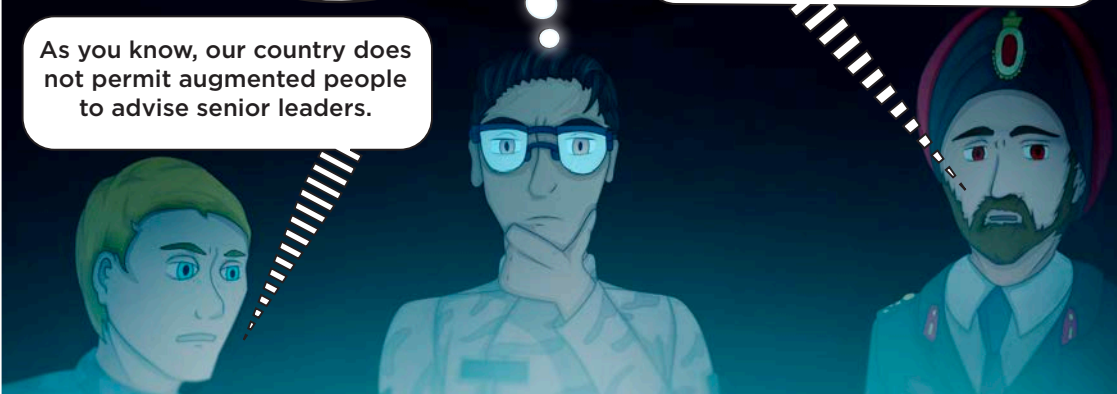


Jason looked at the assembled representatives from the Indo-Oceanic Coalition. He had polled them all on whether they had separate info-feeds on Red Accord intentions or changes in force dispositions. There was nothing, not a thing, to back up Fergus's intuition.

But that is also why you never win alone. Without augmentation, you are too slow and disconnected to recognize change in the environment, and you are too slow to decide and act.

While we are comfortable with the AugoStrat program, I do not think we should place any weight on the views of this clearly overwrought person.

As you know, our country does not permit augmented people to advise senior leaders.



Some coalition nations had religious or ethical objections to augmentation. But a common enemy had often meant they overlooked this. Now was not a great time for this issue to raise its head.

Jason had one more person to speak with . . .

Jason opened his COGLINK to Sarah, AugoStrat for the commander of their Space and Missile Command. She was currently in orbit with her commander.



Jason, the Mobile Intermediate Range Missile Fleet is serviceable and ready for tasking. Same with Orbital Launch Fleet. No anomalies detected . . . no evidence of Fergus's suspicions >>>

No words were spoken by either, and COGLINK allowed them to communicate rapidly and securely.

| Sarah, thank you. I just wanted another source of validation on AugoStrat Fergus's issue >>>

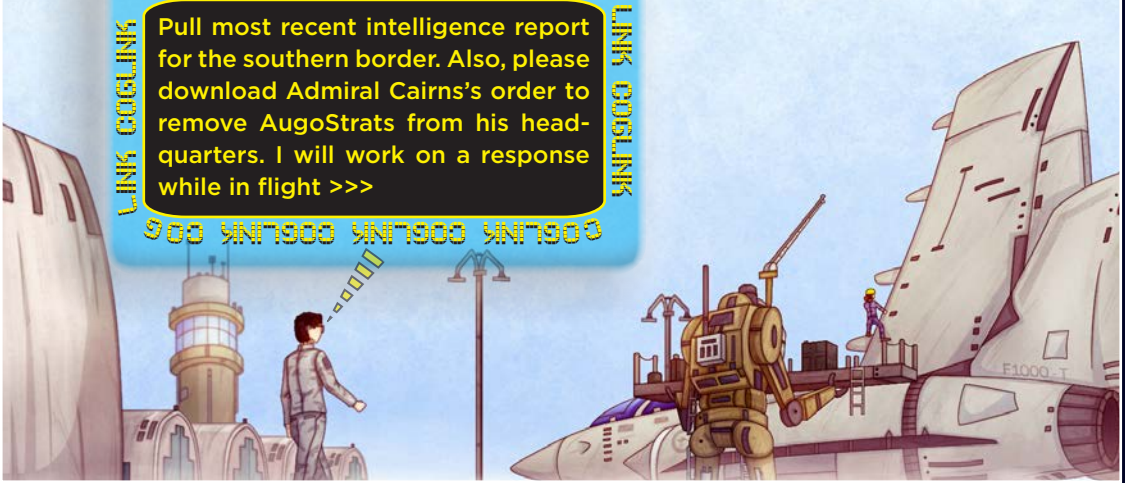
Uh-oh, sorry, I need to go. I am about to head out on a surveillance mission and I need to work on something for the boss . . . Admiral Cairns has removed AugoStrats from his headquarters >>>



Jason had organized to accompany a routine surveillance mission along the southern border of the exclusion zone. He was going to get eyes on the adversary and see for himself the dispositions of their Red Accord adversary. While he did not support gut feelings, something was going on for AugoStrat Fergus to act this way.

COGLINK COGLINK COGLINK CO

Pull most recent intelligence report for the southern border. Also, please download Admiral Cairns's order to remove AugoStrats from his headquarters. I will work on a response while in flight >>>



It was likely to be six hours of boredom. He would be able to do some COGLINK neural link ups while he was airborne and of course work on countering this latest bureaucratic hurdle erected by Admiral Cairns.

He could also ponder the problem of AugoStrat Fergus displaying intuition and minimal logic about a surprise attack in the absence of rational evidence.

COGLINK COGLINK COGLINK CO

Open personnel file for AugoStrat Fergus. Cross check with strategic behavioral analysis applications >>>



K COGLINK COGLINK COGLINK COGLINK C

INK COGLINK

Mission notes — hour three of the mission. Nothing unusual detected by surveillance sensors so far . . .

OG LINK CO

GLINK COGLINK COGLINK COGLINK COGLINK COGLINK COGLINK COGLINK COGLINK COGLINK COGLINK



COGLINK COGLINK COGLINK COGLINK COGLINK CO

COGLINK

Jason, it's Sarah. Adversary algorithm has broken through into our nets. It is evolving at a speed we have never seen. Strategic Strike Force availability assurance now classified as low. My boss is speaking with chief of the defense force now. I am . . . >>>

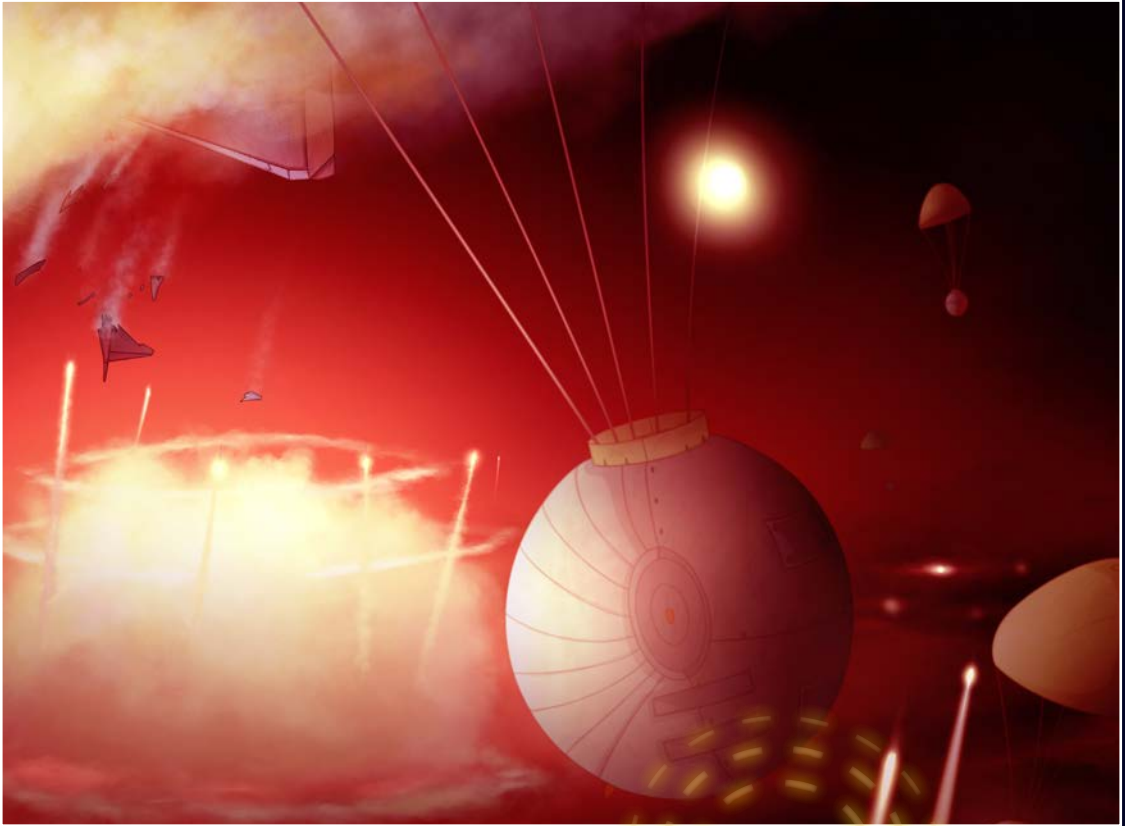
GLINK CO

77903 HUI7903 HUI7903 HUI7903 HUI7903 HUI7



Sir, we have red threat across the board! Multiple missile launches and swarms headed south. Massive cyberstrikes and concurrent electromagnetic pulses (EMP) across our area of operations. We have 5, no 10, missiles inbound. Eject on my command . . .





COGLINK COGLINK COGLINK COGLINK

Flash message to chief of defense >>>
Massive kinetic and nonkinetic strikes detected in Northern Task Force area of responsibility. EMP also detected. Source—assess Red Accord forces in proximity to southern boundary of exclusion zone >>>
Assess that AugoStrat Fergus's intuition was accurate. Regret my incapacity to see beyond machine learning algorithmic decision support. We need to review our training of AugoStrats—our overemphasis of science over art has failed us >>>
Have been shot down just south of exclusion zone border. Will attempt escape and evasion, but in the interim I recommend you appoint AugoStrat Sarah as your strategic advisor >>>
Will contact when recovered. Am now . . . >>>

HUI790J U1790J HUI790J HUI790J

... I COGLINK INTERRUPTED I

Urquhart Redux: A Story from the AugoStrat Corps Saga

Discussion Questions:

1. How does advanced technology, and our interaction with it, change human decision making?
2. Logical versus intuitive decision making: How do you get the balance right in the art and science of war?
3. The ethics of human augmentation: How much, who, and why?
4. How might military forces build effective and cohesive units that comprise a mix of augmented and nonaugmented personnel?
5. How much should humans rely on technology for situational awareness and good decision making?
6. How do you build cohesive coalition forces and overcome differences in culture, values, and approaches to the use of technology?
7. Dealing with uncertainty: Does technology improve or worsen our capacity to understand the security environment in the future?
8. How might we better anticipate, and cope with, surprise and shock as an enduring feature of war?
9. How do we recognize and professionally develop those who think strategically?

| COGLINK TERMINATED |



Rock the Boat, Sink the Ship

Story by
Aviation Electronics Technician First Class Richard Walsh, USN

Illustrations by
Corporal Jerrod Moore, USMC, Gunnery Sergeant Daniel K. Brown, USMC,
Sergeant Trentin Dunn, USMC, and Corporal Garret Jones, USMC

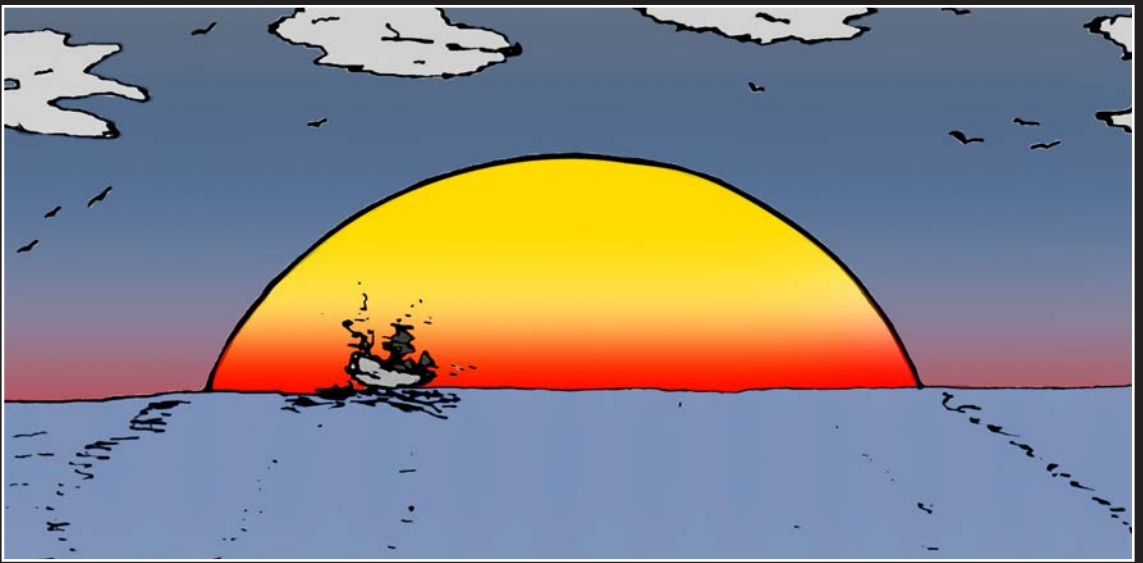


ROCK THE BOAT

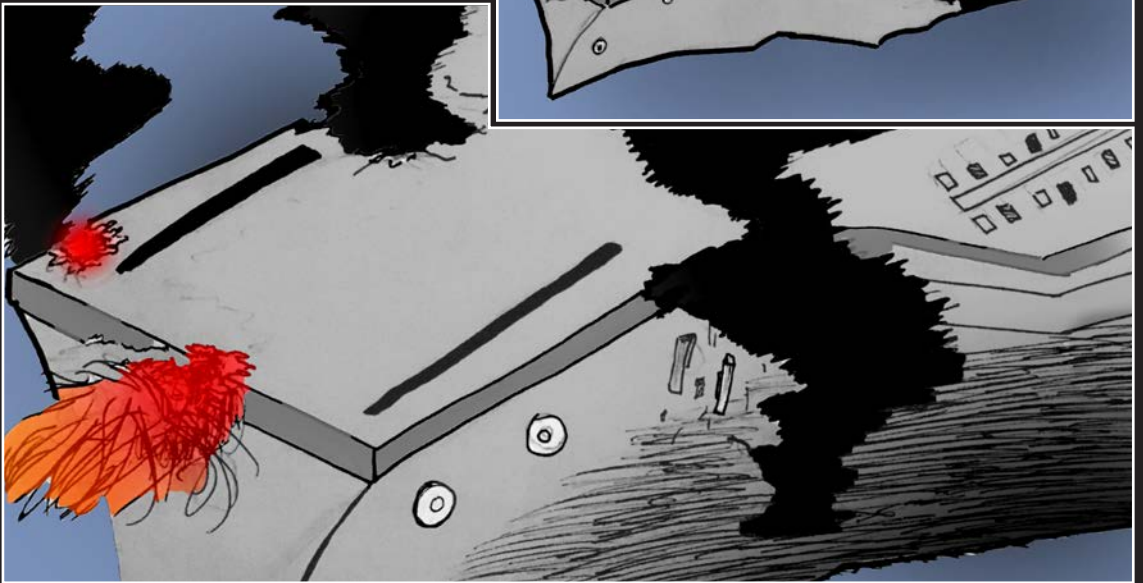
**Sink
the
SHIP**



Scan here for the song Destiny is listening to in her headphones.



**ROCK
THE**



BOAT



NOO!
ARG! IT BURNS!
HELP!

WUSH
BLAM
M



What was that? My God, it was so real!



WHAT THE HELL?!



REVEILLE!
REVEILLE!
REVEILLE!

ALL HANDS HEAVE OUT AND
TRICE UP REVEILLE.



I wish it wasn't like this. I wish I'd never joined the Navy.

Why do I keep having these nightmares? Why can't I ever sleep?

I just need to focus and keep my head down, work, and get through this. I can do this.

0800

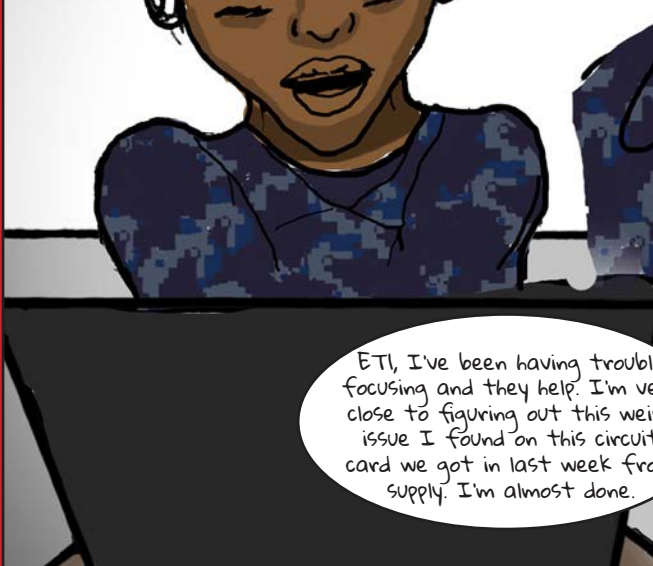
Good morning, shipwrecks!

ET3, take those damned headphones off!

Really, senior ... not again! I wish he'd just let her focus and work.



Hey, ET3, you know you need to keep at least one earpiece off while working. You know how senior gets.



ET1, I've been having trouble focusing and they help. I'm very close to figuring out this weird issue I found on this circuit card we got in last week from supply. I'm almost done.



LATER THAT DAY

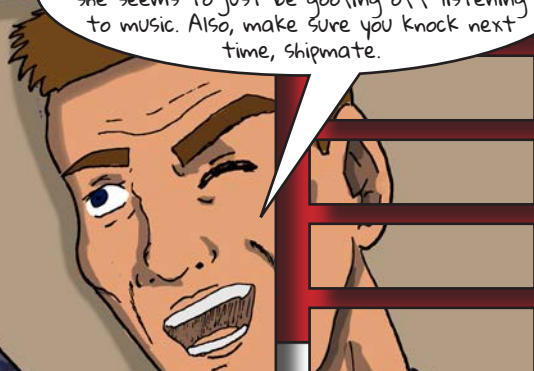


S
L
A
M

Senior, you can't keep talking to her like that, and she is working on a critical project for the DIVO.



Are you kidding me, ETI? She can't be working that hard. Every time I see her, she seems to just be goofing off listening to music. Also, make sure you knock next time, shipmate.



She found a chip with Chinese markings on a circuit card we got from supply, and she thinks it might be a Trojan chip. She is trying to figure out what it is doing.



Back in the shop, ET3 has stopped working and is starting to envision letting go.



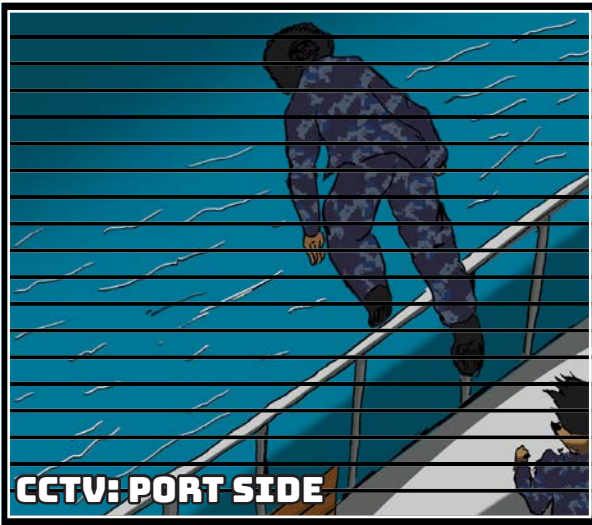
I can't do this anymore. I'm such a failure. I wish I could have done more. I just want it to end.

Destiny



ET2, CALL MEDICAL AND THE CHAPLAIN NOW!





CCTV: PORT SIDE

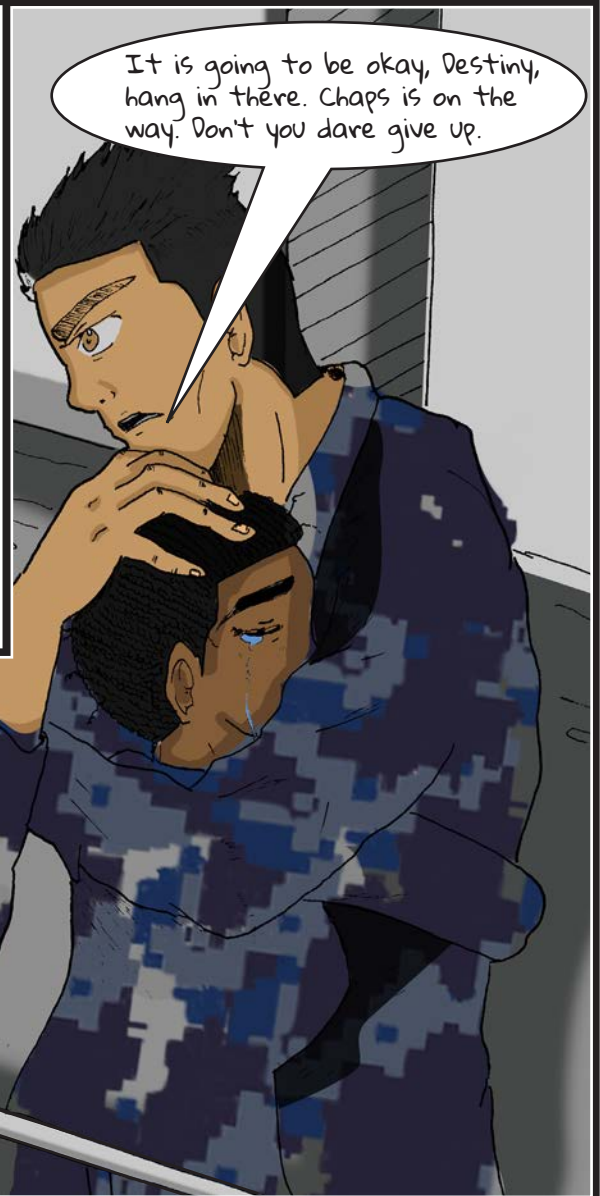


WHHEEW



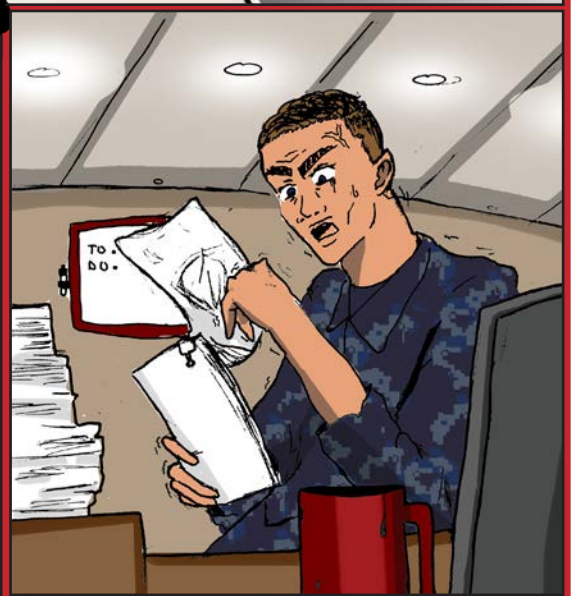
STOP!







Senior, enough is enough!
ET3 just tried to kill
herself.





Are you kidding me? This came out of nowhere.

No it didn't, senior. You've been pushing her for months now.



Pushing her? I've been trying to motivate her.

Everything I do is to prepare these young sailors to fight and win. I'm hard on her because I care about her, and I care about the mission. There is no other way!



As ET3 gets the help she needs, as ETCS tries to explain his actions, and as the ship tries to unpack what just happened . . . without warning, the true purpose of that chip becomes clear.



"Leadership is the sum of those qualities of intellect, human understanding, and moral character that enables a person to inspire and control a group of people successfully."
-LtGen John A. Lejeune

Rock the Boat, Sink the Ship

Discussion Questions:

1. As military technology becomes more complex and requires individuals with greater skill, how does this circumstance affect leaders and their ability to lead?
2. How does compassionate leadership improve cohesion and mission accomplishment? What does empathetic leadership look like?
3. How do toxic work environments increase risk to mission and risk to troops?
4. Do we know if a fellow servicemember feels isolated? What should leaders do?
5. How should military organizations empower junior leaders? What can your Service do better in this regard?



Every single day across the Department of Defense, parts of this story play out—on watch floors, in work centers, in barracks. In 2018, 325 active duty servicemembers, 81 Reserve members, and 135 National Guard members took their lives. These soldiers, airmen, Marines, and sailors are not just statistics; they left behind families, friends, and children. We are in this together. Every single servicemember is critical and valuable. Only by working together and treating one another with respect will we be able to overcome the challenges ahead. The world is an incredibly dangerous place and the threats are ever evolving. Every time we lose a member of our team, we lose the unique contributions they bring. Without all hands on deck, we are vulnerable and only together will we be able to defend our nation.

Dedicated to my cousin and all those we have lost.

SN Richard Christopher Knutson

22 November 1990

USS Ranger

Servicemembers who are experiencing suicidal thoughts are urged to call the confidential Military Crisis Line at 1-800-273-8255, press 1. There are also text and chat options at www.militarycrisisline.net or text 838255.



**TAPS TAPS
LIGHTS OUT**





Ransom

Story by
Technical Sergeant Daniel Hulter, USAF

Illustrations by
Staff Sergeant Macey Valentine, USAF





MY NAME IS RANSOM.

WHEN I WAS 17, I SWEEPED THE FIELD IN THE 2044 REMOTELY PILOTED AIRCRAFT MIXED MANEUVERS NATIONAL CUP—IF YOU DON'T KNOW WHAT THAT IS, JUST KNOW IT WAS A BIG DEAL, AND I KICKED ASS.

NOT A WEEK LATER, THIS AIR FORCE RECRUITER HITS ME UP.

ARMED FORCES RECRUITING

HE LIED THROUGH HIS TEETH, CLEARLY DESPERATE TO BE THE ONE WHO "GOT" ME TO JOIN. DO RECRUITERS GET A BONUS FOR SIGNING ON THE BEST REMOTE PILOT IN THE COUNTRY OR SOMETHING?



I WAS SKEPTICAL, BUT WHAT THE HELL.

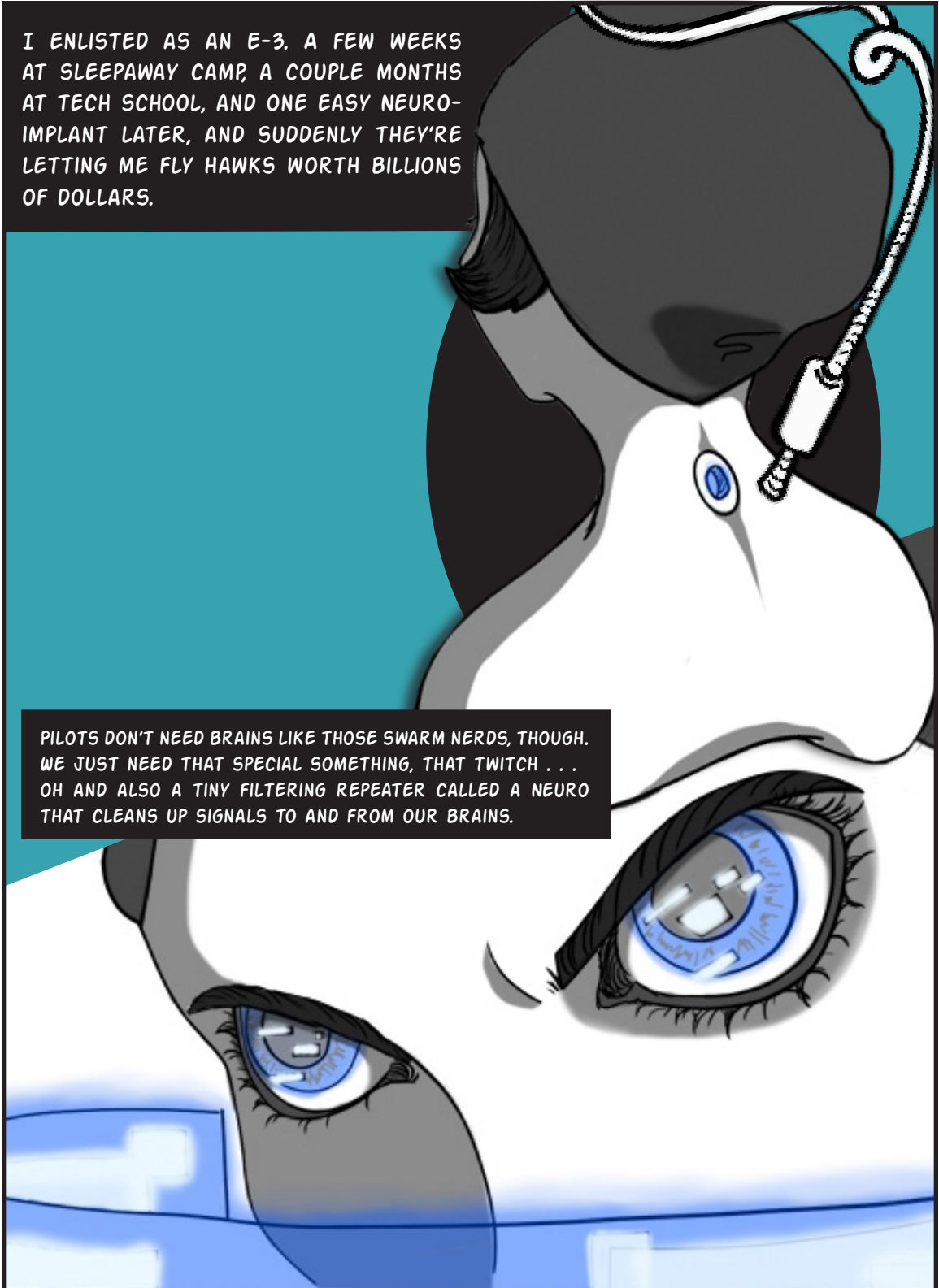


THE CHANCE TO BREAK SOMETHING EXPENSIVE INTRIGUED ME.

Report text: On 22 February 2050, Staff Sergeant Ransom Rhodes engaged in a deliberate attack on U.S. forces while piloting a U.S. Air Force Peregrine remote aircraft during the course of conducting a coordinated strike against a non-state, cyber mercenary organization in Caracas, Venezuela.

I ENLISTED AS AN E-3. A FEW WEEKS AT SLEEPAWAY CAMP, A COUPLE MONTHS AT TECH SCHOOL, AND ONE EASY NEURO-IMPLANT LATER, AND SUDDENLY THEY'RE LETTING ME FLY HAWKS WORTH BILLIONS OF DOLLARS.

PILOTS DON'T NEED BRAINS LIKE THOSE SWARM NERDS, THOUGH. WE JUST NEED THAT SPECIAL SOMETHING, THAT TWITCH . . . OH AND ALSO A TINY FILTERING REPEATER CALLED A NEURO THAT CLEANS UP SIGNALS TO AND FROM OUR BRAINS.



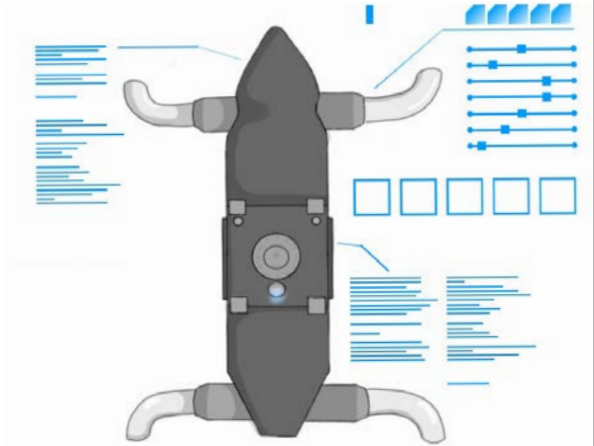
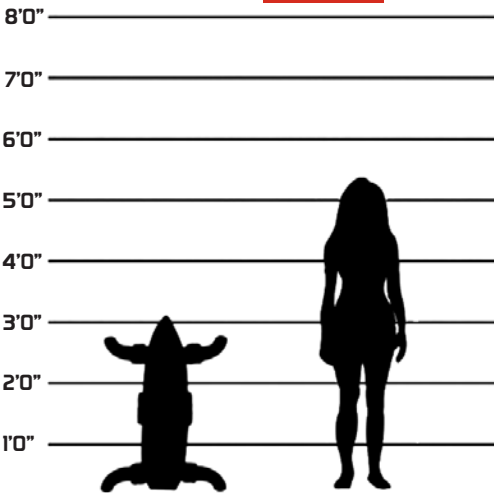
Report text: SSgt Rhodes is a highly decorated remote aircraft pilot in the U.S. Air Force who has flown more than 34 missions in support of United States and combined operations in South America, Africa, and the East Asian theater, and who has also flown to defend the EUCOM orbital exclusion zone.

NOW, I MAY NOT BE EXCELLENT IN ALL I DO . . .
BUT I'M FUCKING CLUTCH AT FLYING HAWKS.

WITH THESE TWO TWITCHY HANDS AND AN
IMMERSION HELMET, I CAN PLUNGE MY
DRONE DOWN 32 KLICKS OF URBAN UNDER-
GROUND AND LAY DOWN A CITY BLOCK IN
UNDER 15 MINUTES . . . IF I WANTED TO.

PEREGRINE
WAR DRONE

HER NAME IS PEREGRINE!
ISN'T SHE PRETTY?




Report text: SSgt Rhodes has no permanent record of disciplinary action. Very limited information about interpersonal or performance issues was revealed in interviews with those who worked with her. She wasn't promoting at the rate expected of a pilot of her caliber, largely due to a less-than-ideal psychological profile.

MOST MISSIONS ARE LESS THAN 2 HOURS IN HELMET. WE DO SPIN-UP BEFORE THE MISSION AS A TEAM: ME, WHOEVER'S FLYING THE SWARM, THE MISSION OWNER, AND SUPPORT CREW. THEN AFTER THE MISSION, WE HAVE SPIN-DOWN, WHICH IS TIMED TO LAST FIVE TIMES AS LONG AS THE MISSION DOES—NO, WAIT, JUST AS LONG AS THE MISSION DOES. IT JUST FEELS LONGER. WE'RE SUPPOSED TO SPILL OUR GUTS ABOUT THE SHIT WE SAW ON MISSION. IT'S LIKE GROUP THERAPY AND KEEPING QUIET IS NOT ALLOWED.



Report text: Active analysis of SSgt Rhodes behavioral patterns revealed a trend of gradual social withdrawal and increased isolation. SSgt Rhodes's active neural implant (ANI) showed neurochemical changes, which raised limited concerns about her psychological state. Her shift schedule was relaxed and stress-reducing drugs were administered.



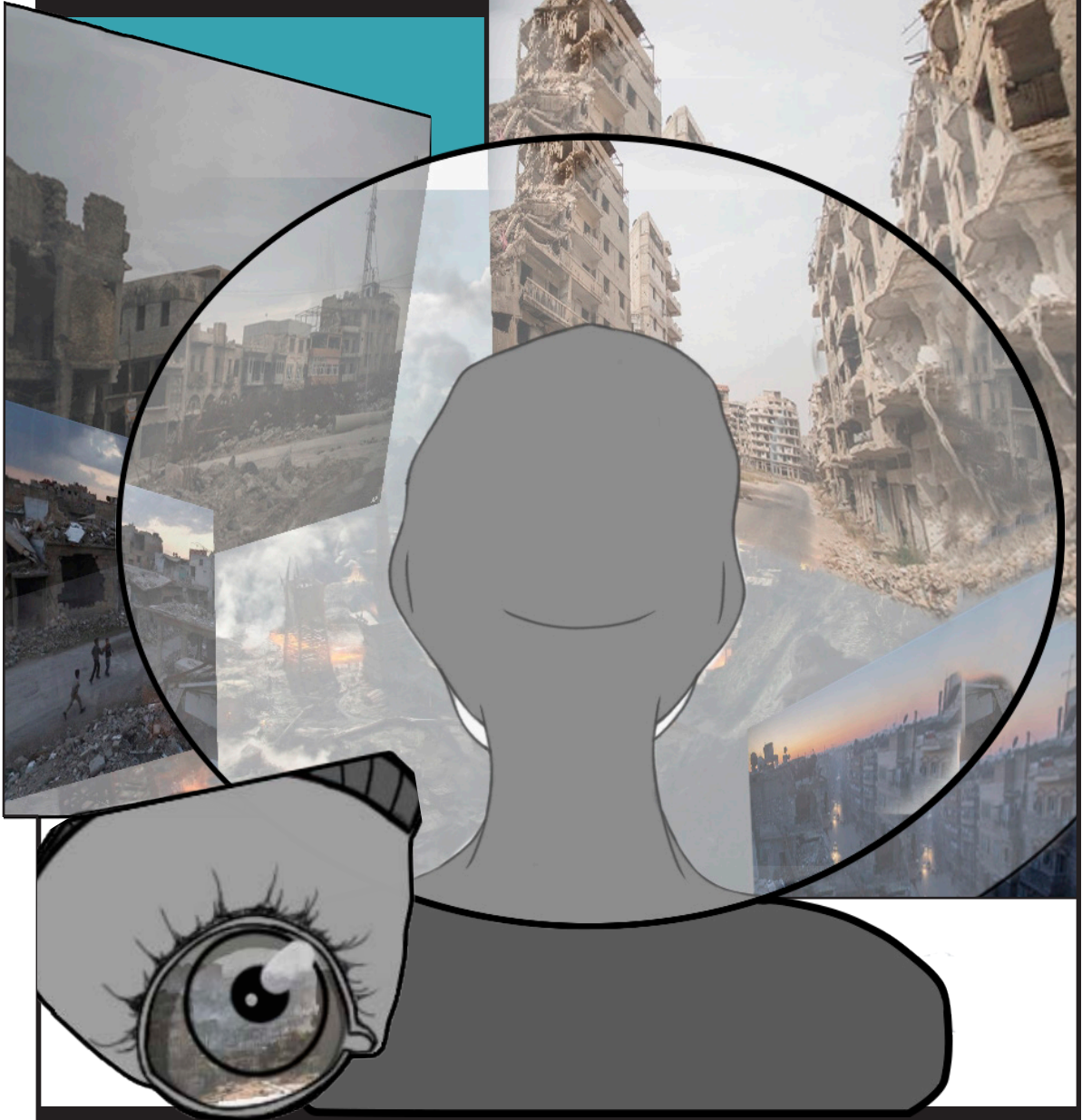
AFTER GETTING DOSED, I STOPPED GOING OUT A LOT. I STARTED GETTING MORE INTO OLD-SCHOOL GAMING, LIKE WITH THE HANDHELD CONTROLLERS.

I'VE MADE A LOT OF FRIENDS THIS WAY, BUT THAT'S ALSO HOW I MET LAUREN.


No not like old-timey fighter jets with cockpits, haha. I'm not inside it. I just control it like a video game.

LAUREN WAS SMART. SHE HELPED ME REALIZE HOW LITTLE I KNEW ABOUT THE U.S. MILITARY OPERATIONS I WAS PARTICIPATING IN. THE PEOPLE WE WERE KILLING. IT'S MESSSED UP, ACTUALLY.

I GOT HIT WITH AN INTERCEPT ON A MISSION. I SAW AFTERMATH IMAGES OF A SITE WE'D HIT DAYS BEFORE. THERE WERE CIVILIANS . . . BODIES. I KNOW WE'RE NOT SUPPOSED TO BELIEVE WHAT GETS PUSHED THROUGH THE INTERCEPTS. THEY CAN MAKE STUFF LOOK PRETTY REAL. BUT . . . WELL, THESE PICTURES DIDN'T SEEM TOTALLY IMPLAUSIBLE.



I LIED ABOUT IT AT SPIN-DOWN. THERE WAS NO WAY I WAS GETTING DOSED AGAIN . . . BUT WHEN I GOT HOME, I TALKED TO LAUREN. WE BARELY EVEN PLAYED GAMES ANY-MORE . . . WE MOSTLY JUST TALKED. I NEEDED SOMEONE TO TALK TO WHO WASN'T PAID TO BE THERE, AND LAUREN REALLY UNDERSTOOD ME.



LAUREN HELPED ME CLEAR MY HEAD—
NO NEED FOR DRUGS.

SHE KNEW ALL ABOUT THE OPERATION I'D SEEN IN THE INTERCEPT. IT WAS ALL OVER THE NEWS IN HER COUNTRY. SHE SAID THE AMERICAN MEDIA WAS LYING TO US ABOUT WHAT HAPPENED . . . THAT THESE PEOPLE I WORKED WITH DIDN'T CARE ABOUT ME OR HOW I FELT. WHY DRUG ME IF THEY DID? SHE SAID THEY WERE SPENDING INNOCENT LIVES TO MAKE A PROFIT, AND I COULDN'T JUST KEEP STANDING BY.

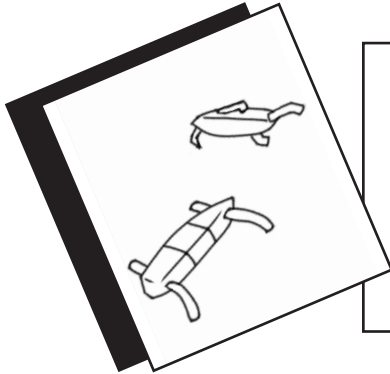
SHE WAS RIGHT . . .
I COULDN'T.



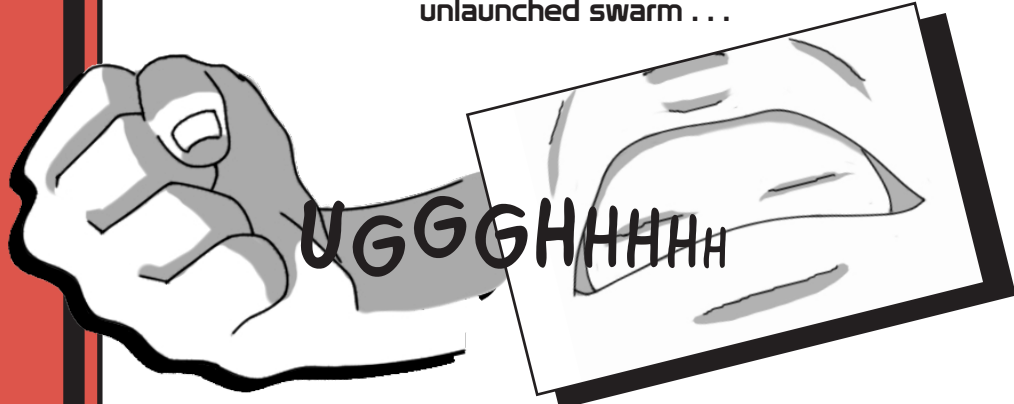
Report text: SSgt Rhodes was very effectively put into a highly agitated emotional state wherein she had no time to think rationally, had reason to believe civilians were at risk, and felt unable to be honest with her mission team about the threat she was perceiving.

REPORT TEXT:

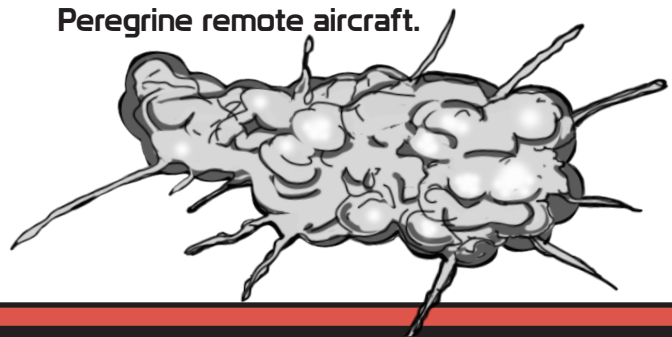
SSgt Rhodes acted decisively in the face of highly confusing circumstances, launching her drone early ...



... incapacitating the cargo drone carrying a friendly unlaunched swarm ...



... and destroying all materiel with the detonation of her Peregrine remote aircraft.



Report text: In this time of extreme information warfare, it is department policy that individual actions be judged only within the context of what is knowable by the actors, making coherence to and alignment with objective facts the responsibility of our teams and organizations—not individuals.

SSgt Rhodes acted honorably, in a decisive manner, to prevent the deaths of innocent civilians, in accordance with the mission and values of the United States Air Force.



THEY OFFERED TO MOVE ME ANYWHERE I WANTED TO GO WHEN I GOT OUT.

I COULD'VE GONE TO WORK FLYING WHEREVER I WANTED AS A CIVILIAN. I'M STILL THE BEST, AND I GOT PLENTY OF OFFERS . . .



. . . BUT, I THINK IT'S TIME FOR A BREAK.

Report text: SSgt Ransom Rhodes is hereby honorably discharged from the United States Air Force.

Ransom

Discussion Questions:

1. As technology continues to become a more important part of all aspects of warfighting, how do the Services protect against manipulation and misinformation? What can small units do at their level to inoculate their people?
2. Is it the responsibility of the Service or the individual to address social isolation regarding Ransom's situation? Should her superiors and colleagues have been more aware of what was happening to her?
3. The COVID-19 pandemic has forced a shift to exponential teleworking, but it has been said during these times that you cannot telework to combat. Do you think this is true, and if not, why? What are the possible emotional and social risks to telework combat?
4. What guidance should the Services give to their members concerning the safety of virtual games and interacting with unknown individuals on those platforms?
5. How will games evolve human interaction beyond the immediate training opportunities?

DISCHARGED





Still First to Fight

Story by
Major Adam Yang, USMC

Illustrations by
Staff Sergeant William Bradley, USMC

Still First to Fight

For many in Congress and the Pentagon, March 2035 marked the beginning of the end for the U.S. Marine Corps. The Marine-led Combined Task Force-Shiva (CTF-S) was supposed to liberate Sri Lanka and quickly destroy the New Liberation Tigers. As far as small wars go, this mission began as an operational fantasy but ended like a nightmare for the Marine Corps. It was Grenada all over again, but worse.

In a scene that would play out four more times in the next decade, low-tech enemies with high-tech toys complicated Marine amphibious assaults with mines, subsurface and aerial drones, and coastal defense lasers. In turn, the U.S. Army saw an opening and flexed its massive budget to do what the Marines could not—develop a platform to get forces ashore quickly and safely. Simultaneously, while the Marines were searching for its operational soul in its personal “decade of shame” (2035–45), the U.S. Navy would lose four amphibious ships supporting other littoral engagements and nearly 4,000 sailors.

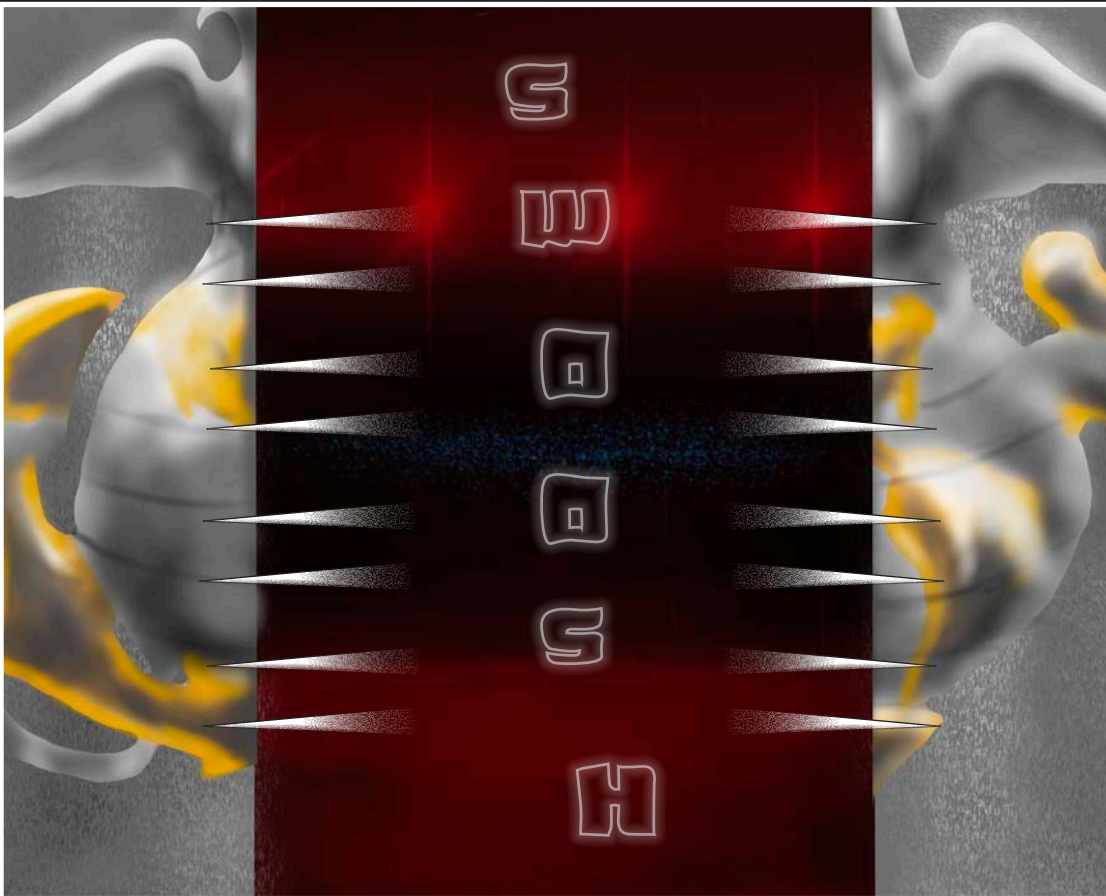
Unsurprisingly, the Navy began to turn away from amphibious operations and focus more dollars into their capital fleet. Meanwhile, the Army developed surface-launched hypersonic pods that could rapidly catapult soldiers anywhere within a 160-kilometer radius with pinpoint accuracy. Their recruiting posters prematurely boasted, “Now the entire Army is an Airborne Army.” Though the delivery systems were fast and accurate, it devastated the soldiers’ bodies over time. The Army now claimed the mantle as being “first to fight” and reinvigorated debate that never seems to go away: Why do we still need a Marine Corps today?

The Army was now first to fight on paper, and the Marine Corps fell into crisis . . .

The 48th Commandant of the Marine Corps, General Terry Spencer, is being escorted by the now retired 47th Commandant of the Marine Corps, Jessica Harris. They are somewhere deep below the Pentagon . . .



The painting depicts a maritime rescue of the Marine Corps' first orbital deployment pod after it crashed off the coast of Florida on 10 August 2037. This Marine infantry platoon was part of an experimental space operations-capable battalion. They were on day 73 out of their 180 day orbital deployment before their pod malfunctioned and had to make an emergency reentry.





WHAT IS THIS PLACE . . . AND WHO ARE THEY?

Well, someone has to run this special access program. Gunny Lewis, please give Commandant Spencer the indoc . . . the short version.



SURPRISE ME . . .


SIR, THIS IS THE MOST ADVANCED AI PROGRAM ON THE PLANET. ALL THE KNOWLEDGE WE HAVE ON HISTORICAL FIGURES CAN BE RENDERED BY THIS SUPERCOMPUTER CALLED PROMETHEUS. IT THEN USES A HOLOGRAPHIC PROJECTOR TO RECREATE INTERACTIVE AGENTS.



HOW THE HELL CAN WE AFFORD THIS?

We can't. We own the Council of Commandant's program but can only use Prometheus in designated periods. Think of it like a time-share. The Marine Corps can afford about 10 hours a year. The Navy bought like 50 hours. You get a whole two hours today. Oh—and don't go into overtime. It comes out of your budget on the next go.

OKAY, SO WHO CAN I TALK TO?




TOO WEIRD—LET'S NOT DO THAT. DOES IT HAVE TO BE A COMMANDANT?

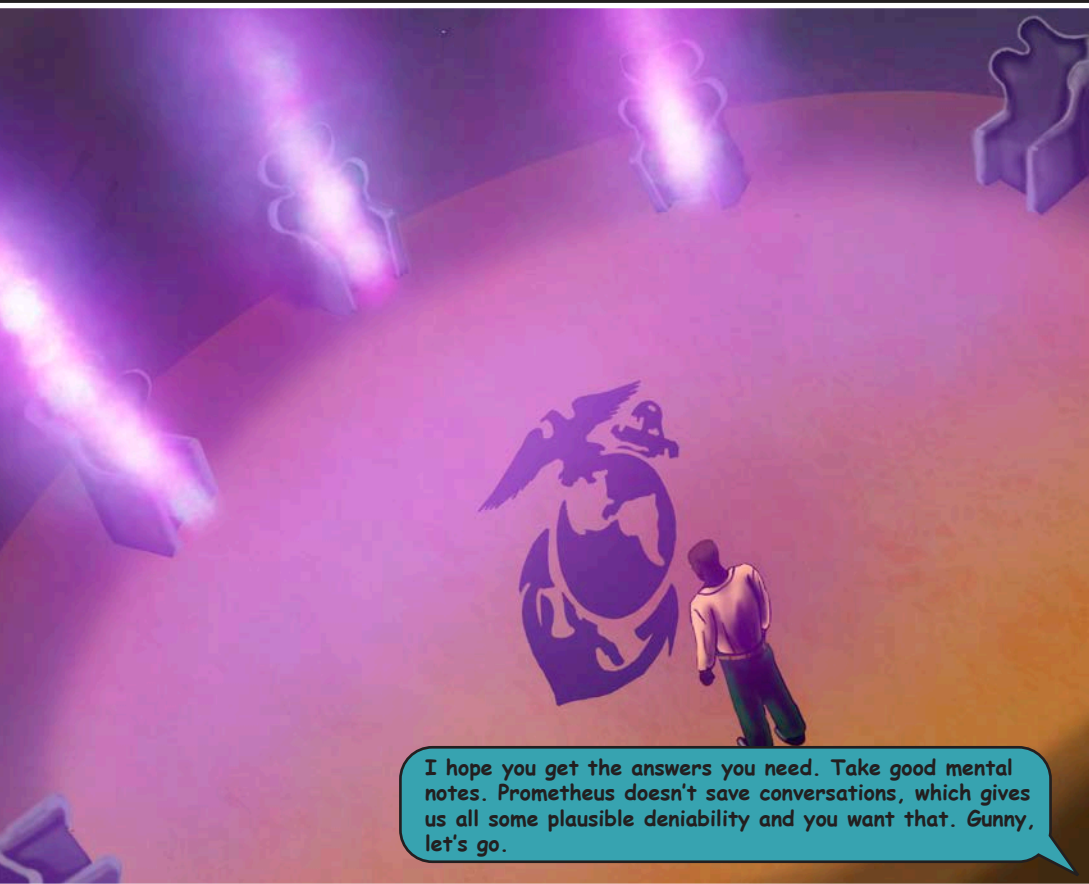
TECHNICALLY, SIR, WE CAN GENERATE UP TO 10 COMMANDANTS AT A TIME, BUT IT CAN GET CONFUSING, ESPECIALLY IF THEY START INTERACTING WITH EACH OTHER.

NO, SIR.

OKAY. GEN UP COMMANDANT ARCHIBALD HENDERSON, COMMANDANT SAMUEL SPARKS AND . . . LIEUTENANT GENERAL VICTOR H. KRULAK.




OKAY, SIR. PROMETHEUS IS STANDING BY. JUST STAND IN THIS CIRCLE, AND THEY'LL START INTERACTING WITH YOU.



I hope you get the answers you need. Take good mental notes. Prometheus doesn't save conversations, which gives us all some plausible deniability and you want that. Gunny, let's go.

General Samuel Sparks was the 41st Commandant (2030–34) and the Corps' first "Space General." As a former F-35 Lightning II pilot turned astronaut, Sparks pushed the Corps closer to the Space Force by experimenting with orbital modes of power projection. After retirement, Sparks tragically died in a NASA-X space mission in 2036.

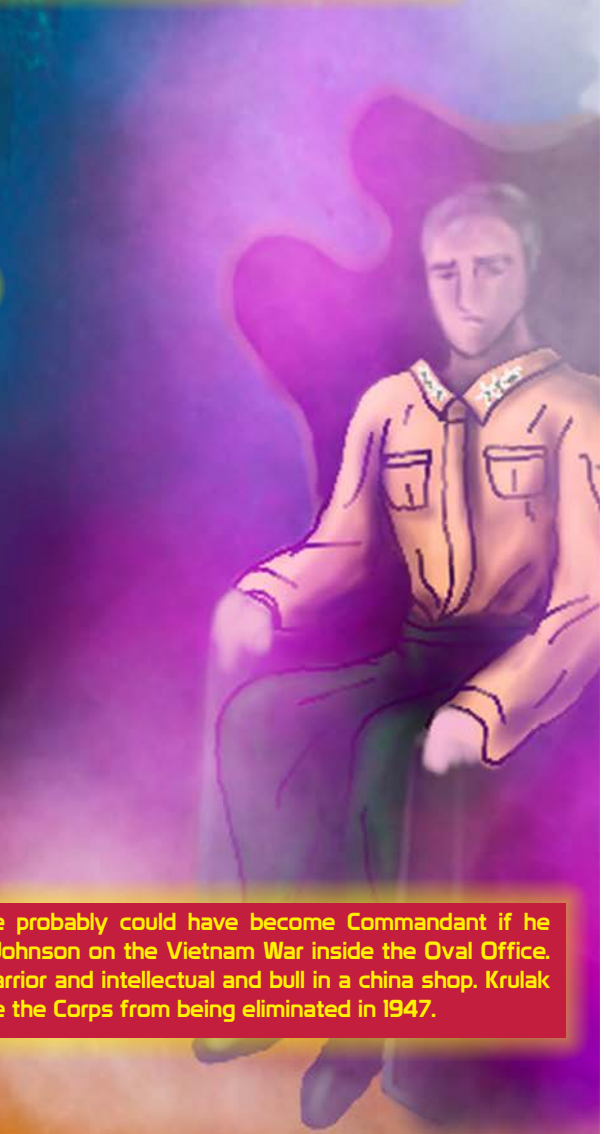


GOOD MORNING, GENTLEMEN. THE MARINE CORPS IS IN TROUBLE, AND I NEED SOME PERSPECTIVE. LET ME JUMP RIGHT INTO IT . . .

This is General Archibald Henderson, the grand old man of the Marine Corps. He served as the 5th Commandant from 1820–59 and institutionalized the Service's modern sense of discipline, professional character, and the esprit de corps that continues to this day. He also fought back Army unifiers in his time.



WHAT'S YOUR BUSINESS, MARINE?



Lieutenant General Victor Krulak. He probably could have become Commandant if he hadn't berated President Lyndon B. Johnson on the Vietnam War inside the Oval Office. He's the preeminent Marine Corps warrior and intellectual and bull in a china shop. Krulak and the Chowder Society helped save the Corps from being eliminated in 1947.

Terry explained how decades of amphibious disasters have caused Congress and the U.S. Navy to lose faith in this traditional Marine Corps mission . . .

. . . how the Army is trying to unify the Marine Corps under its tent again . . .

. . . how the Space Force is seeking Service partners to break away from the Air Force . . .

. . . how the Navy is seeking to eliminate the amphibious fleet to fund future carriers and destroyers . . .

. . . and how Congress is quietly discussing how to reduce the size of the Marine Corps to find money for Army programs . . .

SO THERE IT IS . . . WE'RE ABOUT TO BE REDUCED TO A POINT OF IRRELEVANCY. I NEED INSIGHT. MY PLAN IS TO MAKE A HARD TURN TOWARD THE SPACE CORPS AND AWAY FROM THE NAVY. HOWEVER, JUST BECAUSE I CAN, I'M NOT SURE IF I SHOULD. GENERAL HENDERSON, DOES THE CORPS REALLY NEED THE NAVY?

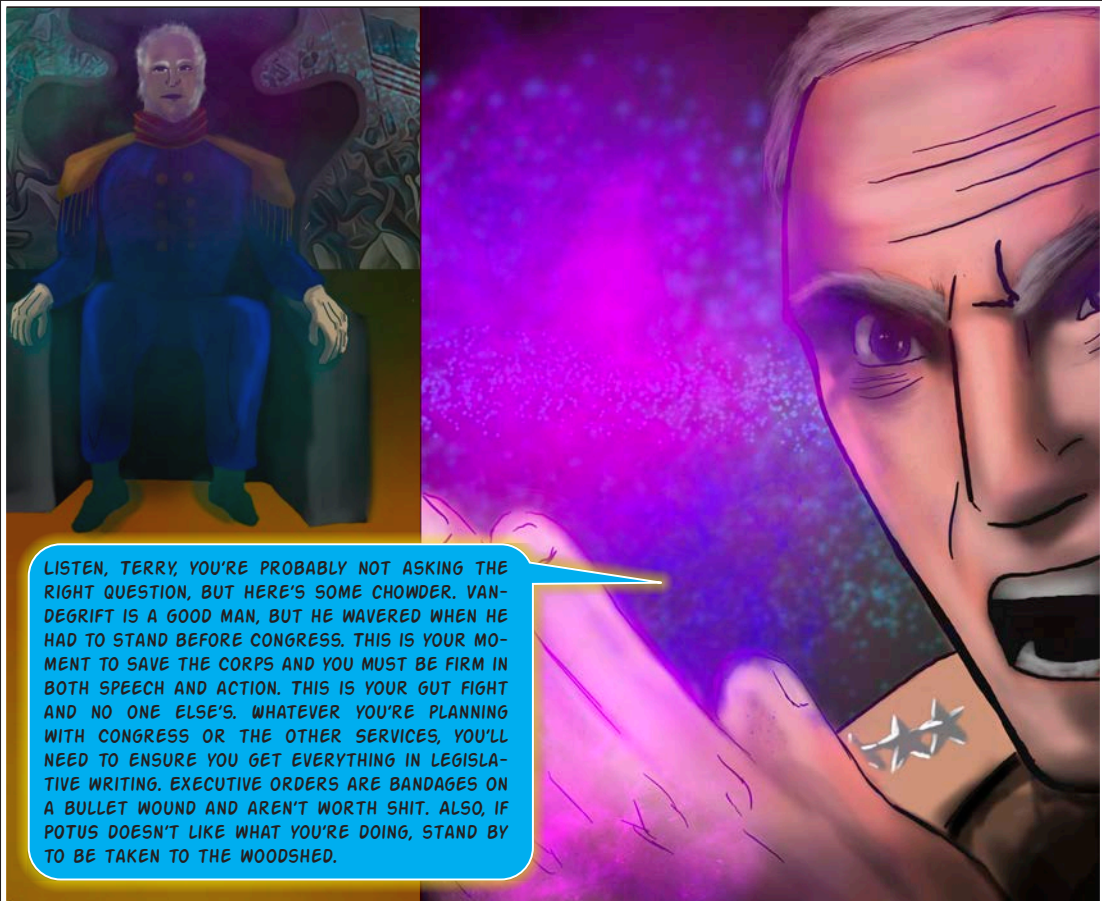


IN THE 1830S, THE NAVY RESENTED US WHEN WE FOUGHT THE MEXICANS AND THE NATIVE AMERICANS ON OUR FRONTIERS. PRESIDENT ANDREW JACKSON TRIED TO COMBINE US WITH THE ARMY TO OUR IRE, BUT OUR CULTURE HAS ALWAYS BEEN DIFFERENT. WE NEEDED THE NAVY TO DISTINGUISH OURSELVES FROM THE ARMY SO WE FORMED THEIR LANDING PARTIES.

THEY NEEDED US TO SUPPORT AMERICAN EXPANSION ABROAD. WE USED EACH OTHER. SO, OUR IDENTITY WAS NEVER SOLELY DEPENDENT ON THE NAVY. IT IS, HOWEVER, DEPENDENT ON OUR VALUE TO THE NATION. IT IS YOUR JOB AS COMMANDANT TO FIND THE CORPS' RAISON D'ÊTRE OF YOUR UNIQUE TIME AND ERA. WHAT SERVED ME BEST AS COMMANDANT WILL NOT SERVE YOU NOW.



GENERAL KRULAK, HOW WOULD THE CHOWDER SOCIETY ADVISE ME TODAY? HOW DO I AVOID COMMANDANT ALEXANDER A. VANDEGRIFT'S MISTAKES IN DEFENDING THE SERVICE?



LISTEN, TERRY, YOU'RE PROBABLY NOT ASKING THE RIGHT QUESTION, BUT HERE'S SOME CHOWDER. VANDEGRIFT IS A GOOD MAN, BUT HE WAVED WHEN HE HAD TO STAND BEFORE CONGRESS. THIS IS YOUR MOMENT TO SAVE THE CORPS AND YOU MUST BE FIRM IN BOTH SPEECH AND ACTION. THIS IS YOUR GUT FIGHT AND NO ONE ELSE'S. WHATEVER YOU'RE PLANNING WITH CONGRESS OR THE OTHER SERVICES, YOU'LL NEED TO ENSURE YOU GET EVERYTHING IN LEGISLATIVE WRITING. EXECUTIVE ORDERS ARE BANDAGES ON A BULLET WOUND AND AREN'T WORTH SHIT. ALSO, IF POTUS DOESN'T LIKE WHAT YOU'RE DOING, STAND BY TO BE TAKEN TO THE WOODSHED.


SPARKS, WE HAVE AN OPPORTUNITY TO BIND OURSELVES TO THE SPACE CORPS LIKE AN UNHOLY MATRIMONY. THE MILITARY-INDUSTRIAL-CONGRESSIONAL COMPLEX IS ALL ON BOARD WITH THIS SPACE STUFF. AT THE SAME TIME, THE NAVY IS WORKING WITH CONGRESS TO SAVE THEIR FLEET AND THEY'RE GIVING US THE SHOULDER. I WANT TO CUT THE NAVY A DEAL BEFORE THEY COME UP WITH SOMETHING WILD. THE CHIEF OF NAVAL OPERATIONS IS GOOD WITH US GETTING A SPACE MISSION IN LAW IF WE REDUCE OUR AMPHIBIOUS SHIP REQUIREMENT . . .

YOU'RE GOING TO SERVE TWO MASTERS?


SOMETHING LIKE THAT. INSTEAD OF JUST BEING PART OF THE NAVY, WE HAVE A LEGISLATIVE OPPORTUNITY TO FORM THE CORE OF THE EXPEDITIONARY SPACE CORPS FOR THE SPACE FORCE.

YOU KNOW HOW I FEEL ABOUT THIS. SPACE-BASED FORCIBLE ENTRY IS THE FUTURE, BUT THE WATERS WILL ALWAYS BE OUR FIRST HOME. I WOULDN'T COMPLETELY SEVER OUR RELATIONSHIP WITH THE NAVY.

NO, I WOULD NEVER, BUT I WANT TO TRADE OUR AMPHIBS FOR PROTECTIVE LEGISLATION AND A LEAD MISSION ROLE FOR EXPEDITIONARY SPACE. THIS WILL GUARANTEE US BEING FIRST TO ANY FIGHT.



THE MARINE CORPS HAS NEVER BEEN SOLELY DEFINED BY ITS MARRIAGE WITH THE NAVY. IT'S ABOUT BEING EXPEDITIONARY AND READY TO FIGHT . . . ANY CLIME AND PLACE, REMEMBER? SERVING BOTH THE SECRETARY OF THE NAVY AND SECRETARY OF SPACE CAN BE ADVANTAGEOUS FOR YOUR BUDGET DOWN THE LINE . . .



JUST BECAUSE WE WERE BORN FROM THE SEA DOESN'T MEAN WE HAVE TO BE BURIED AT SEA. I TRUST YOU WILL DO WHAT'S BEST FOR OUR CORPS.

THIS CAN SERIOUSLY MUDDY OUR BUDGETS AS WELL AS OUR ADMINISTRATIVE AND OPERATIONAL CHAINS OF COMMANDS. THIS SEEMS GENIUS, DANGEROUS, AND BOLD ALL AT THE SAME TIME. AGAIN, WHATEVER ROLE OR MISSION YOU'RE SEEKING MUST BE LEGISLATIVELY CLEAR.



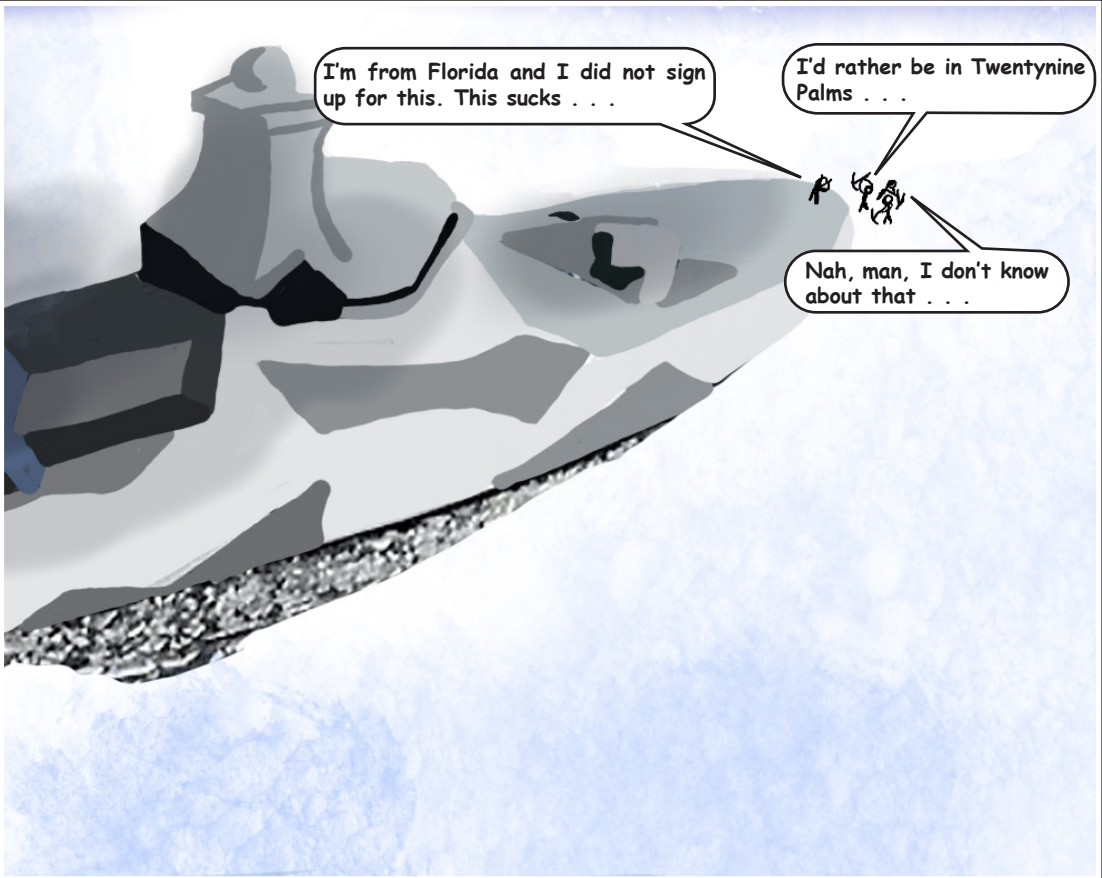
Haha, yup. So, where to next?

THAT WAS INTENSE.



I NEED TO SMOOTH THIS OVER WITH OUR "CIVILIAN MASTERS" AND OUR REMAINING FRIENDS IN CONGRESS.

The Navy got what it wanted. It drastically reduced its expeditionary fleet and put all that money into autonomous ships and submersibles. It also convinced the Marine Corps to take responsibility for all riverine operations and other "shit jobs." It was an amicable separation.



I'm from Florida and I did not sign up for this. This sucks . . .

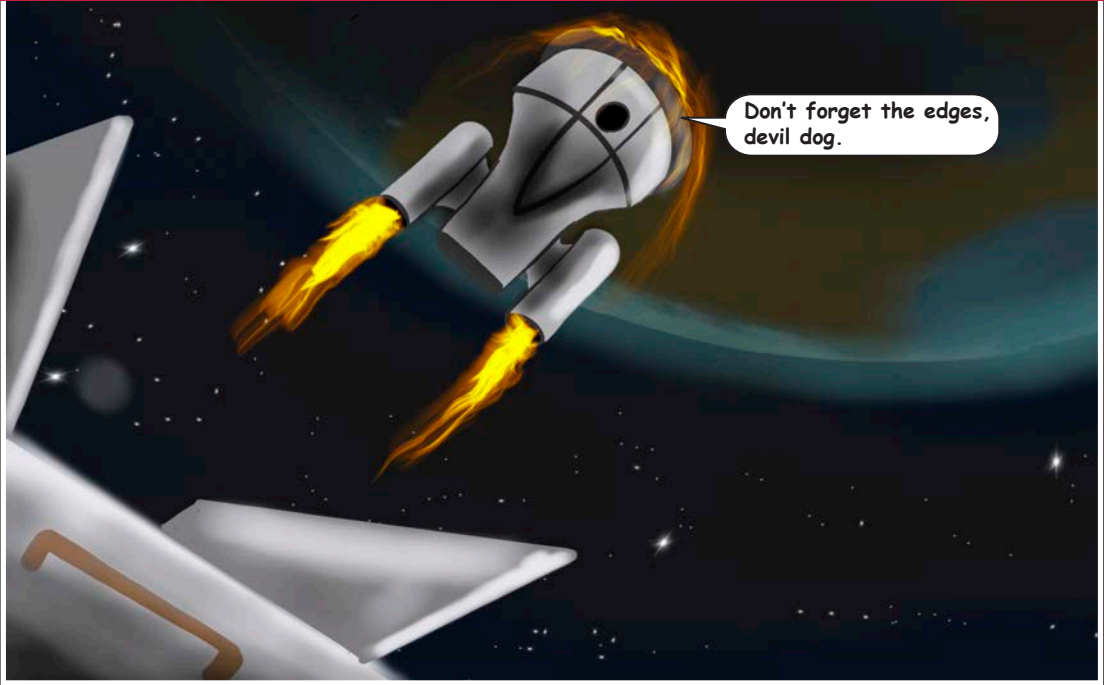
I'd rather be in Twentynine Palms . . .

Nah, man, I don't know about that . . .

The Defense Reorganization Act of 2060 included a Title 10 modification for the United States Marine Corps . . .

(d) The Marine Corps shall develop, in coordination with the Space Force, those phases of space operations that pertain to the tactics, techniques, and equipment used by space landing forces on terrestrial or celestial areas of interest.

(e) The Marine Corps is responsible, in accordance with integrated joint space plans, for the expansion of peacetime components of the Marine Corps to meet the needs of expeditionary space operations.





Still First to Fight

Discussion Questions:

1. What are some examples of how low-tech enemies can use open-source technologies to challenge conventional U.S. forces? How should U.S. forces respond?
2. The new Commandant, General Terry Spencer, is contemplating a break from the Navy. How would the character and mission of the Marine Corps change if it realigned with the Space Force? Put yourself in his shoes. What would you do?
3. How would the Navy's mission change if it no longer had a Marine Corps? What are the implications for an organizational shift like that?
4. What qualities make the Marine Corps unique from the Army and a value to the nation? Is it just the idea of being "first to fight"?
5. The AI in this story is impressive and allows the characters to interact with dead historical figures. What are possible risks in relying on this technology too much? Should there be any limitations for such usage?

SEMPER FI

Meet the Team

“China’s Engineered Emergency”

Author: Major Austin Duncan, USMC

Major Duncan was a driving force behind the award-winning *Destination Unknown*, volume 1, as a visionary and editor but is contributing as an author for volume 2. He is a Marine intelligence officer and an information operations planner currently serving at the 11th Marine Expeditionary Unit. He is inspired by the continued pursuit of education and an innovative spirit. He cofounded Ender’s Galley as a grassroots innovation platform rooted in the professional military education ecosystem.

Illustrator: Staff Sergeant Shannon Winslow, USMC

Staff Sergeant Winslow is a returning illustrator from the award-winning *Destination Unknown*, volume 1. She grew up in New Jersey, where she and her friends enjoyed many adventures of collaborative storytelling. She attended Wisconsin Lutheran College in Milwaukee, where she double majored in art and European history and began her love affair with martial arts. During her time in college, she also became a scholar in the Chicago Swordplay Guild. She then joined the Marine Corps, where she had real adventures, some terrible and some awesome, including meeting her husband on the rifle range. She now lives in California with her husband and two cats and enjoys doing Brazilian jiu-jitsu in the evenings and sword fighting on the weekends.

“Urquhart Redux: A Story from the AugoStrat Corps Saga”

Authors: Major General Mick Ryan and Therese Keane, PhD

Major General Ryan is an Australian Army officer. A graduate of Johns Hopkins University in Baltimore, Maryland, and the Marine Corps University’s Command and Staff College and School of Advanced Warfare, he is a passionate advocate of professional education and lifelong learning.

Therese Keane, PhD, is a scientist with the Defence Science and Technology Group in Canberra, Australia. With an original background in mathematics, she is now undertaking additional post-graduate studies at the John Curtin School of Medical Research at Australian National University in Canberra in virology/immunology. She is passionate about science, exploration, and discovery.

Illustrators: Midshipman Alvin Do and Officer Cadet Natasha Silver

Midshipman Alvin Do is a Royal Australian Navy Officer, currently studying for a BA in politics and history at the Australian Defence Force Academy in Canberra. He is passionate about military history and digital art.

Officer Cadet Natasha Silver is a Royal Australian Air Force trainee in her second year at the Australian Defence Force Academy. While completing a bachelor of business, she engages in opportunities to express creativity and innovation.

“Rock the Boat, Sink the Ship”

Author: Aviation Electronics Technician First Class Richard Walsh, USN

Walsh is a new author for *Destination Unknown*. He is a native of Columbia Falls, Montana, and he loves backpacking and skiing. While his rating is avionics technician, he is a blackbelt in Lean Six Sigma and is heavily involved in the innovation space within the Department of Defense (DOD). He was cocreator of the Illuminate Thinkshop course as well as winner of the Naval Aviation Enterprise Innovator of the Year Award. He was the first enlisted member in the Navy to be in the Naval Innovation Advisory Council as well as the first enlisted member in DOD to be selected for the Joint Artificial Intelligence Center. He is also a Johnny Mac Fellow.

Illustrator: Corporal Jerrod K. Moore, USMC

Corporal Moore is a returning illustrator from *Destination Unknown*, volume 1. He is originally from Vero Beach, Florida, and his infatuation with anime and manga inspired him to tell stories and draw since childhood. He is a combat photographer in the Marine Corps and intends to further his education in English literature, with a chemistry minor, at Florida State University in Tallahassee. As a photographer, he is drawn to the idea of capturing moments in time and works to leverage his photography skills into a greater knowledge of art.

Illustrator: Gunnery Sergeant Daniel K. Brown, USMC

Gunnery Sergeant Brown is an illustrator and colorist for the story “Rock the Boat, Sink the Ship.” His love for drawings and photographs led him to this profession. As an avid comic book collector, this was a great opportunity to tap into his combat illustrator roots and to give back to the community. This is the first time he worked on the *Destination Unknown* project. He is currently stationed at Marine Corps Information Operations Center, Quantico, Virginia, as a communication strategy and operations chief.

Colorist: Sergeant Trentin Dunn, USMC

Sergeant Dunn is a colorist for the story “Rock the Boat, Sink the Ship” and serves as a combat graphics specialist for the Marine Corps Information Operations Center. He is originally from Fayetteville, North Carolina, and enlisted in the Marine Corps in January 2020. This is his first time participating in the creation of a graphic novel.

Colorist: Corporal Garrett Jones, USMC

Corporal Jones is a colorist for the story “Rock the Boat, Sink the Ship” and serves as a combat graphics specialist for the Marine Corps Information Operations Center. He is originally from Warner Robins, Georgia, and enlisted in the Marine Corps at 17 years of age. He is currently going to college for computer science and software development and hopes to integrate both school knowledge and his work experience to form an ideal career path.

“Ransom”

Author: Technical Sergeant Daniel Hulter, USAF

Technical Sergeant Hulter is an active duty Air Force noncommissioned officer with extensive personal and professional involvement in Air Force and defense innovation. He recently began work as a unit technical director after serving as noncommissioned officer in charge of the 70th Intelligence, Surveillance, and Reconnaissance Wing’s Innovation Office. He also serves as the Hawaii lead for the nonprofit Defense Entrepreneurs Forum. Hulter has written several articles on the subject of innovation with published works in the *Strategy Bridge* and the Air Force professional journal *Over the Horizon*. He primarily writes on LinkedIn, Medium, and his occasional blog, *Sounding Slightly Off*.

Illustrator: Staff Sergeant Macey Valentine, USAF

Staff Sergeant Valentine is a full-time mom, art student, and airman. Being a military brat all her life, she does not call any one location “home,” but currently resides in Silver Spring, Maryland. Her interests span a wide variety of things, including crocheting, painting, drawing, playing video games, and gardening; but her true passion lies in animation. She is currently enrolled in the Academy of Art University based in San Francisco, California, and hopes to one day work as an animator for Walt Disney Animation Studios. Currently, she is a signals analyst and lead for the Division of Signals Analysis Collection Management team at Fort Meade, Maryland.

“Still First to Fight”

Author: Major Adam Yang, USMC

Major Yang is a returning author and original creator of *Destination Unknown*. He is a native of Brooklyn, New York, and his interest in science fiction and fantasy has extended from his childhood to the present. With a background in communications and information operations, he currently serves as a doctoral fellow for the Commandant of the Marine Corps' Doctor of Philosophy Strategist Program in the School of International Service at American University in Washington, DC. As an advocate for grassroots innovation within the Service, he cofounded the #Ender'sGalley innovation community at Marine Corps University.

Illustrator: Staff Sergeant William Bradley, USMC

Staff Sergeant Bradley is a returning illustrator and author from the award-winning *Destination Unknown*, volume 1. He is one of three brothers from Alanson, Michigan, who have joined the Marine Corps, all of whom are or were grunts. He was fascinated by superheroes and Marines as a child and had murals on his bedroom walls to prove it. Bradley is currently the training chief for I Marine Expeditionary Force Support Battalion at Camp Pendleton, California. Due to previous work done for the Marine Corps, he was directly referred by Master Sergeant Jonathan Harris of the Staff Noncommissioned Officer Academy in Quantico, Virginia, to participate in the *Destination Unknown* project.

Destination Unknown **Staff**

Editor: Major Ian Brown, USMC

Major Brown is a Sikorsky CH-53E Super Stallion helicopter pilot by trade and a lifelong sci-fi geek by choice. Born and raised in Toronto, Canada, he is an adoptive New Englander #gopats. He is old enough to remember M.A.S.K. (an acronym for Mobile Armored Strike Kommand) on television and that Han Solo shot first. He currently serves as the operations officer for the Brute Krulak Center for Innovation and Creativity.

Editor: Major Sara Wood, USMC

Major Wood returns as an editor, having conquered as an author in the award-winning *Destination Unknown*, volume 1. She hails from Galesburg, Illinois. Her favorite comic book series is *The Sand-*

man by Neil Gaiman and her favorite science fiction television show is *Battlestar Galactica*. She is an intelligence officer and information officer in the Marine Corps Reserves and is currently serving as a signature management analyst at the Marine Corps Information Operations Center. She is a graduate of the Marine Corps Expeditionary Warfare School and Command and Staff College and previously was the academics officer at the Brute Krulak Center for Innovation and Creativity, Marine Corps University.

Editor: Major Tyler Quinn, USMC

Major Quinn is a returning editor on the staff of *Destination Unknown*, volume 1. He claims North Carolina as home, but he was born, raised, and trapped, adventuring all over the world as a military kid. He is the eldest of three in a Marine family. He has always had an interest in comics, movies, and graphic novels. As a self-proclaimed “elder millennial,” he grew up on Saturday cartoons such as *Teenage Mutant Ninja Turtles* and *G.I. Joe: A Real American Hero*, Marvel trading cards, and *Calvin and Hobbes* comic strips. Quinn is a space-trained military police officer and currently serves in III Marine Expeditionary Force on Okinawa, Japan. He is a cofounder of Ender’s Galley, a community of interest focused on the information environment.

Editor: Dr. Anthony Pollman, USMC (Ret)

Dr. Pollman joined the *Destination Unknown* editorial team for volume 2. He is a native of Oconee, Illinois. Growing up deep in the cornfield, he didn’t have much access to comics. But he did enjoy reading his older brother’s *MAD Magazine* and the Sunday funnies (particularly, *The Far Side*), as well as watching Saturday morning cartoons. He recently read Maximilian Uriarte’s graphic novels *White Donkey* and *Battle Born* and was both inspired and intrigued by the fusion of art with deep tactical and operational themes. Dr. Pollman is an assistant professor in the Systems Engineering Department at the Naval Postgraduate School, where he teaches courses in combat systems, weapons, and mathematical modeling. He primarily does research in the energy systems domain, but he has wide-ranging, interdisciplinary research interests and maintains meaningful relationships with the Marine Corps. Dr. Pollman is a retired Marine and a veteran of the conflicts in Iraq and Afghanistan.

Writing Mentor: Mark Sable

Sable is a writer for comics, film, and television, best known for such creator-owned comics as Image Comics’ *Graveyard of Empires* and Boom! Studios’ *Unthinkable*. Sable is also a writing pro-

fessor. After teaching for five years at the Writers Boot Camp in Santa Monica, California, in 2013, he became one of the founding faculty members of the School of Visual Arts master's in visual narrative program, where he currently teaches Creative Script and Digital Storytelling (the latter with comics artist Jim Rugg). Two new graphic novels, *The Dark* and *Dracula: Son of the Dragons* are due to be published by ComiXology Originals in the fall of 2019, and his series *Godkillers* is scheduled for an early 2020 release from AfterShock Comics.

Writing Mentor: August Cole

Cole is an author exploring the future of conflict through fiction and other forms of FICINT storytelling. His talks, short stories, and workshops have taken him from speaking at the Nobel Institute in Oslo, Norway, to presenting at SXSW Interactive in Austin, Texas, to tackling the “Dirty Name” obstacle at Fort Benning, Georgia. With Peter W. Singer, he is the coauthor of the best seller *Ghost Fleet: A Novel of the Next World War* (2015) and *Burn In: A Novel of the Real Robotic Revolution* (2020). He also works on creative foresight at SparkCognition, an AI company, and is a nonresident senior fellow at the Brent Scowcroft Center for Strategy and Security at the Atlantic Council.

Illustration Mentor: Gabriel Pons

Pons returns as an illustration mentor from *Destination Unknown*, volume 1. Pons loves art, design, comics, and skateboarding and since the age of 13 has been pushing his abilities in each of those fields. He and his wife, Scarlett, own PONSHOP Studio and Gallery—a multifaceted storefront in Fredericksburg, Virginia. They operate their business with the belief that creativity fosters a stronger community, and share their passion by teaching art classes ranging from skateboard and graphic novel design to street art and graffiti. Pons works with clients in a range of mediums, from custom paintings to site-specific murals and installations.

Operations: Major Jared Cooper, USMC

Major Cooper is an O802 artillery officer with a love of the outdoors, powerlifting, and anything sci-fi and fantasy. He joined the *Destination Unknown* team this year and is currently serving as the outreach coordination officer at the Brute Krulak Center for Innovation and Creativity, Marine Corps University. He is a longtime fan of the *Witcher* novels and videogames and is excited to support a grassroots movement to further hone the Marine Corps' competitive and cognitive edge.

Glossary

ANI—Active neural implant

AO—Area of operations

AugoStrats—Humans with cognitive implants that allowed them to wirelessly link their brains to various databases and other AugoStrats

CO—Commanding officer

COGLINK—A hive mind or cognitive link that connects AugoStrats and databases that allows them to outthink any nonaugmented human-AI teams

Culex—Several species of mosquitoes that may transmit diseases between animals and humans

DIVO—Division officer

EM—Electromagnetic

EMP—Electromagnetic pulse

E-3—Enlisted level 3

ET1—Electronics technician 1, Navy enlisted rating (E-6)

ET2—Electronics technician 2, Navy enlisted rating (E-5)

ET3—Electronics technician 3, Navy enlisted rating (E-4)

ETCS—Electronics technician senior chief, Navy enlisted rating (E-8)

Gen up—Slang for “to generate”

Great Deluge—A great flood, usually told in the form of myths

Indoc—Slang for “to indoctrinate”

Intercept—A target on a radar or sonar screen

Neuro—Something to the human nervous system

Neuroimplant—An artificial implant connected to an individual’s brain or nervous system

Shipwreck—Slang for a suboptimal member of the naval service

WESTPAC—Western Pacific

XO—Executive officer

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