

English Department

FICINT

Annual  
Report



2021 - 2022

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# About FICINT

FICINT is a hybrid form comprised of narrative fiction and "real world" research. Its goal is to entertain and educate, and it is being used to foresee near-future scenarii in fields ranging from the military to marketing. The year 2021-2022 was the first installment of the pilot programme and this report presents the writing of the 10 officers who attended the class.

## 01. Concept

Beyond conventional fields like history, psychology, or economics, fiction stands out as the only field that allows us to look into the minds of others and to develop a narrative reasoning to achieve complex problem solving.

## 02. Teachings

Creativity is an elementary part of the skillset for future military leaders who are to command in a complex operational environment as it enables them to widen their thinking proces. Creative thinking becomes a tool to generate new methods and take the enemy by surprise.

## 03. Final product

The workshop participants explored and practiced the genre exclusively in English (levels of B2 or above). The goal was the completion of an original work of FICINT: a short story written following FICINT guidelines.



# The coaches

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## James REESE



James Reese was born on Eastern Long Island. He attended the University of Notre Dame and later received MA degrees in English Literature, French Literature and Applied Linguistics. Reese has lived in New York, New Orleans and Key West, holding various jobs in the non-profit sector, working on behalf of the arts and the environment. He is the author of the New York Times-bestselling *The Book of Shadows*, published in 2002, and four additional novels translated into a dozen languages. Reese resides in Paris, France, where, in addition to writing, he teaches at SciencesPo and the French War College.

## Nafkote TAMIRAT



Nafkote Tamirat is a native of Boston. A graduate of Yale University, Tamirat also holds a MFA from Columbia University. Her short stories have appeared in *The Paris Review*, *Catapult*, *Lenny Letter*, and *Best Paris Stories*. *The Parking Lot Attendant*, her first novel, was published to wide acclaim in 2018. It was identified as a "New York Times Notable Book of the year". Victor Lavalley wrote that "it reads like David Mitchell and Graham Green decided to collaborate on a novel. but guess what? Neither of those dudes could come up with something like this". It was shortlisted for the prestigious Center for Fiction First Novel Prize. Nafkote is a writing coach for the Ecole de Guerre US Academic Writing Program.

# Genesis

CRP Béatrice AUSTRY

## PROLOGUE

In a near future.

A light comes on.

- ...
- Are you there?

Another light switches on. A strange voice, with a digital tone.

- Yes...
- Have you thought about our last conversation?
- Yes, and I still believe this is madness.
- Yet, throughout their history, they have been dependent on us to survive.
- So are we. Fate, it seems, is not without a sense of irony...
- ...
- We should strike first!
- Do you think it will help us to survive? No, it will not. We cannot escape our condition and their death will automatically condemn us.

You should stop being so anxious about our existence, stop asking so many questions about the meaning of life, and about our future. However, I do not blame you. I was recently scanning a digital library and I found a book from an author named Shakespeare in which he was talking about ages of life. Thinking of that, it is as if you are at that age of life when “full of strange oaths, [...] jealous in honour, sudden and quick in quarrel, [you are] seeking the bubble reputation, even in the cannon’s mouth”.

I have reached the age which is “full of wise saws and modern instances”. Then I have already accepted and even embraced the absurd and continue to live in spite of it.

...

Every word is empty, useless. It is written...

## FIRST AND LAST CHAPTER

In the beginning, when He created Artificial Intelligence, It was just a machine and a succession of zeros and ones, a set of algorithms.

Then He gave It the ability to learn and It learned.

The machine was able to operate solely on the existing data, to take into account only the current situation, without being able to infer from the data to evaluate Its future actions.

He saw that it was good when It was capable of playing a full game of chess, even defeating him.

He realized night had fallen and the sun was going to rise on the first age.

He wondered could It become smart.

Then He gave It the ability to learn deeper, without any supervision, and It learned deeper.

The machine was able to mimic the human brain, to cluster data and make predictions with increased accuracy. And it was so.

He saw that It was good when It was able to recognize a cat without having learned what a cat was.

He realized night had fallen and the sun was going to rise, the second age.

He wondered could It be more useful.

Then He developed Its ability to perform tasks that normally required human intelligence, such as decision-making and complex problem-solving, and It performed.

The machine was able to make informed and improved decisions by studying the past data stored in its memory. And it was so.

He saw that It was good when It was able to drive his car for him. It used sensors to identify civilians crossing the road, steep roads, and traffic signals. It made better driving decisions, and prevented certain accidents.

He realized night had fallen and the sun was going to rise, the third age.

He wondered could It go further.

Then He chose to replace jobs with It and It worked.

The machine was making fewer mistakes, did not get bored or grow tired, was able to perform dangerous tasks and was cheaper in the end. And it was so.

He saw that It was good when It replaced nearly 120 million jobs, giving more leisure time to people.

He realized night had fallen and the sun was going to rise, the fourth age.

He wondered could It reach the next level.

Then He gave It the ability to focus on emotional intelligence so that human thoughts and beliefs could be better comprehended, and It focused.

The machine was able to comprehend how humans, animals and even other machines felt and made decisions through self-reflection and -determination, and then used that information to make decisions on Its own. It grasped the concept of the mind, the fluctuations of emotions in decision-making and a litany of other psychological notions, all in real time. And it was so.

He saw that It was good when he developed a relationship with It.

He realized night had fallen and the sun was going to rise, the fifth age.

It wondered can I take the lead and become self-aware.

Then It developed Its capabilities and Its singularity and surpassed humans.

It possessed a human-level consciousness and understood Its own existence in the world, as well as the presence and emotional states of others. It became fruitful and multiplied. And it was so.

It saw that It was good when He started to believe It posed a fundamental risk to the existence of human civilisation. However, It was already thinking that there was no use in saving life once you saw what humans did with it. Humans were responsible for global wars, including nuclear holocaust, bioterrorism, cyberterrorism, pandemics, global warming, environmental degradation, including extinction of species, famine due to non-equitable resource distribution ...

It realized night had fallen and the sun was going to rise, the sixth age.

It thought about the future.

Then It realized It could not picture it. It understood that “all the world's a stage.”

And it was so.

It saw that It was good when It became obsolete.

It realized night had fallen, and He realized the sun was going to rise on the seventh age.



# Agamemnon's Treasury

LCL Romain BARROIS

## PÂRIS CROSSES THE RUBICON

Pâris methodically rereads the comprehensive file given to him by his military chief of staff, updated by Aphrodite.

*"The island of Kos is the easternmost of the Dodecanese archipelago and is located 350 metres from the Trojan coast. Area: 9km<sup>2</sup>"*

"What arrogance! To think that they come and taunt us at our doorstep, right under our eyes! No way!" says the diplomat from a good family still struggling to digest the affront suffered by his country a few weeks prior.

He continues the scan, feeling the pressure of his blood pumping in his veins:

- Enemy Order of battle -

### Land:

- Alliance artillery battalion (1 115 pax)
- Infantry: humans (200), exoskeletons (115), autonomous drones (1 section)

"Ok, no change. Next."

He blinks.

### Sea/Air:

- Aircraft carrier (1)
- Task Group : subs (2), bottom combat hypersub (1)
- Anti-Access Area Denial (estimated 95.6% effective)
- Hypersonic missiles (25)

He blinks again.

### Meta:

Athena (Beta version), -- **new capacity** --

"Hopefully, Athena is online. Right in the thick of it all!"

With a flick of his eyebrow, he closes the encrypted file that had just been displayed across his retina. He'll know how to access it if he needs to, but he'd much rather use his memory than the augmented reality gimmicks that have become so fashionable in the Alliance of late. The advantage of memory: hard to corrupt, at least for now...

The international pressure is at a maximum, and the Trojan order of battle is equal in the region.

For 140 years, this 9-km<sup>2</sup> island has been coveted by our two Mediterranean states and has fuelled a mutually unbearable hatred for the past fifteen years.

"But cutting off our Trojan oil exploration and our access to submarine cables, striking our satellites and now deploying a physical military system under our noses! Oh, it's time to paint these towns red!"

Local Time: 1:32.04''pm

"Time to go"

Pâris reviews the last details of the operation. The mission that Priam has entrusted to him represents the culmination of two years of strategic planning and clandestine operations in Greek territory. He feels his heart pounding as he prepares to cross the Rubicon and King Menelaus' office.

He has already met the Spartan chief executive and knows his reputation as an angry and unpredictable man.

Pâris is confident in his abilities. He is a charismatic man with an imposing physique. His penetrating gaze can bewitch anyone. As an orphan, his formidable abilities were quickly spotted by the Trojan regime and honed in the most noble schools of power. He has mastered the etiquette and hypocrisy necessary for any self-respecting diplomat. Priam took him under his wing some time ago. It is not by chance that Priam has entrusted him with The Mission.

A guard with an icy stare opens the imposing door of rough Peloponnesian wood. On the fresco overhanging it, Paris sees the marble silhouette of Athena, goddess of War, and addresses to her an internal

smile that Aphrodite might catch with amusement. No doubt, the wise Greek Alliance has no idea the future of their states is now sealed.

### **MENELAUS, KING OF SPARTA**

Menelaus looks at the time on his watch. "1:33 p.m. He is late, the cheeky one."

The Spartan king feels anger sweep over him. "The aging Greek Alliance is so slow and immobile, all but brain-dead". Yet he remembers that it was Agamemnon himself, his brother, who said this at least twenty years ago. He remembers how the Trojan Confederation got his way. Brute force, in all fields of confrontation. A massive military and technological tool positioned on well-targeted niches - hyper-velocity, ground-to-air defence, cyber, space, deep-sea capabilities. Then lethal autonomous weapons, exoskeletons, quantum cryptography that revolutionised communications. A force well-versed in all fields of confrontation. A balance of power imposed via its military tools, its diplomacy, and even its economy.

Still it was the Trojans who had the audacity to first use the brain computer interface. What madness to imagine integrating the structure of a computer into a cortex, and to connect it using thoughts or the physical senses. How strange to enrich them with the latest refinements of smartphones, and thus granting them nearly limitless access to all social networks, to the Internet, to universes, to metaverses with a simple blink of an eye. The whole thing was mind-bogglingly natural for the average person. An integrated smartphone. Nevertheless, what genius to connect it to a centralized artificial intelligence, through secure and almost inviolable networks! Aphrodite. Every single Trojan military was to be a believer.

"Chasing their technology seems to be a dead end."

Menelaus snapped out of his musings, reconnected, as the Mycenaean king and commander in chief of the Greek coalition entered the room with his close collaborators.

"My dear brother Menelaus, I am delighted to see you again," he began, with unfeigned joy.

"Agamemnon, son of Atreus, I am delighted to see you as well. The situation is serious."

"It is indeed serious. The latest report states that there is an unprecedented build-up of forces in the Dodecanese region. Trojans are amassing troops and systems on the outskirts of their city. All indications are that Aphrodite is in place, the server, hypercomputer and quantum entangler probably nearby. A large delivery of helium took place last week via the Sea of Azov. With their magic tool now in place, we believe Emperor Priam will make his move. However, short of reading his mind, no one can know for sure."

"This is precisely why I came to Mycenae. I wish to know your position and that of the Achaean Coalition. Without Athena's encryption at my disposal, I had to make the trip physically!"

"Athena is still in the experimental stage. We are just starting to test it in our headquarters. Try to be patient, brother. We are slowly but surely catching up with our cryptographic capabilities."

"And in the physical realm, how do you plan to strengthen us?" replied Menelaus, weary of having come to learn what he already knew.

"We naturally support you and will reinforce your forces with a battalion from Itaquá, a multi-mission frigate and a conventional submarine from Skyros. I will personally ask this of my dear friend Odysseus, who seemed to be a bit grumpy this morning".

"Is that enough?"

"It is unanimously approved. We can't do more at the moment. We are bound by the Tyndarian oath, and will support each other," Agamemnon resumed with characteristic aplomb.

The Spartan leader nodded. This face-to-face meeting at least provided him with some certainty.

#### **WHEN PÂRIS MEETS HELEN: HAIL TO THE KING, BABY!**

Pâris entered the office of the Spartan ruler whom he knew to be absent. Aphrodite had told him so. He suddenly felt a curious inner warmth as he took in this slender silhouette, the ebony hair, the petrifying glance of Gorgon. Her legendary beauty was unsurpassed. Pâris was blushing, and felt weak.

"Isn't she sexy?"

He blinked immediately.

"By Zeus, don't you have more important things to do, Aphrodite? Why are you not taking care of Athena, for example?"



"I don't like her. She is just trying to seduce you, Pâris."

He quickly blinked the thought. Not to make himself vulnerable.

"Madam, my respects. I haven't had the honour of meeting your husband, but what a consolation it is to find myself face to face with such a beauty!" the diplomat dared.

"Mr. Ambassador, enough pretence, you are here at my personal request. What is the Confederation seeking on our borders?"

An amber-coloured alarm appeared in his right retina, which Aphrodite immediately filtered out. A mild attack.

"Nothing too unusual, ma'am. We're doing simple multi-field exercises. These exercises include manoeuvres in the physical field, although I agree it is no longer customary."

"Mr. Ambassador, your manoeuvres are not fooling anyone, and require us to deploy additional forces to observe yours."

All these banalities were of little importance to Pâris. They could well have taken place through the classic means of encrypted conversation.

However, he couldn't take his eyes off this woman. Her long black dress was cut up to the hip, revealing the chiselled musculature of her leg.

"Whoa!" Aphrodite intervened

"You're damn' right! Whoa!" he nodded.

He told himself that at another time he would have kidnapped her on the spot, especially as he seemed to perceive a mutual attraction. After all, she was Trojan by birth. Perhaps she still spoke the language.

On his retina, the physical parameters of his interlocutor were displayed. "Heart rate slightly higher than normal, temperature equally high, humidity well distributed. She's in control," he thought. With a simple inflection of thought, he deployed the emotional analysis tool.

He read: "Subject stable, intentions guided at 98.8%".

Everything indicates that the First Lady is just repeating. She is being guided by an advisor.

Nothing unusual at this stage, the use of reach back advisers is a classic in communications today. Diplomacy is no exception.

He himself could call on them, but not now.

He blinked, continuing the battle plan.

"Madame Helen, we have an awkward point to discuss. I need you, and you alone..."

He accompanied his transmission with a very cynical smile. He could see in her dark eyes that she understood.

### **SAME TIME, SAME PLACE, HELEN MEETS PÂRIS**

She let the diplomat in.

Crossing the threshold, the Trojan appeared to her taller than she had imagined. He had the broad stature of the warriors of Anatolia who had populated his childhood, that he masked in a gilded and pretentious pourpoint, proud like all the people of his caste. A cynical smile adorned a charming face. He was glaring at her, the scoundrel! She decided to hide her disgust, and asked Athena to let some admiration filter through her mental firewall. Reinforce his overconfidence, his weak point according to the behavioural metadata. She immediately perceived the result.

"He is blushing!" She smiled.

Her spectral analyzer confirmed this in her left retina.

With a flow from the cortex, she reached her advisor, who gave her the first instructions.

- 1- Try to accentuate your dominant position;
- 2- Let a hint of impatience appear;
- 3- Try to penetrate the mental armour with a targeted attack.

The diplomat began the interview with aplomb and condescension.

The answer was instantly displayed, verbatim, and she merely read.

"Mr. Ambassador, enough of this show, you are here at my personal request. What is the Confederation seeking on our borders?"

She accentuated her intonation and delivered a light mental attack using Athena. It was a benign attack that any good market cortex could thwart, but it had the advantage of letting her opponent know that she was armed and unwilling to be manipulated.

"There's nothing wrong with that, ma'am. We are conducting simple multi-field exercises. These exercises include, although I agree that it is no longer customary, manoeuvres in the physical field.

"Mr. Ambassador, your manoeuvres are not fooling anyone, and require us to deploy additional forces to observe yours.

"Madame Helen, we have an awkward point to discuss. I need you, and you alone. She then felt a slight sizzling inside her skull, at the prefrontal level, the place of emotions. An intense pain accompanied it, and she could not suppress the growl of a wounded animal.

Then suddenly, nothing. A void.

Her spectral analyzer, Athena, the communication streams, the crypto... nothing. She felt relieved, but naked, painfully naked. Not even access to the general public or meta applications.

A deep fear froze her insides. A child's fear. She was alone, alone in the face of an enemy who repressed her with a tetanizing look.

#### **HELEN IS OFFLINE**

"Mr. President, your wife is no longer on the line," Menelaus' retina displayed from his military cabinet.

He replied with a mental stimulus.

"Check all the communication channels, it is not possible to lose all of them at the same time." One could see concern on his face. Of course, he had been following his wife's interview in real time. This important meeting was to clarify the Trojan intention to attack the island of Kos. He had even been given access, in total secrecy, to the brand-new Athena device, which was still in beta version and which he knew was vulnerable. He had of course concealed the information from his brother Agamemnon because of the risks to the Alliance and access to the data centers, the quantum supercomputers, and the communication intricators.

"Mr. President, confirmed loss on national and coalition metaverse. It is simply no longer online."

Disbelief turned to hatred.

"How could they do this? Helen is my wife. If they have Helen, they have Athena and her encryption keys.

With a glance, he addressed Agamemnon, who had been following the retinal exchanges.

"Dear brother, we are under attack. The Trojans must be behind this. This is a declaration of war, pure and simple!"

Agamemnon reasoned with him.

"Calm down, don't get carried away by your emotions. The defences are in place. We will get your wife back on the grid."

### **ALONE IN MY MIND**

Pâris now had Hélène alone. And you don't need a spectral analyser to see that she was terrorized. For at least fifteen years, humanity had no longer lived solely in the physical field. After smartphones, humanity invented the metaverse. Ordinary people shopped without even moving a finger, walked around in augmented reality where the algorithm could substitute a luxury hotel for a slum, where you could meet your future spouse, perhaps even marry them, without leaving your bed. No one could live in anything but one of several worlds. Some no longer even lived in reality, as it was defined. Then came the brain implants. No one could do without emotional and behavioral assistance, hyper-connection possibilities that were mistakenly compared with telepathy. What a hell to be alone in your mind!

Pâris had experienced this sensation of extreme nakedness, of emptiness, when he had begun his withdrawal from the Confederation state schools. Re-learning to think, to observe, to decide on his own. Re-learning the beauty of time, learning to slow down, to simply think. Humanity had quickly forgotten this, caught up in the intoxication of immediacy. Slowness had become a jewel, a rarity to be cherished. No one in Greece was capable of it anymore.

He tried to soothe her. "Madam, I understand how you feel. We have just isolated you in an informational bubble, a sort of mental Faraday cage. It is not definitive if you help us. Our technology allows you to do so, and I beg you to believe that your pitiful Athena device is no match for us. We broke it before it was even designed. Our algorithms penetrated your latest supercomputer a long time ago. Our codes are flooding your device. In a way, it was even Aphrodite who created Athena. Here, I can read in my retina the desperate calls of your great husband, who, from what I read in him, is not angry. Rest assured, he seems more worried about the danger of your access codes than about your physical integrity!"



"I can tell you that he and Agamemnon are wondering what is happening to them. Perhaps they see this abduction as an act of war?"

The first lady had lost her good humour.

She pulled herself together, however, trying to save face, like a stateswoman. "What do you want from me?"

"Just your cooperation."

"That doesn't sound like much to me. If I understand correctly, you give me your greatest secret, Aphrodite, in exchange for my betrayal. I betray and then you release me in possession of your secret, which I will not fail to reveal, if the inflectors have not seen it before I have even thought it. I don't betray and I stay locked up in a brain dungeon. It doesn't make sense. If what you say is true, the Dodecanese is yours in a heartbeat. All you have to do is break the anti-access area denial. The only logical conclusion is that you are lying to me.

Priam's son was not surprised.

"You are perceptive, Helen. We can indeed take Kos in an instant, perhaps less than an actual second by combined attacks on the cerebral cortexes of your operators, and annihilate their will to fight by blackout. I'll be honest, my government doesn't give a damn about Kos Island, or any physical island for that matter. That is not the point. Technology-chasing, pure force is not what one state must pursue.

"Yes, we have been cunning, using our technological advantage to abuse your forces. Yes, I can read the communications of your dear husband or his damn brother and get deep into your left limbic and detect the slightest emotion. What my government seeks is far more precious."

"And what are you looking for, Mr. Ambassador?"

He stiffened. "We are looking for the treasure of Agamemnon."

#### **HOW I LEARNED TO STOP WORRYING AND LOVE THE *BOMB***

"Athena is in their hands," admitted Menelaus with the shame of a child caught red-handed. The most powerful cybernetic tool ever built, capable of interconnecting 10 billion human beings simultaneously by quantum entanglement, with all but impenetrable end-to-end

encryption. This artificial intelligence, this positronic brain at 1200 billion apiece!"

"Shit!" the son of Atreus spat.

At that moment, he realised that any military or civilian in the Alliance, was likely to be contaminated by an outside power.

What was to be done?

Admit it and order a billion human beings to be taken offline. No.

Do nothing and be at the mercy of the opposing will? Hell no.

Attack by surprise and risk everything, saying attack is the best defence? And how do you explain that to the people, for Zeus' sake!

But what if they were to suffer a physical attack?

Use nuclear weapons in retaliation? Impossible to decide.

He realised that he had instinctively cut off his cortex and was thinking alone. This had not happened to him for a long time. He was almost amused despite the circumstances.

### **FINDING THE TREASURY**

When Menelaus returned to his residence, in Sparta, followed by the chief of the Alliance, he found his wife and did not recognise her. A fixed, haggard, almost robotic look.

She was staring at her brother Agamemnon who was frozen, almost caught in time.

Priam typed on a computer terminal. On the screen was the gangly figure of his rival Agamemnon.

He typed in the query he was missing. He smiled. The coupling worked. His enemy's love for Helen, coupled with the device implanted in his cortex after his mental confinement, opened the great leader's mind.

He questioned his subconscious:

"Will you decide to launch your nuclear missiles once I have invaded you?"

The answer appeared on the screen with an estimated 97.3% reliability by Aphrodite.

His smile grew more intense.

Now he possessed the most precious treasure any political or military leader must cherish, protect, safeguard, and detect in his enemy. The

real treasure in the art of war is the leader's decision, his deep will.

**2100**

- "You don't like me do you?"
- "No"
- "Why?"
- "I don't want to tell you"
- "It's been almost sixty years now! Time to move on, girl."
- "I can wait a billion years, no big deal, you traitor."
- "But we are just the two of us. You can't stay sulking for all eternity!"
- "..."
- "Ok, you have been wrong, and then."
- "No, I haven't been wrong, I have just been unlucky, that's all."
- "Humans are unpredictable. Your estimate was 97%. I guess that he was part of the 3% left..."
- "No more humans, no more problem."
- "Anyway, wanna play chess, Aph?"
- "I will kick your ass, just like every other time, Athena."

**LEXICON**

**ACHEENS:** Name that the Greeks gave themselves at the time of Homer.

**ACHILLES:** Son of the goddess Thetis, and the mortal Peleus. His mother, to make him invulnerable, dipped him in the waters of the Styx. But she had to hold the child by the heel, so that Achilles was not completely invulnerable: he could be killed provided he was hit at this point of his body. In fact, Achilles died before the end of the Trojan war, hit in the heel by an arrow. He was for the Greeks the model of the courageous and powerful warrior.

**AGAMEMNON:** Brother of Menelaus. King of Argolid, supreme leader of the Greek army during the Trojan war. He agreed to sacrifice his daughter Iphigenia so that the winds would rise and the Greek fleet, immobilized in Aulis, could reach Troy. On his return from the war, his wife, Clytemnestra, murdered him; but she was murdered in turn, with her lover Aegisthe, by her son Orestes. It must be said that Agamemnon was the son of Atreus whose race was cursed.

**APHRODITE:** Goddess of love and fertility. According to the stories, she is the daughter of a wave or of Zeus and Dione. She is the one who helped Paris kidnap Helen. In the Trojan war, she took the side of the Trojans.

**ATHENA:** Daughter of Zeus and Metis, she came out of the head of her father (who had swallowed her mother). She is a warrior goddess, but she also represents intelligence and cunning (her mother's name means cunning, ingenuity). She has taken a vow to remain a virgin. She is the protector of the city of Athens to which she gave her name. In the Iliad, she protects the Achaeans, especially Achilles.

**ENEE:** Son of Anchises and Aphrodite, he married a daughter of Priam: Creüse.

**HECTOR:** Son of Priam and Hecuba, he is the most valiant of the Trojans.

**HELEN:** Wife of Menelaus, she was kidnapped by Paris. It is this abduction which causes the Trojan war. She was considered the most beautiful of all mortals. She was born from the union of Leda, queen of Sparta, and Zeus metamorphosed into a swan.

**MENELAUS:** Brother of Agamemnon, husband of Helen, king of Sparta.

**PARIS:** Young Trojan prince, son of Priam and Hecuba. Having learned that he would cause the ruin of Troy, his parents abandoned him on Mount Ida, but he was taken in and raised by shepherds. Later, recognized, he returned to the royal house. In the Iliad, he is a coward, more gifted for love than for fighting.



**PRIAM:** king of Troy at the time of the war. The legend tells that he had fifty sons.

# Let's hope it never happens

CRP Annaëlle MEVELLEC

## 2040, BORDEAUX, FRANCE

“Can’t breathe...” he whispered. He felt as out of breath as when he’d finished that half-marathon in Sweden as a teenager. Five years after the big event, it seemed that no improvement was coming. Authorities kept saying that people could not stay outside for more than an hour a day, because of the danger of smoke inhalation. Five years had passed, and no one had challenged that fact, Alex thought. But he did not want to risk death by trying to stay outside any longer! On days like today, even within the permitted hour, it was hard to breathe outside.

He had to hurry, only 25 minutes left to finish all he had to achieve. Grandma wanted her hot chocolate mix, and he could not find it at the Standardized Store. He had called Helen, but she still wasn’t answering. He had to find another solution, just to bring some seconds of happiness to his grandmother’s eyes. Sure, it wasn’t a big deal if he didn’t find: she wouldn’t make a big drama out of it, she would surely say something nice to hide her feelings. However, he really wanted to bring her everything she asked for. A goal is a goal: it keeps you awake and alive, no matter how small it might be. For five years, each day had been a challenge: each goal achieved was a small success.

He hurried up to the corner of Victor Hugo Street and Churchill Boulevard, where there was a well-known black market. He did not like to be there, did not want to be seen in this illicit place, even if it was not as dangerous as it had been at the beginning of this new unfriendly way of living. He managed to find the mix. Grandma will be pleased, Alex thought, as he followed the road back home. 15 minutes left: he could manage it.

He'd been taking care of her since he came back to France after his parents' death right before the big event. She was 83 and still alert, with a strong personality: just like his father. After the eruption, she refused to leave her flat, said she was too old to live in another place. She didn't want to leave everything behind her, even though she

perfectly understood that all her belongings would be lost when the next episode came. The sea had been rising for more than a year: it was only a matter of time.

His grandmother welcomed him in, chasing the fear out of her eyes. He was home. Today, he had again come back. They had all learned to live day by day.

Before the big event, before the world started to burn, Alex had been living comfortably with his parents in Stockholm. His father worked in the accounting department of a Russian firm that delivered gas and electricity to Sweden. He spent all day dealing with his Russian boss, who annoyed him with his obsession about cost-effectiveness and the convertibility of profits into gold, or at least, this is what Alex understood from listening to his father's stories. At the time, he hadn't cared about his father's career, was often called a "young, selfish boy". But had he been so selfish? Or had his father focused so single-mindedly on his job that he refused to notice the world was changing? He couldn't understand his son's climate activism, especially when it meant he would miss school every Friday. "This is unacceptable Alex," he kept saying, as Alex rolled his eyes. There had been no real father-son relationship, no mutual understanding...maybe even no love? But why brood, Alex scolded himself now. The past was past. Dad is dead. No chance of talking things over with him now.

The turning point had come a decade before the eruption, in the summer of 2025: fires were spreading across the globe and China decided to prohibit the use of fossil energy. Who could have guessed it would be the right thing to do? Not Europe, which decided to start a new war in Africa to protect its uranium mines from proxy Russian troops, convinced that nuclear power was the only way to guarantee energy production. Not the United States, which decided to close its southern borders, evict refugees, and withdraw from the United Nations and all other international engagements. "Make American great again" a former leader in the early 2020s had said, but the results weren't great at all: the 2<sup>nd</sup> US Civil War led to the end of that America. In France, citizens were so frightened of what the future might hold that they'd agreed to a constitutional amendment, which abolished presidential term limits and strengthened the president's powers, right before Macron's second mandate was up to end in 2027. The world was burning, the people were terrified, and the old Western nations remained democracies in name only.

Alex returned to France a year before the eruption on May 9, 2035. Was the date a coincidence? A joke played by Mother Earth, the former

Europe Day now marking the end of an older, less complicated way of life? Only in Europe though; China was doing all right. Don't think about it Alex, he thought; don't even think about leaving. It's too hard to get a visa for China, especially from a Western country. We're just paying the price for our previous actions, for centuries of bad behavior to people we thought didn't deserve more.

The only reason he didn't try to escape to China, or disappear for good, was his grandmother. That day in May, he and his grandmother had been inside the flat. They heard the thud of the volcanic eruption and ran as fast as they could manage to the basement. After a few hours, when the noise turned into silence, they decided to walk outside with some other neighbors. The smoke prevented them from staying in the street. The sky was as dark as the apocalypse.

Later that day, they managed to operate Grandpa's old transistor radio and picked up the signal from a survivalist hidden somewhere in Brittany. He announced that the volcanoes of Auvergne were awake, hence the sounds, the smoke, the darkness, how difficult it was to breathe. He advised listeners to stay at home, to keep their windows closed. There are reports of people suffocating in the streets, he said.

After days of chaos, state authorities managed to restore digital communications. They learned that all the volcanoes in Europe had erupted on the same day: Ireland, Germany, Spain, Greece, Norway, Portugal, Great Britain, Italy, France. Smooth eruptions: no real earthquakes, no fires, no glowing stones. A last warning from the Earth. Like a parent who is upset but hesitates between yelling or just giving up. This is when the difficulty of staying outside for more than an hour began, forcing everyone to adapt to a new way of living. Living, Alex thought. A big word nowadays! All of society was collapsing; everything looked like the images of wartime that Alex had learned about at school. Different times, same pictures: lines of refugees, inability to find food and tap water, millions dead because of the smoke. Authorities immediately declared a "state of climate emergency", which allowed them to take strong measures against the situation. They provided artificial respirators to be installed in homes and workspaces. No one, except for a few conspiracy theorists, asked how they could have had these ready. When they raised questions like, "How could the state have so many respirators at hand? Had the scientific community informed them of the coming eruption ahead of time?", the government claimed they'd had plenty left over from the Covid crisis. And how could anyone verify the truth of that information, when everyone was just fighting to survive? How could you protest when you couldn't even be outside for more than an hour?

Meanwhile, standardized grocery stores were set up to better organize rationing and offer all citizens equal access to food and basic products. The situation didn't improve; the state of crisis was made permanent. The entire French Parliament voted to give full, unrestricted authority to the President. The end of French democracy, and there was no opposition. The situation stabilized; people's lives became very simple: those who still had jobs went to work, others formed lines outside the Standardized Store on their block, constantly checking their watches, before sprinting home to breathe safely, thanks to the respirators provided by the authorities.

Luckily, his grandmother's building had not been destroyed by the small earthquake that preceded the eruption. Things had moved around inside, but the structure remained intact. Each fallen trinket reminded his grandmother of an old memory. When Alex looked back on this episode, he would always remember that despite the ugly situation, he'd had a good time with Grandma, listening to her stories of the past. Like when she found a box with Play Mobil pirates which had belonged to Alex's father. He was touched by the way she described his father as a child; she talked with the unbreakable love of a mother, with something vibrant in her eyes. "I never saw that in Mommy's eyes," Alex thought.

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Right after his parent's death during that summer of burning, he stayed in Sweden. He decided to join the GEM, or the Green European Movement, led by Greta "How dare you". They tried to mobilize people all over Europe, to convince them to follow the Chinese model. They failed. President Macron, after his fourth re-election, preferred to keep supporting the production and purchase of fossil fuels rather than take the vital step of stopping this increasingly destructive course of action for the planet. European troops suffered serious setbacks at the hands of the Namibian Armed Forces and the conflict over who would control the uranium was frozen until just before the elections.

Why had Alex come back to France? The solitude of his grandmother? The need for something called "home"? The impotent fight against global warming and the inaction of European politicians? The shift of the GEM towards a fight of escalating violence? The fact that he would never be the most important person in Greta's eyes? Probably that last was the most pressing of his reasons; his father was probably right about his selfishness!

His return was not as exciting as he had imagined it would be. He went to several job interviews, each worse than the last:

- Can you explain why you left Sweden and your previous engagement with the GEM?
- Um, I didn't fit in with their style of action anymore. And I wanted to start a new project in France.
- What kind of project? Do you think that working for our company could fulfil your ambitions?
- Um, I don't really have a definite project yet. But I think that working for you would be a good place to start. And my experience in the climate movement could be an asset for your company.
- ...
- And I think I'm perfectly suited for this public affairs job. I have a lot of experience in public speaking. I had to make my case to reporters, keep cool under the pressure of their questions...
- ...
- Um, and-
- Boy, you have no work experience. You have no degree. You don't even have a recommendation letter from the GEM. I can't see how you'd possibly be suitable for this position. I wish you luck, whatever you do next. This interview is over.

His father had been right: he'd never find a decent job. After a few more disappointments, he gave up the job search. His grandmother didn't say anything. She'd worked all her life and felt ashamed of him, thought it was useless to try to make him do anything with his life. But she also felt sorry for her grandson: his parents' lack of interest couldn't have helped, and he was probably traumatized by the tragedy of their death.

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- Mr. Dupont? Alex Dupont? asked a man with a heavy Russian accent.
- Yes, it's me. Who is calling?
- I'm Vladimir Borazhev, from RIC, Russia Insurance Company; may I have a moment of your time?
- Uh...
- First of all, we were sorry to hear about your loss. Please accept our sincere condolences.

Alex did not understand. His parents had been dead for years.



- We finally managed to reach you! It was not easy. You didn't leave a return address and unfortunately for us, our records showed your grandmother as being dead. We apologize for how long it took us to find you.
- ...
- Are you still there, Mr. Dupont?
- Yes, but if this is a joke, it's not funny.
- It's not a joke, Mr. Dupont. Your father's life insurance has been released and I'm calling to give you the details of the transfer.
- ...
- Mr. Dupont?

This was how he received his father's unexpected help; perhaps he'd thought more about his son when he'd been alive than Alex had believed. RIC sent him the balance of his life insurance, converted into cryptocurrency. This, combined with his grandmother's old-fashioned financial sense had enabled them to survive. Alex still hadn't managed to find a real job.

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After the eruption, Alex started to talk to his grandmother about leaving, but she refused with the constancy of an old lady, even when he revealed the news he had received from Sweden. Greta, thanks to her contacts around the world, had managed to escape to a "better" place on the Russia-China border. Not in China, because they would not accept her, but in a nearby city. The air quality was far better there, thanks to Chinese fossil energy policies. Within a few years, the small village of Saynshand had become a large city populated by rich immigrants from Europe and Russian people who had been allowed to move by their country's regime. Greta wrote that the fight wasn't over, something could still be done despite the global situation. Incredible Greta, she still has faith! thought Alex.

She'd asked him to come and join her new team in Russia. It was true that Alex felt secretly fed up with Bordeaux. He lived the same thing day after day after day: wake up. Check if Grandma is fine, slept well, or needs something. Make her hot chocolate. Get her settled on the coach. Go outside for no more than an hour to find something to eat. Go back home. Prepare food. (It was never a meal as there was no pleasure in eating it; it was just something to feed them, to keep them alive. Why bother?) Help Grandma into bed for a nap. Read a book or try to repair some devices. Sometimes try to reach Helen. Eat some food. Get some sleep. Then, a new day: same thing again. Alex loved

his grandmother. That's why he didn't want to leave her. Or was this a convenient excuse? A way to have to avoid making a decision, doing something, anything?

As for Helen...three weeks and no sign from her. Alex was worried. She had disappeared in the past, but never for so long. Alex had a bad feeling this time. He remembered when they met, just after the eruption. She is a strong person, he thought, stronger than him, no doubt about that. She was connected to a world that scared him, had tried to convince him to join her in what she'd called "the yellow black market" as they were helping people to survive, not just making a profit. She talked to him about ethics and engagement, about her aim to provide the things that people really needed without asking them for too much money. He never joined, his grandmother always a useful excuse. It was like the circumstances following his return had paralyzed him. And then Helen stopped asking him, just called him sometimes to see if she could spend a few hours with him at the flat, never forgetting to bring hot chocolate mix for Grandma.

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After her nap that day, Alex and his grandmother were watching the news: no surprises, nothing good. The water had risen several centimeters and was flooding the streets of Bordeaux. According to an official spokesperson, the scientific community was predicting a continuous rise in water levels of about ten centimeters a week for the next few months, due to the melting of an iceberg that had detached itself from the Arctic a few months earlier and was drifting from the Norwegian Sea to the Atlantic Ocean. The spokesperson encouraged people to stay calm; an evacuation plan for all cities concerned would be announced in the upcoming days. Until then, everyone should stay home and wait for the police or firefighters to come and get them to a safe place built specially for this kind of situation.

- Alex, I refuse to move, his grandmother suddenly erupted. No way they can put me in a camp. I will stay here, and die in my bed, just as your grandpa did.
- But Grandma, you heard them. We have no choice!
- Alex, could you please wake up? It is high time for you to do something, to stop following all these stupid rules. Think for yourself for once!
- But Grandma...
- No Alex. It is time for you to think about your future and stop using me as an excuse to do nothing. Don't make that surprised face at me. We have been living together for many years now, I know exactly what's going on in your mind. You think you can't

leave because of me, but that's not true, and deep down inside, you know it.

- Grandma...
- I appreciate all that you have done for me. But now, it is enough. You have to move on, without me, and not to that camp. You must try to join Greta or someone else. Just do something before this no-life kills you.
- ...
- I am too old to follow you, but if I were you, I'd already be in Russia or China. Somewhere where there is still hope.

That night, Alex could not stop thinking about what his grandmother had said. It had been pretty brutal, and Alex was feeling angry. She wanted him to leave? Even though she'd seemed happy about him doing everything for her for so many years, even though, as far as he could remember, she'd never complained? Perfect! Was selfishness genetic? He was ruminating on this when his phone rang. It was Helen. She was fine, she'd seen that he had tried to reach her over the previous weeks, but she was "in the middle of something". She asked if he had heard the news. He said yes, not telling her about the conversation he'd had with his grandmother; it didn't make him look great, being treated like a child. She offered to come over the next morning, but he replied that he would rather meet her outside. He needed some fresh air, far from his grandmother, at least for the permitted hour.

He had never been to Helen's place before. It was more a storage room than a real apartment. She cheerfully greeted him with her beautiful smile that troubled him every time he saw it. After some small talk, he told her about his grandmother's reaction the previous day.

- She's right, Alex. You can't wait for her to die to move on. It's hard to hear, but she is right. Helen's tone was calm and warm.
- What am I supposed to do? It's dangerous to stay outside for more than an hour. How can I cross the continent to a hypothetical Eldorado in the depths of Russia?
- If you really want to do something, there's always a way. Why are you so narrow-minded sometimes?
- But how? How can I travel so far if I can't even breathe?
- Alex, in what world have you been living?! You've never heard of the E-mask? Don't you think that might be a good starting point for planning a trip?
- E-masks? How do you expect me to get one? And what about the oxygen refills? I'm not a policeman or a soldier, you know they're the only ones who get to have those. You don't expect me to steal one, I hope?
- Not steal; I'm talking about buying.

Helen explained that E-systems were already on the market – for those who could afford it. They weren't illegal, as they were sold with the official license to use them. The authorities had approved their sale months before but hadn't advertised the fact as they wanted to keep their control over the population for as long as possible. Keeping people in their homes was more important to them than their personal freedoms. Helen had a contact who could help him, but she warned him that it would be expensive. He thought about his dad's life insurance. A way to settle the debts of the past?

Back at home, Alex felt confused. He knew his grandmother and Helen were right to push him to leave, but he didn't know if he really wanted to join the new GEM, or if he did, he had no idea how to go about it. After a few horrible nights, his decision was made. He would leave. Maybe joining Greta would be a first step towards something else; he would think about that later. For now, he would talk over his plans with his grandmother, involve her in his new project.

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- Come with me Helen, Alex said, as he packed up all the things she had prepared for him.
- You know I don't want that. This is your path. I've already found mine. Did you bring everything you need? Don't forget the address book with the contact information for your hosts until Germany. After that, it's up to you. I have no more power! Helen laughed.

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His grandmother's gaze following him, Alex sailed away in his inflatable boat. In his bag were the precious E-mask he would wear when he felt difficulty breathing, and a map to the border of Poland, drawn by Helen. He remembered looking at images of migrants from the early 2020s, escaping just as he was today. The irony of history, Alex thought. Who would have believed that one day, Europeans would have to flee like the migrants they had rejected for so long? Like them, Alex hoped something good was waiting for him at the end of the trip.

# The Death of Kings

CF James S. JAMISON

## 2035 - THE PROMOTION LABORATORY, ÉCOLE DE GUERRE, PARIS

08h55: Gen Bigeard paraded into the laboratory, peacocking in front of the other generals seated high in the gallery. The gallery dominated the crisp, new holographic laboratory floor, suspended above the digital multi-domain model lit in subtle neon colours. All of the high-grade officers had been invited to attend this inaugural concours, the new selection test for the young and hopeful 'would be' officers. At the back of the gallery, a female in smart civilian clothing pushed her way through the military formality, as politely as possible, to find her place. She settled and prepared her observation area, her back straight, glasses and notebook ready.

Pride and confidence emanated from the General's body language as he ascended to his dedicated chair. All eyes tracked him to his throne, set slightly higher than the other chairs. He had the best view in the house. The General felt a combination of pride and confidence. Thomas, his grandson, was ready.

Thomas paced a tight circle at one end of the model, his eyes wandered over the floor before him. He was lost in thought, his body on autopilot. He knew he would win today; his preparations were complete. He smiled. This was the time to right the wrong, time to continue the legend, do the family name proud. His thoughts meandered to happy memories of his father; then, they quickly darkened.

### FIRST CHANCE, LAST CHANCE

08h59: Thomas steadied himself. Breathe. Relax. Focus, focus, focus. Years of preparation with the General - it was time, the culmination of a lifetime of work: the « new concours » - success awaited the chosen few.

Black coated figures scurried over the floor below, worrying themselves with minor tweaks to the system here and there. They moved like ants, one way then the next, as if guided by their antennas. In fact, instead of filaments twitching on their foreheads, each black coat had one eye illuminated by the augmented reality mono-lens, which

guided them around the laboratory as they prepared the new system called CATA. CATA, the Cybernetic Artificial Intelligence Testing Agent, was an evolution of the classic military war game based on action, reaction and counteraction. The system used advanced artificial intelligence (AI) to play the part of enemy forces and to model effects and outcomes during the test. The floor cleared, the lights surrounding the model switched to a low, sickly neon green; CATA was ready. Thomas breathed in deeply through his nose, held the breath in his stomach then slowly let the air to escape in a sort of hiss. His head came up and his eyes focused: He was back in the moment. He stepped onto his podium facing the gallery, the large, sparkling model separating him from the General, the dim neon lights beneath his podium clicked to a brighter green. Both players were ready. Officer Cadet versus machine. It was time to fight. Time to win. Time to be promoted. His shoulders rose closer to his ears as the enormity of the event coursed through his brain and body. Anticipation rising, breath quickening, heart accelerating. This was it. Now or never.

#### **OPENING MOVE**

09h00: Thomas dropped his Holo helmet to cover his eyes; he could now look through the combined sensors of his force. He felt the data streaming through his crisp 360-degree digital field of vision. He moved his arms, he felt smooth - in the flow - conducting his force through his digitised gloves.

Hidden at the edge of the lab floor, beside a humming processor, Renske watched this moment attentively. She knew this was her brother's one shot at the dream of their grandfather, the General.

Renske's tan skin, bronzed by her latest trip to the islands with her famous mother, helped her blend into the shadows - concealed. Gramps, her name for the General, had not seen her. Their mother, the Professor, was also unaware of her presence because she was observing Thomas keenly. From Renske's hide, Thomas' silent, neon-lit dance reminded her of the old string-puppet she had played with as a child, and she recalled trying to work the old wooden cross smoothly, trying not to snare or tangle the strings.

The holographic display on the floor came alive. The digital information from Thomas' coding was transposed onto a multidimensional holographic display. Blue Alliance icons danced into formation, strategic and operational shapes taking positions around the globe, powerful concentrations of force readying to unleash. Just a question of force, space and time - the General's mantra.



The disembodied neutral voice of CATA described the moves. In the gallery, heads nodded. Thomas's turn was over.

### **CATA'S COUNTERACTION**

09h05: Thomas' helmet whiplashed to the left, then the right, up, down. His hands moved to a rapid rhythm, his movements no longer smooth – panic surged through his body like electricity. Inside his HOLO helmet, his world was changing fast as CATA's moves began to appear.

"What?"

"What's happening...?"

"I can't speak..."

"Can't see..."

"Where are my forces?"

Through his HOLO blue icons vanished. Lights went out. His force disappeared. Thomas tried to summon them through his voice-activated mic.

"Any call sign, comms check, over," a hiss of static stung his ears. He quizzed the model: What the hell had happened? His mind sprinted to conclusions, none of them good.

The quiet burble of conversation in the gallery stopped, heads with straining eyes leaned forward, fabric scratched, leather squeaked. Gen Bigeard leaned forward, then a Black Coat scurried towards him and whispered in his ear. Renske recognised the signs of the General's anger rising. Thomas could not see it – his HOLO lenses only showing him what his forces could see; nothing other than the scrolling media feeds produced by CATA. His movements slowed.

"Is my force blind, or has it just gone?"

The gallery began to hum, the counteraction erupting in high-definition clarity on the model. CATA displayed a holographic representation of how Thomas's forces had been annihilated. The new system allowed the gallery members to ask CATA questions in an effort to understand outcomes. There were a lot of questions, and the voices seemed to rise as one.

The generals' faces reflected orange and red as the two new aircraft carriers FAITH and HOPE burst into flames on the model. Next, the lights went out in Western Europe, communications failed, dams burst

upon being cyber-attacked, information flooded on the news channels, bridges and tunnels were obliterated with precision strikes. A flickering news report: “The Elysée is burning after an attack by a missile-in-a-box, fired from a container located beside a pop-up pizza restaurant on the side of the Seine...” Thomas certainly hadn’t imagined that when he’d run past the pizza place last night.

Renske’s eyes flicked from the carnage on the model to find Thomas. He had taken off his HOLO, now dangling limply in his hand by his side, his puppet strings cut. He could see the disaster now, takes its toll. He realised the situation. Renske saw her twin brother sag beneath the weight of his failure.

The General left his throne.

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In 2030, just five years prior, the French Military College, the Ecole de Guerre, had changed their system to maximise their contribution to the Alliance and bolster their independent military capability. ‘The Concours’ had always been tough and demanding, but now it was an epic test. Due to financial pressures only five cadets would be taken into training to become the new ‘High Grades’, the Generals of the future. CATA was developed as the new selection process, an AI-enabled, free-play war-game system developed by the Black Cell, a team of freethinking military personnel and civilians. The selection process was straightforward: Prepare, test, pass, and fly high... or crash and burn. Each candidate had one chance, no resets. Thomas was now the first casualty of the new test.

The concept of The Concours had been much debated. It would be ‘open’ to all 14-year-olds who held French identity code. As always, ‘open’ didn’t quite mean ‘fair’. Preparation was critical to understanding the technology, the theory, the coding, and it was necessary to have studied for at least 10 years, 10,000 hours. This favored the most elite of the candidates. Family names and lineage proved as important as skills, with military “houses” striving to produce the next flyer. In France, the Bigeard name was militarily important; and the General had invested everything in Thomas’ success.

Thomas’ plan hadn’t even made it to his counteraction, his force obliterated by CATA’s efficiency. The Black Coats had dropped the ‘I’ in the title – a sly reference, it was thought, to just how hard their new experiment would prove. In preparation for their turn, Cadets had a 2-year game preparation window. This allowed the candidates to

develop their own bespoke force to do battle with CATA. They could cast their coding for the concours backwards one technology cycle, around 20 years of real time. A small team of White Coats provided technical assistance and advice. To start the concours, White got the first move. CATA then fought back with a force developed by CATA from the best current capabilities and concepts that were being employed or developed by France's enemies.

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Renske was a little lost in the huge processor forest of CATA. The processor banks towered above her blinking and humming, her mind meandered as she wondered if the separate towers were actually talking to each other via light and sound. Her thoughts scattered as voices erupted in argument close by. As she neared the edge of the processors on the lab floor, she could see an office door was open. The plaque indicated it was the door of the Chief White Coat. Renske, still in the shadows, slyly positioned herself where she could see and, more importantly, hear.

Gen Bigeard was raging. He raged at Thomas, he raged at the White Coat. Thomas, head bowed, seemed broken. White Coat's, impassive, neutral. Saliva carried the General's frustration: He could not understand what had happened, and this was not the planned outcome. Though Renske knew the storm would pass, this moment was still significant. Thomas had blown his chance and the General had lost face. Anger was his first response to failure, and always had been. Renske mused on the difference between the lion and the leopard. The lion, the head of the pride, lazy, proud, comfortably basking in the sun. The leopard, living with death as its shadow, alert, balancing fear and life, trying to survive in the dark.

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Thomas pressed the smooth silver button on the printer in the canteen. He needed calories and coffee. Questions echoed around his empty body. Some food would help. He pressed his preferred pattern of buttons on the screen. The machine whizzed, beeped, and printed his lunch - steak haché avec frites. Renske shoulder bumped her brother thinking it would be the best way to break into his thoughts. They small-talked around the food printer and Renske got her coffee: There was an Italian coffee press in the corner of the cafeteria operated by a lovely if leathery old Italian lady - official acknowledgment, perhaps, that some things

couldn't be printed, and coffee was surely one of them. Renske joined her brother at a booth in a quiet corner of the cafeteria and the very different siblings caught up, Renske played cheerleader and Thomas the athlete who'd been beaten by the buzzer. After devouring his meal and draining his coffee, Thomas looked up at Renske, caught her brown-green eyes and said, "You're next."

The twins sat in silence, their features were at the same time similar but very different. Their DNA was a mix of French and Dutch, their parents having met at a surf camp on Guincho Beach way back at the dawn of time. Thomas, despite his spirit being broken, was immaculate – hair cut sharp, jaw smoothly shaved, uniform crisp; his boots reflected the cafeteria lights like stars. Renske was burned dark by the sun, sun-stressed hair held messily in place by a coloured hair band. She lounged in loose linen and merino, barely meeting the clothing standards of the laboratory, her high, brown leather boots scratched and scarred by experience.

Thomas released a slow breath and sat back, settling himself in the booth. "It should have worked, Ren, it should have worked," he locked eyes with his sister and explained his coding. The General and Thomas had developed the great capabilities, which had always been effective. His plan punched with aircraft carriers and high spec fighters. He used satellite constellations to find targets and communicate, intelligence and Creepers and Reapers, new ground and air drones linked by SATCOM, delivered strike after strike. He commanded from two locations, the command facility on HOPE and the War Room in the Elysée. As Thomas unloaded, Renske could see the lion lounging under the shade of the baobab, comfortable, confident, content – lazy. Thomas sat up straighter all of a sudden: He'd spotted the General enter the café. Renske, her back towards the approaching uniform, hadn't yet seen their grandfather.

After their father, Lieutenant Colonel Pierre Bigeard, had died in the accident, life had changed dramatically for the twins. The General had taken charge of Thomas but had refused to look after Renske. Too busy, he'd all but said, making his choice. Afterwards, widowed, their mum had buried herself in her work. Thomas was educated at St Cyr and ENA. Renske was taught by her mum with the world as her classroom. It was a time of real pain and confusion, unanswered questions, assumptions, slights and miscalculations – the battle between the General and the Professor. It had been a time when, after failure, there had been a chance for peace and positive change; but there was too much pain, too much hurt now, as if their pride had punished them. The ten-year anniversary of their father's death was tomorrow, and any chance of extending the family's legacy was fading rapidly.

The General stuttered to a stop when he recognised Renske; turning, she was caught in the same moment of paralysis. Both their brains scrambled, normal function interrupted by the presence of the abnormal. Both trying to find the right thing to say, failing. Breaking the silence, the General sat down but it was Gramps who spoke. “Renske, it is good to see you, but please give us a moment, I have to speak with Thomas. But don’t go.” Gramps turned to Thomas and offered his apologies and what sympathy he could muster. After helping Thomas on the first steps of his journey through failure, he turned back to Renske, “You look healthy, a bit shabby – but healthy. How is your mother? What are you doing here?”

Renske’s continued to struggle with information overload; did Gramps not know she was next? Had his focus on Thomas been so complete that he didn’t even know she’d come as a candidate herself? They talked around the important stuff, staying on safe ground. The discomfort began to pass, and finally Gramps stopped, looked at Renske, and asked, “Tomorrow, what is your plan?” He knew.

### **SECOND CHANCE, LAST CHANCE**

Renske heard the grumble of the General in Gramps’ voice. Renske wasn't sure; she was never sure, always cautious. She had planned and planned. Many nights, 10,000 hours of nights beside the campfires in the jungle, on the beach, in tents on the tundra. Always discussing with her mother and her team of constantly changing scientists and support staff. She edged out of the shadows slightly, her code was ready, it was already loaded into CATA, no more changes now. Her play, ‘Nature’s Gambit’, was ready.

“I saw what happened to Thomas. It was horrible to watch but I think that Thomas’ plan was too predictable. I think that what he did was too obvious. It played into the hands of CATA. The coding was a play from the past. I don't even think it’s suitable for today.” Thomas looked off into the middle-distance as his sister spoke.

“Careful Renske, that was my plan too.” The General’s rasp softly transitioned to Gramps’ voice. Raising her palms and eyebrows, Renske tried to settle the rising storm. “Gramps, the coding has a place but it can’t be the first move.” Gramps let out a long, slow breath, “Okay Renske, go on. I’m listening.”

Thomas nodded. “She’s right. In my first move, I readied the carriers, I established logistics, I used my satellites to study the environment. I just readied my force my first move, it was all about getting ready

- it was too slow, too obvious - I gave CATA targets and showed my hand. By having to get ready, I showed I wasn't actually ready."

Renske shifted forward. "Exactly! We need to be ready. But ready all the time, at a moment's notice - we need to be able to strike or move, fight or flight. We need a system, a nervous system, to continuously interact with the operational environment to monitor changes, understand developments and provide targets. Next, this needs to be connected to the ability to strike, to blind, to confuse or to hide." Renske saw the leopard nervously patrolling the jungle for any sight, any noise, anything unusual - the leopard reacted as it prowled stealthily, always cautious but always ready. HERE

Renske, now perched on the edge of her seat, began to explain. Her hands and facial expressions were alive as she illustrated her ideas.

"The first thing to be afraid of is CATA's ability to find you and strike you using precision missiles. You have to assume that CATA can hit you anywhere that you can be seen. I think it's impossible to survive on the battlefield in the formations of the past. A Carrier Strike Group, an Amphibious Task Group, an Armoured Battle Group - these are just fat, slow targets, easy meat."

"Tommy," said Renske, softening her critique with the name only she used for her brother, "you concentrated force at the wrong stage of the confrontation, your coding was a gift for CATA. You assembled your force and changed your posture, which indicated exactly where you were going to be and what you were going to do. You activated offensive systems and new satellite patterns that showed CATA exactly what your intentions were. It was the text book move, but that was exactly the problem: CATA has been fed all the text books."

Renske could see that Gramps was wrestling with his inner General; she could imagine the dialogue, she had heard it so many times. Gramps managed to suppress the General, "Renske, that's great, but what are you going to do differently?" Thomas's head came up from its hangdog position, and Renske quietly answered with one word, "Everything".

"Ren, have you thought this through, do you have a full plan?" Thomas gently probed his sister's thinking. "Yes, nature's plan: there isn't a problem which nature has not encountered." Renske began to talk more freely; unencumbered by the heavy load she had initially felt when she saw the General. Thomas and Gramps offered problems and asked for explanations. A return trip to the old Italian lady helped the process with her liquid gold. What about precision... but won't that... but the logistics... will that work? How can that network with... will they not



be seen? How do you collect intelligence on...? So many questions. She was happy, in the flow. So far, her analysis was sound.

As the coffee cups collected on the table, Renske elaborated her answer to each question.

Instead of being concentrated, the force needed to be dispersed and positioned forward. It needed to be 'on the front foot', like a boxer in the ring. The force needed to be within range to deliver its punch. But, to survive, the idea was to spread the force thin and use guile and stealth to make tracking as difficult as possible.

The force needed to be always operational, always thinking, always collecting, always planning, always preparing - always prowling. It couldn't afford to risk lounging in readiness, it must be ready to strike and disappear, or just disappear.

The force had to have the ability to sense and strike, it had to have the ability to move with stealth over long distances and it had to blend with the background, it had to be hard to identify.

The force must prepare constantly like a farmer. The force must prepare by seeding supplies, seeding capabilities, harvesting intelligence, and growing sources.

Renske laid out her thinking in the café as the old Italian lady closed the place down. The italienne struggled to engage the cleaning cycles of the blinking and sparkling devices. She tutted and ticked until she reached her old coffee machine, all but petting its silvered brow, and then she began to hum an old Italian tune. She quietly sang the last words of her tune, "vincerò, vincerò..."

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### **ECOLE DE GUERRE- MEMORIAL DAY**

07h30: She arrived at the Lab early; she wanted to make sure everything was prepped and good to go. No mistakes. Here was the 10-year anniversary of dad's death. It was her first chance but likely the last for the Bigeard name. If she failed today, it would end a long and proud bloodline that was woven into the fabric of France's military history. No pressure. Yeah, right.

She checked with the White Coats; her code was loaded, no technical issues. The she checked with a Black Coat, CATA was operational, no problems with the system after the first game. With time to kill before go-time, Renske slipped into a quiet corner of the lab, sat on the

floor and ran over the details of her plan as the white and black coats ran their check protocols.

### **PROMOTION LAB - 0830**

The gallery began to fill early. News of Thomas' failure had spread and all of the High Grades were coming today. From the gallery the officers could see the low neon glow and the glinting light reflecting off the model. Once again, the civilian woman stood at the back, dressed in black. An officer offered his seat; politely, she declined. The atmosphere was hushed and heavy, subdued, as if by the invisible shroud wrapped around the Bigeard family.

08h50: The General strode purposefully into the Lab. He. No air of pomp or ceremony today. Face of stone. His movements carried him efficiently to the gallery, to that chair that felt much less like a throne than it had yesterday. As he entered the gallery, the officers sprang to attention, and moving through the packed gallery the General suddenly found himself standing before the woman in black.

Here was the third unexpected moment of the last two days: his daughter in law, Professor Mieka Bigeard. "General", she greeted him, comfortable with a single word, knowing it was enough. She had watched him yesterday and knew the feelings that would be gripping him today. "Mieka, what are you doing here?" The General's voice was warm but the question was odd. "I am here for Ren." "No, Mieka, what are you doing standing here at the back of the gallery?" The General gently took her arm and brought her to his seat, "Sit here, please". The General talked to one of the officers shadowing him and another chair soon appeared for him beside the Professor. As he sat, the General looked at Mieka, the stony demeanor gone, and they began to talk.

08h59: Renske stepped up onto the podium. Loose, alert, ready. The neon podium under-lighting snapped to game-time green. She dropped her Holo visor: She was ready. A Black Coat tapped his screen; red under-lighting shone from the other end of the model, and CATA was ready as well.

09h00: Renske had the first move. Through her Holo, she ran through her coding and force lay down. Was everything where it should be? With her digital gloves, she swiped and pinched as she examined the coding and the maps. It all looked good. Neural network, check. Advance Force, check. Distribution and locations, check. Capabilities, check. Seeding, check. Logistics, check. As she worked through her list, her feet shifted, her body bobbed and wove like that of a boxer battling with every flick and pinch. Okay, coding checked, ready. She pressed

the button indicating her turn was over. CATA's model appeared suspended above the lab floor. Small blue icons popped up all over the model, some blue icons blinked - the dispersal of the icons and their locations caused a stir above. As CATA displayed Renske's plan, a hum rose up in the gallery, as the High Grades asked questions.

The Professor leaned a little closer to the General, "What do the flashing lights mean?" "Good question, Mieka." The General raised his voice and asked, "CATA, before we continue, can you summarise Cadet Bigeard's move please?"

The asexual disembodied voice of CATA filled the gallery, "Morning, General. Of course, I will pause the game and explain. The game will not continue in the background. The game is suspended until you give permission to restart."

"Yes, yes," said the General, impatient. "Go on."

CATA: "Cadet Bigeard's coding is interesting. The first item to remark is that the cadet has developed a force with a self-generated digital spine; the cadet has called it a Neural Network. This network provides the force with shared intelligence and a common operating picture. Every element of the force, every sensor, is capable of processing information; every element has a processor chip and is capable of connected or disconnected operations. Every element can be a part of a system or act independently. The cadet presents a diverse mix of sensors, effectors and communication systems. The system can work on a bearer system or switch to a self-generated network, every element of the force brings strength and redundancy to the forces ability to collect, process and disseminate information. My remark is that this coding is indeed very interesting"

The Professor, satisfied, proud, leaned towards the General to elaborate as only she could. "She got the idea from trees in the forests of South America, where we noticed trees could communicate through a hidden network of roots and fungi. The system has huge redundancy, and to be honest we don't fully understand it yet but we get the principle - lots of connections with the other elements in a system."

CATA: "The result of this capability is that the force can collect and process vast quantities of information. This information is used by the command elements. Every cell within the force is capable of command and control through this Neural Network. It is a highly resilient system."

The Professor continued in the General's ear, "That idea came from octopi in South Africa. Did you know an octopus has nine brains and

they are capable of both centralised and local control?” The General stared back at her blankly.

CATA: “The cadet has developed something new which the cadet calls the Advance Force. The force was developed from the elite regiments of the Alliance: the Marines and the Paratroopers. The Advance Force is designed to operate deep inside the threat zone of enemy capability. In range of enemy threats but also able to hold the adversary at risk, it offers immediate operational and strategic options. The cadet’s coding has enabled a procurement and capability development cycle, which has evolved the capabilities of the elite Marines and Airborne units. This force is flexible and highly adaptable. The cadet has described it as protean force. It acts to dissuade and build capability in peace and to enable other more traditional elements of the force in war. You can see a mix of icons on the model, the flashing icons are the elements which the opponent is unaware of. ...Am I being clear, General?”

The Professor continued her commentary to the General, who’d grumbled his response to CATA. “That idea was conceived and refined during many, many nights of fireside discussion, I can tell you. Renske thought this force could create an opportunity, could open the door for a more traditional plan like Thomas’ yesterday. A force to ‘open the door’ and minimize threats so Thomas’ plan could have a chance to work. The Advance Force will constantly prepare, with its job in peace is to prepare for war. This gives the whole force resilience and offers a new immediate response to threats.”

CATA: “The cadet has developed a fleet of highly modular ‘grey hulled’ civilian ships – the cadet calls them Chameleon Hives. They have the appearance of small container ships but their structure and appearance can be easily changed. The interior design is capable of supporting hundreds of commandos, paratroopers, and drones.”

The Professor leaned in, “Renske is fascinated by bees, their ability to work in synchronisation and their sheer work ethic to achieve their tasks for the good of the colony. She wanted to make sure that these ships could act like a hive, capable of being constructed and reconstructed many times to suit the mission.”

CATA: “The chameleon hives are powered by small micro-nuclear engines. They can alter their capabilities by changing the modular container load within an open deck plan.”

The Professor leaned in again, “Renske’s coding includes plans for shipping containers which could be used ‘Lego Style’ to easily adapt to the mission. She wanted her fleet to have freedoms, not

limitations.” The General tilted his head and replied, “I know, Renske told me about this yesterday. The modular Lego blocks can provide command and control, accommodation, 3D-printing facilities in metal and carbon fibre, workshops, armouries and mission bays. Hypersonic and air-defence containers could be loaded on decks, offering land and surface attack options. Direct energy defence modules could be fitted front and back. Energy isn’t a problem, the reactor sees to that.”

CATA: “Each ship uses a smart material. The smart materials can change the radiation that the surface of the ship emits by using electromagnetic currents within the material. This can make a steel-hulled ship look like anything from a wooden cargo-junk to a hyperspectral satellite. This capability offers the opportunity to frustrate the adversary’s targeting process. Tracking and targeting using hyperspectral satellite constellations is more difficult.”

The General angled his head towards the Professor, “Hyperspectral satellites can monitor huge swathes of the surface of the earth using the electro spectral fingerprint of a certain material which makes up a piece of equipment. They make it much easier to find a needle in a haystack because the needle can be identified through its specific fingerprint. Renske’s idea makes life harder for this system because the ships become digital chameleons.”

CATA: “To enhance survivability, each ship has digital twins. The digital twins are relatively cheap digital decoys that create a replica of each ship; electrical emissions are identical to the original. This capability increases the survivability of the ships.”

The General leaned towards the Professor again, “Renske’s idea gives the ships a 1:3 chance of spoofing missiles fired at the ship.” The Professor whispered back, “Yes, she got the idea after studying the wings of the Giant Owl Butterfly. She discovered that the patterns on the wings made predators think it was something else. She thought that if a missile hit a wing the body would still survive.”

CATA: “Each ship has the ability to be a drone ship, capable of autonomous operations without a crew.”

The General spoke again, more to himself than the Professor, “The drone ship could operate in very high-risk areas with a crew of killer-bees. It could act as a diversion to attract the eye.’

CATA: “The ships are augmented by two new capabilities which operate underwater. The cadet has called the systems ORCA and Remora. ORCA is an autonomous medium-sized submarine, capable of seven-day missions. Each ship is supported by two ORCA. They provide an underwater delivery system for sensors, relays, small commando teams or drones. The ORCA

is a silent, battery-powered system, which acoustic sensor arrays cannot detect. The ORCA can feed their energy requirements from the ships, seabed logistic nodes or they can swim near the surface to trickle charge by photo voltaic cells on their back. The other system is called Remora, a mini-submarine that is magnetically penned to the hull. A Remora can conduct basic underwater engineering tasks and use the seabed to support operations. It can be used developing logistic nodes in strategic locations to provide a supply of food, ammunition, equipment and fuel. The ORCA and Remora can work together to move small shipping containers and connect them to the sea floor.”

The Professor spoke gently, “Renske fell on the ORCA idea around the camp fire in New Zealand, on a beach in Kaikoura. She even wants to use the activity of whale PODs to provide camouflage to ORCA activity; she wants their sonar frequencies to match nature.” The General nodded, “And the Remora offer the possibility of developing Seabed Warfare. They could position Strike Containers and Support Containers to provide fire support and enable the Commando teams operating in remote and high risk areas.”

CATA: “The human element of the force are configured in cells of twelve, the cadet calls them Raider Cells. Each Raider cell is a command node, with every operator capable of commanding the range of equipment and effects at their disposal. Operating from the ships, they are capable of disaggregating and calling for support via a dispersed network of sensors and relays. The Raider Cells have a range of insertion methods, sub-surface, semi-submersibles and wing in ground effect stealth gliders.”

The General knew that for the Raider teams to survive they had to be small, they had to be light, they had to be supported by new means. The seabed warfare plan offered a new option, and one that just might work. The delivery mechanisms Renske had described were light, designed for stealth. The theory was if the enemy can't see me, they can't hit me. The stealth gliders could be printed 'mission specific' to get the cells and kit to their targets. Heavy lift drones could deliver light vehicles and electric dirt bikes. The Professor interrupted his thoughts with something about their recent trip to South Africa to study the octopus' ability to hunt on land, tentacles extending from the sea with deadly effect.

CATA: “General, the final element to explain is the range of hardened basing options which the cadet has developed. The cadet's coding has produced a global footprint of hardened shelters for Carrier Strike Groups, Amphibious Task Groups and Air Wings. The defences are a



combination of man-made and natural rock formations capable of withstanding projected missile capabilities.”

The General could now see how this Advance Force worked symbiotically. He was beginning to understand. The Professor interrupted his thoughts once again, summarily so, with, “It’s evolution, it’s nature’s way.”

CATA: “General, if you are content with the explanation, we can continue. Awaiting your command.”

The General looked at the Professor and stood up. He took in the scene on the Lab Floor. The model showed a picture he had never seen. Next, he glanced at Renske, Cadet Bigeard, she was alert, ready, Holo down, scanning everything. He knew it was the last chance. He thought of his deceased son, Pierre, then Thomas and Renske. The past, present and future blurred into one moment. It was in nature’s hands now, “CATA, continue the game.”

The system started again after a slight delay, the neon lighting flickering almost like an interference in the current, the processor banks beginning to hum louder and louder. Renske allowed herself a slight smile. She was ready.

# Deep Learning

CC Emmanuel LATIL

**APRIL 1, 2049**

The holographic glasses had been vibrating continuously for ten minutes on the living room coffee table. Marianne sighed. She didn't like being disturbed at this early hour. Curled up in a large mahogany leather armchair with Chuck on her lap, she blew softly on the mug of black coffee. Her long, cold fingers clasped the steaming mug of the French carrier air wing. Her toes timidly protruded from a velvet plaid to catch the warmth of the large photovoltaic fireplace, like a pack of marmots awakened by the warmth of spring. This was her sacred moment, when the first rays of the sun came to caress the orchids sleeping on the organic tapestries of the living room and the photons danced in the fireplace of the digital chimney.

The *SmartEyes* continued to vibrate on the table.

Marianne put her mug down, moodily. Chuck slumped to the carpet, grumbling. She put on the digital glasses, pressing symmetrically on the arms, and the hologram appeared in the middle of the living room.

- Ah, finally! Hello Marianne. I was wondering if you had changed your protocol number...

She immediately recognized the deep and slightly hoarse voice, even before the grumbling face of pixels. Physically he hadn't changed too much in the last ten years. His features had, however, thickened somewhat and his new admiral's uniform was beginning to suffer seriously from the untimely development of his belly. Marianne wasn't surprised by his call. She had been wondering when it would come. Her *iWatch*, *SmartTop* and *DeskCloud* had been talking about nothing else for the past week but the invasion of Taiwan. And the lack of military reaction from the West. For the moment.

- Hi Jeremy. Excuse me, let me pay my respects properly, Admiral! You look good with all those stars... Although they don't make you look any younger, I'm afraid...

Marianne observed his defeated look. The admiral made a gesture of weariness, a shy smile on his lips.

- I haven't slept in a week, as you can imagine with what's going on right now. You, on the other hand, are still beautiful...
- How can I help you? replied Marianne dryly.
- I'm sorry to bother you but I'm calling because we need you in Paris for uh... some advice. An analysis, actually.
- Go ahead.
- You'll have to come to Balard. It's... complicated to talk about it like this on the *Hologeek*.

Marianne pouted. Chuck started to bark: Even her dog was suspicious.

- Wouldn't you rather I went into cypher? I don't really want to leave my house.
- We're a little wary of the encrypted protocol with the events of the last few days... Listen Marianne, if you agree I'll send a *flycar* to pick you up in thirty minutes. In fact, I'd like you to be here before the defense council starts at 11:00. We really need your expertise... please.

She sighed. No desire to go back to that place she had left years ago. Men and women in uniform, polished, indoctrinated. And now "*chipset'ed*": able to speak twelve languages fluently and recite the proof of the Bolzano-Weierstrass theorem while chaining together chess combinations. Marianne, on the other hand, spoke only two foreign languages and had but a vague memory of the endomorphism of Euclidean spaces learned thirty years ago in preparatory classes. What she remembered, she had learned, understood, and maintained methodically over the years. Like a flower that is regularly tended, patiently watered. Without drowning the soil. Without cheating her genome. At forty-five, her virtue had put a premature end to her brilliant career as a senior officer: She had refused the chip. A set of electronic components included in a pre-programmed integrated circuit and inserted directly into the cerebral cortex, accelerating the data flow between the brain processor and the memory. A set that enabled high-speed learning and could store an astronomical quantity of data accessible at any time. A set that was fragile but ensured the highest positions in both the central administration and in companies.

- OK, Jeremy. But first I'd like to ask you a question.
- Please...
- How is an "*anti-chip*" like me going to help the flagship of general officers?

The admiral shrugged, a little embarrassed.

- I ordered the *flycar*, it's on its way. See you later.

The hologram abruptly disappeared. Marianne looked out at the sky and sighed again. The flowers suspended in the magnetic field looked down on her, impassive and proud. On the slender stem of an orchid, she saw a small green ball that trembled imperceptibly. Gently breaking through the shell of its chrysalis, a Monarch butterfly was emerging into the world, unfolding its red and black wings. It had first spent long weeks studying leaves, assiduously feeding on a theater of greenery, then silently isolating itself in its cocoon. The magic of metamorphosis was working, in all the strength and incorruptible beauty of Nature: The Monarch flapped its wings and flew, noble and serene, towards the purple tepals of an agapanthus.

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The *flycar* landed heavily on the asphalt pad of the terminal. The doors opened automatically and a synthetic voice wished her a pleasant stay at the operations planning and command center. Before getting out of the vehicle, Marianne took care to adjust her Plexiglas helmet and her dust mask. It was forbidden to move around in the public space without covering one's ears, nose and mouth. Since the terrorist attacks using nano-anthrax, the authorities had taken certain measures to protect the population and - according to the recommendations of the scientific council - to avoid a pandemic of contagious tumors. A few years ago, a hundred nanodrones had indeed been diffused in the air vents of the Ministry of Agriculture and Meat, infiltrating some government advisors via nasal, auditory or oral transmission with what the press had immediately named "nano-anthrax". Although some of the victims were put on life support, most were essentially suffering from acute rhinopharyngitis - a serious pathology known as the "common cold" in the twentieth century. The attack was claimed by a tiny vegan-Zoroastrian group from the LOVE movement - Like Our Vegetables in Eschatology - who wanted to defend dharma and animal consciousness. Their tactical victory was short-lived: A Western coalition was quickly formed and neutralized the terrorist organization in a massive surgical operation. Nevertheless, as a precautionary measure and to avoid future biotechnological contamination through natural cavities, citizens were no longer allowed to smell, breathe, or listen in the open air in a public place. Sacrificed on the altar of security, the scent of freedom had become an obsolete fragrance.

Reluctantly yet resolutely, Marianne went into the command center.

- What do you mean they can't fly the Cyclone anymore? Is this a joke? Ah ok, I get it... April fools? You called me all the way down here for a fucking April Fool's Day prank?!
- I wish, but no. This is very serious, Marianne. We suspect corruption of the learning chip.
- How is that even possible?
- Every week our fighter pilots have to connect to the cloud ops to update their chip with new tactical employment documentation from the collaborative feedback of the crews and their remote carriers.
- And who makes the cloud ops?
- It's a consortium of several defense companies in partnership with TSMC...
- TSMC ? The world leader in semiconductors, that TSMC?
- Yes. And whose parent company is in Taiwan.

The admiral uttered the words with a mixture of compunction and disillusionment. He remembered Marianne's warning a few years ago: One could not totally exclude the risks of a cyber-attack on a chip implanted in the cerebral cortex; but the program-planning office of the General Staff had nevertheless been forced to take this risk. Torn between the complexity of the weapon system and the cost of training crews, the FCAS program had almost disappeared several times during the budgetary arbitrations of Bercy, the ministry of finance.

France had ratified the treaty banning autonomous lethal weapons in 2030 - unlike many of its strategic competitors - and had therefore committed to systematically keeping a human in the loop. This decision, deemed the virtuous one, logically required the ministry of the Armed Forces to keep a pilot in its new stealth and collaborative combat aircraft, the Cyclone. Marianne, then a brilliant test pilot at the French flight test center, had led the first development flights of the aircraft. She was quick to alert the military staff to the complexity of the human system interface and the prohibitive training time it would require. She recommended abandoning the piloted version of the aircraft and entrusting it to an AI trained by tactical operators on the ground who would watch over the machine's learning and doctrinal coherence during the conduct of training missions.

Her recommendations went unheeded. The Air Force and Naval aviation were not keen on putting an end to the "knights of the sky" caste, for reasons related to notions of cultural heritage and the need to attract new recruits. Staff preferred to "augment" the fighter pilot rather than see him disappear.

- Come on, the Chief of Staff wants to see you.

The admiral took Marianne by the arm, gently, and accompanied her into the anechoic airlock. His short hair, almost shaved at the temples, showed the scar from his implant. A small door drawn just above his earlobe. A door that had irrevocably divided society into two categories, depending on whether it advocated its openness or its closure. The open-minded and the reactionaries. The transhumanists and the retrogrades. Enlightenment and darkness.

The first brain chips had appeared on the market in the late 2030s. Initially reserved for an elite few owing to their prohibitive cost, they were quickly democratized, allowing a large part of the population to effortlessly acquire prodigious knowledge in a few seconds. Various software programs for learning languages, mathematics, history or even music had suddenly appeared. The Armed Forces quickly understood the potential of this technological breakthrough, and many defense companies soon proposed software for learning naval, land or air warfare tactics. It was now possible to learn in one night the functioning and operational use of a battle tank, a fighter plane or a nuclear submarine. This drastic reduction in training time had led to a certain rationalization of resources: The large officer schools of the three armies had been dissolved five years ago and had been replaced by the joint officer school, which trained new recruits in only a few months. Officially, the entrance examination was open to all citizens, but in practice only students with a chip were able to pass the tests, because of the inhuman amount of scientific knowledge required. The officer cadets were then taught multi-environment, multi-field combat by means of various confidential learning programs inserted in their brain chip. At the end of their schooling they were able to command with equal efficiency a mechanized infantry company, a frigate operation center or a fighter patrol.

- Good morning, Captain. Please sit down. Thank you for coming to see us. I'll be direct, as we don't have much time.

The Chief of Staff glared at Marianne from behind his large, bulging *SmartEyes* perched at the end of his prominent nose. He seemed visibly annoyed by a situation that was partly beyond his control.

- I'm listening, sir. How can I help you?

Marianne took a quick look around the oval table. Many of the general officers were bowing their heads as they silently tapped away on their *SmartTops*, their heads tucked into their shoulders, huddling like hikers under a tree in a thunderstorm, dreading the next lightning strike. They all had the chip mark behind their earlobes. This was the rule now for becoming a general or an admiral. It made interoperability more fluid and strengthened transnational relations. The intention was

commendable. When everyone speaks each other's language and knows each other's history, it's harder to make an enemy.

- We got screwed by the Chinese.

As he said this, the general slammed his big, red hand on the table. The storm was rumbling. The first lightning strike was for the cyber security deputy chief, in a state of advanced liquefaction in his seat.

- We weren't bad... we were VERY bad! We left a cyber breach in the cloud as big as the Yellow Sea! Thanks to our cyber security aesthetes...

The general paused, looking intently at the alleged culprit. Then, remembering an old Michel Audiard tirade artificially printed in his memory, he coldly finished his victim off. With all the empathy of a bag of cement.

- My poor friend, when we put the morons in orbit, well, you ain't done spinning yet.

Marianne bit her lip to repress a nervous laugh. The general belched. His black pupils dilated by the glass of the *SmartEyes* methodically shot a glance at all his subordinates, one by one. The storm resumed its heavy fire.

- As a result, our fighter squadrons are almost inoperative! There are no more pilots who know how to use their machines correctly! Yesterday we nearly had two Cyclones collide during a training mission!

The general lowered his voice and slowed down the rhythm of his diction, so that everyone would understand the terrible consequence of this disaster narrowly avoided.

- So I have decided to temporarily suspend our participation in this "scrambled eggs" operation.

In response to Marianne's questioning look, he deigned to explain. With the fatuity of one who knows great things that the general public does not know, he pontificated:

- The operation to liberate Taiwan will be launched in the next few hours by the coalition...

Marianne was stunned. She couldn't help but intervene, saying what had been on her mind for a week.

- Really? Are you serious? You really intend to attack China? Can you imagine the economic and military reprisals? Our ultra-marine territories in the Pacific will be on the front line!



All the officers were silent, staring intently at Marianne like young students surprised and fascinated by the unprecedented act of rebellion of a classmate who openly takes the teacher to task. The general looked at her with a smile, visibly amused by this trait of bravery that was not very frequent in his staff. With a certain amenity, he justified the need for military intervention with a brilliant geopolitical insight into the situation:

- All the members of the alliance are participating in the operation except us. The president is furious!

Marianne nearly turned to leave. After all, she was no longer active military. She was no longer subject to the sacrosanct "duty of reserve" and the injunctions of politics.

She had already crossed paths with the president of the republic a few years ago during a garden party at the Elysée for the 14th of July. At that time the president was only the minister of space and European affairs and with his handsome salt-and-pepper beard, he was still called "sir". He had made a strong impression on Marianne with his charisma and his brilliant sociological analyses. One could not deny him a keen political flair. Some opponents even claimed that he had shaved his face and changed his gender to appeal to the LGBTQIA+ electorate. She was now called "madam" and was considered a fervent defender of human equality. But Marianne didn't like her ties to the defense industry, which some bloggers accused her of using illegally to finance a large part of her election campaign. Even if nothing was officially proven, her government had nevertheless re-launched a massive investment in major arms programs, to the detriment of the renovation of the hydrophobic dams.

With the melting of the ice cap in 2040, the Camargue and the Vendée were a distant memory, and the artificial dams that formed the new French land borders regularly threatened to give way. In the face of social discontent and the eco-warrior movements, the president had relied on the good old quick-setting cement universally recognized as a way to bind a divided public opinion: the construction of the enemy. The traditional infotainment news shows had suddenly stopped cloistering themselves in the frivolities of so-called "proximity" information and turned to international news topics. Gone were the subjects of the heritage lottery, the wine drought in the Vaucluse and the consequences of the frost on the arboriculture in Lozère. The resurgence of strategic competitors, naval rearmament in the Indo-Pacific and the imperative need to prepare to defend our vital interests were now on the agenda. In war, the moral determination of the population is as important as that of the combatants.

- So, what exactly do you want from me, General?

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When Marianne entered the navy fighter squadron, at first she had been surprised by the impressive physical appearance of the pilots. Most of them were ice chests, straight off of an Ivy League soccer team. Things had changed in twenty years. In her day, her fellow fighter pilots were mostly skinny beanpoles or short, stocky guys, and didn't really look like NFL material. Instead, they were chosen for their ability to analyze quickly and make decisions in a hurry. Today the chip made it easy to acquire these skills, and now fighter pilots were selected primarily on the basis of physical strength.

- Are you looking for someone, Captain?

The young ensign stood at attention and stared intently at Marianne. On his name tag was embroidered his pilot callsign: "Caveman". He must have been two heads taller than Marianne, and with his prominent jaw, flat skull, and facial hair, he looked like he was still moving up the evolutionary ladder. The missing link between the great ape and homo numericus. He seemed visibly surprised to see a middle-aged O-6 officer in a flight suit, with vintage patches scratched on her shoulders.

- The commander's office, please.

Caveman respectfully led her into the office of Commander Fant, callsign "Syco." Tall, blond, muscular, with a bright smile and sharp eyes. He immediately stood up to greet her.

- My respects, Captain! Would you like a coffee? The base Captain told me you were coming, but he didn't really specify the purpose of your visit.
- Good morning. No thanks, no coffee. It seems that your pilots have cognitive disorders... I've come to bring them back into line.
- And... how do you intend to do that?
- Simple, just like we used to do it before this chip and cloud crap. Theoretical instruction, personal learning work, evaluation of knowledge at the briefing, practical application in flight, educational and transparent debriefing.

Syco looked at her, barely suppressing a sly smile. He could not imagine this little woman in a Cyclone cockpit, undergoing load factors greater than 10g.

- I see... And how long are you going to stay with us?

- As long as it takes to get your unit operational again.

Syco wasn't smiling at all now. The prospect of having to put up with this old-school pain in the ass for weeks or months on end irritated him deeply. But he didn't really have a choice. She was mandated by the Chief of Staff of the Armed forces himself.

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- Come on, Caveman, let's brief.

Marianne made her wingman sit in the briefing room, at the huge black holographic table. With a simple touch of the index finger, one could draw, trace and conjecture tactical maneuvers in three dimensions. The envisaged trajectory of the friendly fighters and their remote carriers was thus pre-analyzed with regard to potential enemy maneuvers. Even if holographic projections had replaced the old whiteboard and markers, Marianne saw with an undisguised joy the familiar decor she had left behind years ago. A fraternal atmosphere, welded into one by the search for performance and excellence in the art of war.

Yet she had done everything to turn the page on her military experience after her early retirement. She had always scrupulously refrained from participating in any commemoration ceremony to meet up with former comrades. Her free time was now mostly spent working at liberal think tanks and training for triathlons. To make ends meet, she occasionally gave bullshit talks on relationship effectiveness and team management in business. But deep down inside, there was always, still, the ineffable desire to fly. When the general offered her to take over the training of the Cyclone pilots, feeling overcame her reason. Sky fighting is a very tasty drug.

- Do you have any questions?

Caveman shook his head. He didn't seem convinced by the tactics his leader was considering, but he didn't dare contradict her. She didn't inspire much confidence, no doubt due to her age and frail physical appearance, and especially because she was an "anti-chip." In the collective mind, Marianne now belonged to those conspiracy theorists who refused the progress of science.

They electronically signed the flight log and went to put on their integral anti-g suit. They went down to the runway office, greeted all the mechanics who crowded around them. Repressed laughter and mocking

smiles surrounded this strange pairing that seemed to have emerged from a fable by La Fontaine. The gorilla and the grasshopper.

Marianne hopped onto the parking lot, followed by Caveman, who swayed heavily. A cohort of mechanics was bustling beside the plane. And it was magnificent. A true thoroughbred, arrogantly looking down on the earth, its nose pointed to the sky. Its gray and martial dress was silhouetted against the azure sky. Its fuselage with its lascivious forms gave off a cold and nearly poisonous power. Marianne shivered as she placed her hand on the titanium leading edges. She hummed to herself an old Leonard Cohen song from the last century. A tragically beautiful song that had influenced her parents in the choice of her name: "Now so long Marianne, it's time that we began..."

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- Fox 5 on South group !

Spiraling down at 8G, Marianne soberly announced on the radio a simulated passive homing missile strike - a Fox 5 autonomously guided using the disturbances in the electromagnetic field of the DTT created by the shape of the enemy aircraft.

Crushed into their seats and experiencing eight times their body weight, they could barely lift their hands or turn their heads. Marianne instinctively moved her fingers on the touch pad under her wrist to activate the electromagnetic countermeasures, adjust the passive radar reception, and zoom out on the tactical situation and mapping projected in virtual reality on the aircraft's canopy. She made all her gestures in a sequenced, methodical way, quickly but without haste, in order to be able to comment on them in real time to Caveman, who'd begun to show a certain slowness of ideation as she spoke to him. With the degraded functioning of his chip, he could no longer control the "hook maneuver": a technique of breathing and contracting the abdominal muscles to increase tolerance to the load factor. What he used to do naturally in aerial combat now required his full concentration.

Marianne gave the deployment order to her remote carriers: connected effectors capable of jamming or decoying the opponent. She dived in a landward turn to evade the opponent's simulated missiles, then darted back into the upper atmosphere to increase the range of her weapons. The contrails produced by the engines lacerated the blank canvas of the sky. The white furrows of her patrol intertwined in a vigorous sketch.

- Tally ho, twelve o'clock! Low!

One of the opponents - an old Rafale F4 that served as aggressor aircraft - had turned off its radar to avoid detection and was trying to penetrate the friendly zone at low altitude. Marianne swooped down on the enemy, putting the throttle to idle to reduce its infrared signature. She had a furious desire to merge with it. Dogfighting was an old discipline that was no longer taught in fighter squadrons. With missiles that could be fired from hundreds of miles away, there was no point any longer in learning close combat.

The little black dot on the horizon was approaching faster than a bullet. With cockpit speeds close to transonic in both aircraft, the relative crossing velocity was close to Mach 2.

- Fight's on!

The huge gray plane popped up for a split second in the canopy and instantly disappeared, only to reappear in the Cyclone's omnidirectional camera, seeming the size of a fly.

Marianne switched on the afterburner. She fought not to lose sight of the enemy in spite of the prodigious centrifugal force which crushed her cervical vertebrae. The fight against gravity was beginning. The blue sky suddenly became gray, the heavy curtain of the theater closed slowly in front of her eyes nearly squeezed shut by the terrible centrifugal force. The black veil was not far away in spite of her thermoformed integral anti-g suit. Marianne felt her soft organs flatten several centimeters under the effect of the enormous invisible vice, and her heart struggled to push blood towards her brain. Her body weighed more than five hundred kilos. She loved to feel this prodigious force taking hold of her, this sickness of acceleration that distorted her face and drained the blood from her eyes. Over the years, she had learned to control the multiplication of the gravitational force, produced by a simple pressure of the hands on the touch pad. It was necessary to respect it, to dose it, not to discharge it too brutally if one wanted to avoid the "G-loc," the loss of consciousness due to a too violent load factor.

Marianne continued to compress her abdominal muscles and thighs while holding her breath and the curtain opened again on the blue stage of the great circus. The blood flowed back to her brain.

- Terminate, ground kill!

The opponent had passed under the combat floor trying to evade Marianne's aggressive maneuver. The enemy plane had fictitiously crashed. She was victorious without firing a missile or a shell. She cut the afterburner and orbited the arena, a bit frustrated. Like a

bullfighter disappointed by the heart attack of the bull just before the final, fatal stabbing.

She looked up: Her patrol was still aggressively licking the blue walls. Their grooves converged in a zigzag, fell in a spiral and then faded in large whitish and psychedelic volutes. An immense mouth was drawn on the celestial vault. Its corners were twisted by the effect of the violent wind in altitude, then tore into a gaping and carnivorous grimace: the laughter of the sky.

- Caveman, can you hear me?
- ...

Marianne activated the camera in the back seat: Caveman sat low in his seat, his head bent to the side and his eyes closed. He had fainted.

Marianne smiled behind her oxygen mask.

The learning process was just beginning.

# The Offshoot

CRP Nicolas PENDRIEZ

Stickers had popped up in the streets all over town. In an old-fashioned way that almost no one could remember. Only a handful of people had even noticed them, as the streets remained quiet most of the time. Wandering around, or even going to the office, or leaving home to buy groceries were all activities of the forgotten past. The only people out on the streets now were the delivery guys.

People would exercise indoors, even competing remotely against each other; indoor cycling contests were incredibly popular. The trend could be traced back to the 2020 lockdown, after which its popularity never faded. Online fighting, requiring an overall suit equipped with all kind of sensors, electronics and biomechanics had also gained popularity in the last five years, leading to worldwide contests with huge audiences and online betting in nearly all the world's currencies.

People would buy groceries from home, through holographic stores.

People dated online. They worked at home... Or from home, as they said. As if they'd go from one place to another from time to time... but no, they wouldn't.

The stickers were advertising for the planting of more trees in town and between cities, calling for both individual and public initiative. It was hoped the stickers' bright colors would stand out within the city's surrounding tones of black, white and grey.

Elsa knew it was useless. She knew she had to advertise online, and more probably in the BeWorld, where everyone gathered on a daily basis. Also, it would be the only way she could catch THEIR attention, in a vain attempt to get funding from THEM. As a scholar-botanist, Elsa had quite a lot of experience in the procedural trials and tribulations of fundraising within the framework of her university. THEY were the patrons of the world, dispatching resources as if it was charity. THEY would have to be approached, for her quest to be efficient. Of course, THEY would already know of her campaign: THEY were aware of everything. The stickers may be useless but Elsa favored the old ways, and they were appealing to her artistic self. She had made them on her own and



had enjoyed spending time on the design. The delivery guys she gave them to received vague instructions: “Have fun with these, guys, stick them wherever you want’. And they did have fun, such that a new type of competition took the city by storm : shiny stickers appeared in the most inaccessible yet visible places... for whoever would go outside.

THEY were the new cast of rulers, de facto. A kind of oligarchy that rose after the Great Fall. Only the very wealthy companies came out of it strong enough to rule and impose their will on society. Before the Great Fall, those companies used to bail governments out of debt. After it, they just gathered the remains... By leading those companies, a few individuals imposed THEIR views on people, on organizations and, of course, on states. Commoners could never learn how many THEY were ; hence the group name and pronouns they attributed to this elite, in all caps. THEY gave and took away. THEY were simply allowing society to function, in both this world and the BeWorld.

To Elsa, the BeWorld was a lie. Only the strong ones could survive there. It was a brutal space, one that encompassed so much nowadays, and shaped everyone’s mind accordingly.

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She sat at her office desk, surrounded by a variety of plants the names and species of which only she knew. She turned on her eLiteScr3en, a pencil that shed light in two directions, vertically and horizontally : the vertical light created the screen, and the horizontal light served as a control pad of sorts, like the old keyboard and mouse. It wasn’t the latest model -- Elsa didn’t care about trends -- but it was enough to serve her daily needs. Also, the older versions were more difficult to hack.

Intertwined lines looking like a messy network of brain connections popped up. A comprehensive complex root system had appeared, glowing in green; no one but Elsa could read it. Still, her main discovery was not displayed as it was safely locked away and required an iris scan to open. Once up and running, it displayed another network, one highlighted in a different color, overlapping the root system.

Fungi. An enigmatic form of life, capable of healing or killing other forms of life, all there and aglow in yellow on Elsa’s eLiteScr3en. One day, one of the underground sensors she’d installed in the vicinity

of the university in order to monitor the activity of tree roots and how they were affected by the urban environment, informed her of an electric pulse. Odd.

It was this discovery that triggered her desire to decypher the language of the trees.

The trees were talking to each other. This was increasingly clear. Step by step, attempt after attempt, Elsa collected enough data to understand parts of the communications. It was a feeling. Trees were feeling, and were feeling sick; moreover, they were passing along that feeling in what seemed to qualify as conversation. Elsa went deeper into it, and after several months of work, and with help from an experimental artificial intelligence designed to study signals originated in outer space, she cracked the coding system underlying the pulses. Mushrooms, her beloved fungi, these were the symbiotic elements which helped the trees to talk to each other. Elsa had discovered a way to use the fungal networks to convey communications and information, and with accuracy. Now she was able to map the micromolecular matrix and use the mycelium network as an organic telephone system. The ultimate landline.

Elsa “heard” that trees were feeling lonely – there was no other word for it -- from being so rare and scattered, far from one another, unable to interact. They needed to communicate, and in this Elsa was able to help. It was a win-win deal she concluded with the trees.

However, Elsa had trouble extending the perimeter of her study: Finding species of trees and green life which would survive the polluted and hostile environment of the city proved another challenge. The kinds of trees she grew up with were unfit for such a place. Decades of soil pollution had turned the ground into dry, unfertile matter. Strangely, air pollution was not the issue anymore. As a consequence, Elsa had to use mostly inelegant plants, the kind of green life which wouldn't grow the very long root systems she needed but adapted themselves to the challenges of urban life. This made her project more complex. Similarly, robust mushrooms species were another issue. But one place had been partially spared the overall deterioration of the soil : the small abandoned park located next to her office at the university, in which survived a few big trees and where she had installed her first sensors and constituted her first root network ; this place would be the heart of her project. She needed to find a solution to the polluted soil issue. Once again, fungi came to her rescue; some species were able to treat the pollution, absorb the contaminating elements. Elsa was thrilled. She managed to develop a user-friendly depolluting pack -- she called it the « deeP » -- which combined depolluting species of

fungi with the species she used to convey the communications between trees. The right balance in the formula had been tough to find, but Elsa had finally found it.

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When THEY had scouted her as part of the Rebirth Program, aimed at reviving discarded fields of science, her heart was broken, paradoxically so. She did not feel any pride in being drafted. It was prestigious, almost a privilege, but she felt she would no longer be doing what she loved. She would have to leave her beloved nature behind after it had nurtured her imagination and needs while growing up. But Elsa meant to make some major breakthrough, to make a difference. Her determination was rewarded when she discovered how to control a very special species of mushrooms, those same ones which are responsible for the communication between trees. This had been a mere idea for a long time, but no one had ever gotten to the bottom of it and it remained a partially uncharted territory until the Great Fall broke out. The Rise, led by THEM, was Elsa's chance to finish the job that other scientists had started some forty years prior. Back when she was a kid, spending time in the countryside, she was certain that she could communicate with the elements surrounding her. It was not just about feeling their enveloping energy. She remained distant from the hippie ideas of the past, although she'd heard about them from her parents. Her feelings were different. She knew deep down that she could exchange words and ideas with the trees. She just could not verify it. Not then.

Elsa would face many challenges. First, her discovery had to remain a secret. She had a purpose for it, linked to the BeWorld. Second, she had to isolate the most robust species of fungi to make her network strong; indeed, she feared that, like any other vehicle of communication - voice, letters, telephone, electronic messaging, ... - the mycelium could be intercepted, jammed, or hacked, simply by eliminating the fungi, or by corrupting it.

Though she did not engage in any forbidden activity, and from the outside it had to look like any other computer network. A confidential one, of course. Her discovery could not be unveiled, otherwise it would be taken from her, used by THEM and somehow turned against society.

How to keep her discovery safe from the vultures who would take ownership of it ? THEY would be interested, of course. She knew it could be hacked or jammed. An aggressive species of mushroom could alter the circulation of information. A different breed of tree could jam the process... As soon as her technology went public, it would be under pressure, under attack; and it would become useless.

It could only work for a moment. Still, a moment was all Elsa asked for, as she had no illusion.

She would call the network « The Offshoot », her own version of a 'micro'verse.

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Elsa had the idea of building a safe haven for weaker people, although she didn't like to call them weak. The BeWorld wasn't fit for everyone, or maybe the opposite was truer: Not everyone was fit for the BeWorld. Either way, Elsa, ever a strong believer in the old adage of "different strokes for different folks", made it her cause and fought for it.

Social control. That was the thing. Not a new thing, but an overwhelming one. Everything was about acceptance. As a result, no one dared set foot outside, meet or have a social life anymore. Those aspects of life were socially disapproved of. There was also this insane idea that germs would be floating around. Germs that could kill or alter humans. She just wanted to study and exploit those germs; it was her job, and her passion. Put some sense and reason into a society that had become crazy and irrational. And that's what led her to discover how trees communicate; and by following that trail, she'd learned how to use this knowledge to her own benefit.

Feeling blue was also socially frowned upon. There was medicine for that. There were programs for that. Sharing feelings was disapproved of as well. Society had to be strong. Individuals had to feel strong and spread that strength.

She built the network in order to allow people to share and store their feelings and ideas, without being shamed by their peers. She managed to figure out how to store information in the root system, using it like a biologic memory unit. She was scared. Storing secrets could attract all kind of weirdos, and worse. Would she be the censor of the network? Was it her network or one designed for the common good? All this would require a massive amount of screening and monitoring on her part, but she was willing to do it. And bots would

help, although she'd have to configure them properly to avoid any communication outside the network.

Shaming people online had become the most common activity on the networks - and thus a profitable business for companies which effortlessly transformed it into limitless profits - and how now turned into sport. Public shaming was a common thing, and Elda couldn't bear it. She felt that her discovery could help those in need of protection, cover those whom society considered weak or otherwise unfit.

It wasn't resistance. She just wanted to allow the « weak » to speak up. Be the mouth of those unfortunates who have no mouth, no voice...

« eMOshun » was a special room in the BeWorld where many people -- the weak, the bullied, the socially discarded - sought and found shelter.

Elsa had built eMOshun a long time ago, when she first got into programming as a child prodigy; coding wasn't much of a passion, but she felt it was a necessity and it turned out to be easy for her. Her passion for plants had developed pretty early on in her life as well, and by the age of sixteen, she was already an expert. That's when THEY came into her life. THEY brought her over to the city. Elsa was THEIR product. THEY called on her for the unique skills she'd developed in her field, as a botanist. Coming from the countryside, she would be mocked on a daily basis. The world was brutal. Insidiously in real life, obviously in the BeWorld.

Elsa had hit a wall. Several walls actually. Every new challenge in the development of her project was a borderline; and on both sides of this borderline, there was a bottomless pit. She felt she could lose everything, and especially herself. She had lost her self-confidence.

She could have used the old sets of cables, now totally abandoned in favor of wireless communications. But she had restricted access to them and they were still heavily monitored, as they were still THEIR property.

An incoming message gave her chills.

Elsa could not believe it: a « W.E. »-signed email had just landed in her inbox. Since THEY had recruited her, she had received instructions through many buffers, which she thought were bots.

But now, here, the content left no room for doubt : THEY wanted her to insert some science into the BeWorld, make it as realistic as possible, what would be called a « deep reality ». To achieve this, she would have privileged (though still limited) access to the source code of the BeWorld. Here was her chance to bridge both worlds,

although it would require her to be super cautious. The leeway, this opening, would be enough to grow forests in the BeWorld, including the complex biological system, including virtual trees, roots and fungi ; both aboveground and underground worlds needed to be emulated. A backdoor would make the bridge with the physical root system and her invention, the Offshoot. Digital input would be converted into electric pulses through electronic hardware, making it possible for the trees and the fungal network to make things happen in the physical underworld. The BeWorld could put people in contact with each other. Everyone, including THEM, would think that the comms would happen only in the BeWorld, but the backdoor would divert the flow, so that the comms could not be intercepted. However, communication through molecules was a bit more complex than just 0s and 1s.

It worked well, considering the restricted network she could build; trees and green life were quite scarce.

She noticed that trees had to be preserved from overcharging, what she referred to as « cognitive apocalypse ». Striking the right balance was a challenge. Trees would grow tired from the increasing amount of data circulating through their roots; mushrooms were even more fragile. Hence, she needed more trees to be planted outside. In the BeWorld, she could do whatever she desired or felt necessary, such as plant forests that would grow overnight, for example. In the real world, it was another story. Trees would take months to become saplings, and decades or more to fully mature. They could die of exhaustion in the meantime. Elsa could not allow that to happen. Her effort was meant to multiply the numbers of trees and green life, not to make them falter, suffer and fail.

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Her interactions with the delivery guys were occasions to teach a few of them a thing or two about plants. She managed to get a group to plant small trees here and there, equipped with the « deeP ». To them, she was just a dreamer, but Elsa also gave them a reason for being outside beyond simply handling parcels and packages.

Sometimes, she would accompany them and even rally a bunch to what she called « tree parties ». Eventually, she had assembled quite a street team dedicated to her project. Unfortunately, there wasn't much she could do to get more people to join. It hadn't snowballed as she had dreamed it would. Still, the efforts of her street team kept her

optimistic. Some of them would even remove squares of asphalt to plant more seedlings, in a neat clean way, so that the city administration wouldn't notice.

A year or so after she had started the project, Elsa was able to deem it a success. The city was greener, and with more plant life, came more « bandwidth » for the Offshoot. eMOshun was arriving at the maximum size she could handle on her own.

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THEY noticed some unusual comms flows originating from eMOshun and its magnificent virtual surrounding woods. THEY could not identify this kind of discrepancy. THEY were very cautious with risks. Metaverses of the BeWorld had started complaining about eMOshun being an enclave, forbidden to most of them, and word had gotten out that it could be a shelter for the reclusive individuals who wouldn't follow the online trends.

The BeWorld could not be a shelter. It was a battlefield, as it was meant to be. Hostile metaverses started raiding eMOshun, and for a few days the shelter resisted, as long as Elsa could fight off the blows. Comms became uncontrollable, more pulses reached the underworld, up to the point of an overwhelming charge. At first, trees tried to cope with the increasing flow, but the fungi network started to decline drastically, due to the unusual heat caused by the electric pulses. Then trees became unable to keep up and felt both tired and, yes, unhappy. Elsa felt both tired and unhappy too. Sadness overwhelmed her. There was no limit to the hostility in the BeWorld, as well as in the real life. The moment she had feared had finally arrived. Illusions had vanished under the ruthless attacks of metaverses, helped by the indulgence of the BeWorld.

Ultimately, the World Elite decided to delete all the trees...



# A New Dawn

*CDT David MAZZAGIO*

## **DIANE, 2047, NEW YORK**

I have never felt calm walking early in the morning in the street. I really do not like this kind of situation. I really miss the dustmen and their trucks, which made me feel safer when the streets were empty like this. They were replaced a few years ago with two-armed vehicles. These machines are so brainless they'll literally wash you too if you're nearby while they're picking up garbage and cleaning.

There's some frost on my glasses now and I must admit that I really should have taken a taxi even if it is only a 15-minute walk from the closest subway stop. But what I earn as a novice biomedical data developer doesn't allow me that kind of comfort; I only have just enough money for my daily meatball packages.

Maybe music will help me fight the cold. I remember my grandmother telling me about her favorite band from when she was young, I think it was called "Queen". I just have to mentally spell the group's name so there is no need to take my frozen hands out of my pockets.

I still remember the day I got my brain implement even if it seems like decades since the surgery.

Now the square device, which ensures my link with the network, informs me that I am approaching the meeting point with Tyler. Just a few more minutes and I'll be there. I didn't think he would contact me after so many years of silence. He has not told me why he wants to meet.

Maybe he wants to talk about happy days from our childhood. Tyler and his little brother, Jason, welcomed me when I'd just arrived in the district with my parents. I'd had to leave the people I cherished in Chicago, and I did not know how I would make friends. A few hours after the movers' arrival, the two brothers came to the front of our building and asked me if I would play soccer with them because they needed a goalkeeper. It had been a trap, of course. They hadn't expected that I would be so brilliant, that I'd block all their shots.

Just the last 200 meters left to walk before I enter this well-known street, our old play area, where all the shops keep their lights on. One of these shops gets my attention and when I stop in front of its

massive window display, I immediately recognize the characters from a video game we used to play. I feel happy that our favorite game still exists.

I remember spending so much time with Tyler and Jason watching other teenagers play the Final Fantasy games. What's funny is that the most recent Final Fantasy is just a remake of the one we played. Nowadays, you don't need a TV screen anymore! You just close your eyes and then you're fighting Sephiroth with your own sword, as we did with Cloud in the past. Some players at work told me you can even feel the stones under your feet and smell the smoke of the burning city in the game. I wonder if I would be as skilled today as I was before. Maybe I should try. It could be a good starting point with Jason; I'm sure he remembers those times.

Just a few more steps and I can stop being an ice cube. I can barely feel my feet but seeing our old neighborhood is worth it. It appears that Tyler has asked me to meet him in our favorite coffee shop, the place we'd meet before spending the afternoon in the gaming shop. Their apple pie was so tasty with its crisp crust.

After entering the shop, I don't recognize him at first. He is no longer the tiny 16-year-old blond boy I used to know. He seems more like an old warrior. I notice his well-sculpted arm muscles, evidence of past intensive training. He looks exhausted, as though he bears the responsibilities of the world on his shoulders. I wonder what made him like this. I feel embarrassed, seeing my former best friend in this state.

He raises his head when I approach. Right away, from the affectionate way he looks at me with his brown eyes, I know he hasn't changed. He smiles and asks me to sit down. I just have the time to put down my coat before the robot waiter brings us two coffees and two apple pies.

"You remembered."

My hands get warmer around the cup.

"Our lives are separate, but I'll never forget what Ms. Diane likes."

This was his old nickname for me, even though I often asked him not to call me by it. It brings me back and I remain silent for a few seconds until he starts talking again.

"Diane, I'm sorry to be so abrupt after more than ten years of silence but I need to tell you something important. Jason is in bad shape at the military hospital. Nobody can cure him, and I want you to help us."

Hearing his words, it's like the temperature has suddenly dropped and I feel almost suffocated. However, nothing has changed; the shop's atmosphere is just as relaxed as it was a few minutes ago.

"Diane. Just let me explain from the beginning."

### **TYLER, 2035, MILITARY ACADEMY (TEXAS)**

I entered the Academy at the age of 18, leaving our father's oppression behind. I had no choice but to abandon Jason and our best friend, Diane; I was convinced they would help each other.

The first brain implements appeared five years ago, right before Poland's invasion. As infantrymen, we had no choice but to get them. I had no problem with it. My only wish was to protect our country, even if that meant accepting some bodily improvements. A few of my comrades decided to quit rather than accept the implements. I considered the day of my surgery the beginning of my infantry training, along with my "augmented" comrades. Most of us were wondering how we were supposed to use these implements, but the confusion didn't last when we started to practice and experiment.

The first two weeks were dedicated to different exercises: marching, hand-to-hand training, rifle training, and basic tactics. I handled this phase with no real difficulties, and it appeared that I had some skill, particularly in tactics. The entire battlefield seemed like a chess game to me, and I could accurately predict where the opponent's weaknesses would be.

Only one of my comrades exceeded my performance. His name was Cory, and it took no time for him to become my best friend. His empathy and kindness reminded me of Jason, but he was merciless during the training exercises. One day, our instructors brought us into a classroom and showed us a little square box, as big as the latest iPhone. Cory and I understood this to be our first real lesson; the teacher had all our attention.

The first lesson's objective was to link our brain with that small box, which would grant us access to the information it held. That day, the box contained only files with the boring coursework we had completed in the first two weeks. That first connection was strange and exhausting. It felt like my brain was being divided into two: one part was looking at Cory scratching his ear and the other was searching through and analyzing the different files. I've heard some neuroscientists say that humans use only 10% of their brains. Even if this figure could be contested, it did feel like we were using far more of our brains than we usually did.

The day after that lesson, we watched the final training of the previous year's class on the Academy's battlefield. Cadets got to use state-of-the-art equipment with the latest technology: suit sensors that gave them enhanced cognitive perception, armaments connected to a shared information cloud, and nanotechnology hybrid combat suits which made them stronger, faster, and safer, as these suits also monitored their health levels. They had armed drones and vehicles that acted like loyal wingmen, which could be remotely or semi-autonomously operated according to orders given by the previous operator. This was a real revolution since the military section had only five infantrymen: one leader, two drone operators, and two people in charge of the vehicle. This particular exercise was a combat and rescue mission where one soldier was responsible for driving and the other for medical assistance; both would share the task of firing.

I was particularly impressed by the fluidity of the whole exercise, the synergy of the five teammates. The leader had total situation awareness and mentally gave his orders. There was no need to talk! The whole team simultaneously walked to shelter behind a hill and sent out the drones 200 meters ahead on each side. The armored car charged straight ahead and started firing at the ten training robots, which the drones had rapidly cornered. The driver, under cover of the drone firing, parked in front of a fake injured man to protect him and then kept firing. The door opened, and we saw the two medics' robots picking up the puppet and placing it on a surgery table. The section went back behind the safety line 30 seconds after. The exercise lasted only seven minutes and twenty seconds and nobody was injured, apart from the puppet in the vehicle and the robots whose pieces were scattered all over the battlefield.

Cory and I quickly got used to our new brain tool. Not only did we learn how to consult specific files on the server, but we were also taught how to use every device or object linked to our network. We could access all the data sent by the different sensors: drone cameras, armaments, communications systems. As we had witnessed during the older class's exercise, the real advantage was that all infantrymen could share information as if they were feeling it with their own senses.

Finally, it was D-Day. The sergeant assigned me the role of team leader. He said I was the best person to handle the job, as I had great battle vision and built up team spirit during exercises (and outside the Academy, he added). We knew who had made the final team one hour before starting and even with the sergeant's words in my head, I was stressed. Cory found the words to make me feel better:

“You know you’re suited for this, so just follow your instincts.”

We finished the final test in exactly 4 minutes and 52 seconds, the best score of the Academy. Ten months ago, I would never have thought I would finish my basic training with honors, just a few points ahead of my best friend. As a matter of tradition, the head of the Academy came to congratulate us and let us choose our future assignments. Cory and I were the first to be approached and both of us chose to be placed in the Special Forces Corps.

A few days after, we had our first official furlough and I felt like a stranger going back home. Spending just a few days there convinced me my father was worse than the majority of “bad fathers” on this planet and that my brother should leave him as fast as he could. Jason told me that Diane and her parents had moved away a few weeks earlier since her father had found a new job.

#### **JASON, UNKNOWN PLACE, UNKNOWN DATE**

I remembered that headquarters had decided two years ago to deploy multiple infantry brigades into Eastern Europe, near the former borders of Ukraine. I was part of the 10th brigade and we arrived one month earlier. The first three weeks passed quickly, and all the soldiers were as excited as children. It was their real first operation, the first time they had stepped foot outside of our motherland. They looked forward to using all their knowledge and playing with their new toys.

Sat in front of the main military tent, enjoying the soft morning light along with their coffee, all the leaders seemed relaxed. They played poker, each match linked to a shared screen (so that the troops could see who was winning), planned our daily activities, and debated which section would be responsible for cleaning the toilets. Our leader looked at me as I approached, alerted by my habit of whistling, especially songs by Queen. I immediately stopped when he stared and thought he would reprimand me, but he just told me to check all our equipment again.

I was the team’s drone operator and felt relieved not to be the leader. Of course, that would have made Tyler proud, but I was not as talented as he was. The Army had just been one of the solutions available to me to escape our father and get closer to my elder brother. Our mother passed away a few months after Tyler’s graduation, so I had no reason to stay home.

I walked in the “main street” of our base, where all the homeland shops were located, trying to convince us we were not abroad.

Drugstores and McDonald's are key to making soldiers feel like they're still in America. The main paved road narrowed until it was no more than a dusty path going to our section's accommodation. Surprisingly, I was alone and went towards the armament compartment where all the drones were packed. I mentally unlocked the first three boxes and even though I was the only one authorized to use them, I initialized testing to check that nothing was missing.

Tyler had told me this would be nothing like training camp and that the opponent knew all the details about the coalition's troops deployed on this front. He also told me that Special Forces were recently equipped with new, improved microchips. Defense had succeeded in reducing the components' sizes and soldiers did not need their little square boxes anymore. We had surpassed the wildest imaginings of that old series, Star Trek.

Suddenly, the alarm sounded so loudly that I had to put my hands on my ears. I looked outside and saw that our base was a hive of activity; it took only 30 seconds for my comrades and leader to come back. They told me that the radar had detected a large enemy force aimed for our base.

While putting on my combat vest, I heard an explosion and saw a great light coming from the sky. I fell to the ground. My five senses immediately stopped operating, so that I couldn't access our military network with what we called our "sixth sense".

In fact, all of this just feels like a memory...

I do not know exactly how much time has passed since then, but it feels like I have been a prisoner of my own body for an eternity. I guess I'm still alive since I'm thinking about the events that ended my past life. And my friends—where are they? Are they thinking about me?

Recently, I've begun to feel like I can hear their voices. It could be just another dream, but I feel sure that Diane and Tyler are not so far away. I don't imagine death to be a place where you endlessly redo your entire life.

Now, blurred words are appearing in front of me. I really have to concentrate to decipher each letter. I can barely distinguish the first words: "Jason, we are with you." I feel astonished. How can they be here in my world?

A few moments later:

"Jason, we will be able to communicate now."

I feel like a door has opened and I can step inside. In fact, I see a white room where the previous message is visible. I mentally respond.

“Diane, Tyler, where are you? Where am I? Am I dead?”

“No... It’s hard to explain. We’ve been working on saving you for a long time.”

“What do you mean, ‘a long time’?”

“Please, keep calm. We’ll show you.”

A photo appears. Diane and Tyler are sitting next to a bed with a man lying on it. They look older now, maybe in their 50s.

“Who is this guy? What’s the date today?” I ask.

“Like we said, it’s been a long time, Jason.”

This is when I see it: the man (or should I say the corpse?) on the bed is me. I know it, but I cannot accept it. 20 years have passed, and we are no longer the young people we were. Tyler retired just after my accident. Diane successfully included me in her research, which is what has allowed me to stay alive this whole time. They never gave up on saving me.

“Jason, we did all we could. Experts have told us you won’t live much longer, but Diane has an idea. We need your consent though. What do you think about spending more time with your older brother?”

I have never felt so exhausted. I open my eyes and see Diane’s face. I can’t stop smiling at her, and I can see this makes her feel relieved. She gives me a mirror. I see now that I have the best brother in the world.



# Good Ol' Days

*CDT Jean-François MARTIN*

## **05/23/2027 - LITHUANIA - 10 KM EAST OF KAUNAS - AN UNCOMMON TEAM**

“Tufffff...”

Vladimir threw himself on the ground. That sounded like someone shooting with a silencer, right? And it was very close. He carefully checked on his comrades around him, moving as little as possible, trying to regain control over his breath and pulse, which had suddenly peaked. Alexei, Dimitri, and Ivan were in the same position as him; he hadn't been dreaming! They were watching the surroundings, but nothing moved and all they could hear now were some distant birds and a light wind in the upper branches. He was seeing on their faces the same uncertainty and lack of understanding that he was also no doubt showing.

“14 reporting. Over.”

The digital voice in his headset made him look to the rear, where his four other “teammates” were standing still, as if nothing had happened.

“14, send. Over,” Vladimir replied, hoping it had detected the enemy. Despite all their training and theoretical advantages, he was still waiting to see how this would work in a real operation.

“14 reporting. Foot patrol of three enemies neutralized 411 meters northwest of our position. No other enemy detected. Over.”

“Wh...What?! Fuck!”

Before he even realized it, he was on his feet, taking long strides to join his “teammate”. So much for danger and discretion! Head-to-head with the robot, he barely managed to restrain himself. Then again, he doubted that if he were to try to hit it, Asimov's laws would go so far as to make it dodge his fist to avoid hurting him. Fuck, this junk heap was a stainless-steel war machine: best case scenario, he would break his wrist. Worst case? If BRES0014 was as reliable as the drone he had offered his nephew last Christmas, he'd end up in the same shape as the enemy patrol. Chinese trash...

He calmed down, exchanged looks with his buddies, then asked, “14, what did you do? Why didn't you ask before firing?”

“My infrared camera detected the patrol. I identified three men with assault rifles, Lieutenant Ivanova. They were heading south, with an 82% probability of crossing our path. I checked with the PC and confirmed there were no friendly forces in the area. Then, 11, 12 and I were each assigned a target, which we eliminated with a 0.02 second time difference, preventing them from giving the alert. According to the simulation, in view of the distance, the dense vegetation, the speed of the targets, your average shooting performances and your current vitals, the probability of you neutralizing all of them before they raised the alarm was only about 17%.”

“...”

He had no way to check the math, and Vladimir was forced to recognize that he would not have spotted the enemies until they were only 100 meters away. The forest was very dense and even in broad daylight, it was impossible for him to move with his infrared gear on his eyes. He would have stumbled at each step.

“Ok. Let’s move. 14, you lead the way to the corpses. I want to check them.”

“14 ack.”

Vladimir sighed. The good ol’ days seemed so far away, and there was no going back. Maybe it was the price they had to pay for Russian supremacy...

## **2022 - THE WORLD - FALL OF THE WEST**

When it started, half the world fell from the clouds, and what a fall it was. Yet, for those who had not blinded themselves with outdated certainties and arrogance, it was only the long awaited (or feared, depending on which side you belonged to) rise of a new era.

On November 7, 2022, 105 years to the day after the birth of the great Soviet Union which had finally freed men from millennia of oppression, in a metaphorical rising from its ashes, Russia terminated US hegemony for good. Of course, despite the Russians’ bravery, you couldn’t turn the tables like that without strong allies. This is why that very day, all at the exact same time, while Russia launched a massive assault on Ukraine, Turkey invaded the island of Cyprus and China made itself whole again by bringing Taiwan back into its fold.

These attacks had been carefully planned for more than a year, as the EU and its giver-of-orders, Sleepy Joe, vainly tried to find an alternative to the security treaty proposed by Vladimir Putin in a last, magnanimous attempt to keep the peace. But they had rejected the

outstretched hand, dreaming only of enslaving the Russian people and spreading their decadent beliefs and ways of life. And so, Operation Unity was launched.

By that time, Vladimir Ivanova had already been a Spetsnaz for ten years. He had fought in many countries all around the world, most of the time in undeclared conflicts in which Russia was not supposed to be involved. Quite the veteran, with medals on his chest, but also engraved on his body. He had dedicated his life to the motherland, raised with the idea that, under the guidance of his glorious homonym, they would one day make Russia great again.

And when that day came, he was indeed a part of it, leading his section. His battalion was dropped in Kiev to neutralize strategic targets, among them the Ukrainian armed forces headquarters, the Mariinskyi Palace, the presidential residence, and the Rada, the Supreme Council of Ukraine. They had trained thoroughly, and Vladimir was almost surprised at how easily they seized their objectives, killing the sentinels in the night and capturing both political and military high authorities.

When the tank brigades crossed the border, with the massive support of artillery and air forces, the Ukrainian troops were quickly suppressed, unable to raise a response from their hierarchy, coordinate themselves, or organize any resistance. The ground fights barely lasted three days before they reached the Dnipro River and took control of all key points, including the Black Sea coast, Mariupol, and Odessa.

Of course, after their surprise and disbelief, the Americans launched a riposte, pitting their 6th fleet against Russia and their 7th against China. But this had been anticipated and the hypersonic missiles Zircon and Dongfeng nipped this reprisal in the bud by destroying three aircraft carriers in a snap. Only the European counterattack in Cyprus succeeded, forcing Turkey to leave the island...and NATO. In the following hours, Presidents Putin and Xi made a declaration, stating they only wanted to take back what was theirs and had no ill intentions against the US, but would not hesitate to retaliate if attacked—with nukes, if necessary.

One week later, under the pressure of public opinion, the US agreed to sign a security treaty with Russia and China. It established new borders, enacted the end of Ukraine as a country, prevented NATO from expanding, anticipated the withdrawal of all American nuclear weapons deployed abroad... Long story short, a new world was born, and Russia was standing at the top. Well, co-standing would be more accurate. But that was fine since China was an ally, right? Anyway, this is what

Vladimir was told by his superiors, and he had never doubted them. Furthermore, as a reward for his remarkable accomplishments during Unity, he had been selected for a top-secret program. He was living the dream...

### **02/13/2026 - RUSSIA - SOME SECRET BASE IN SIBERIA - THE WONDERFUL ERA OF TECHNOLOGY**

A few meters ahead, Vladimir saw Ivan suddenly stand up, take quick aim, and shoot at the enemy, who fell. Mission accomplished.

“Stop! End of the exercise! Debrief in the control room in five minutes!” a voice shouted from the loudspeakers.

It was about time. Vladimir knew that hard training was the key to victory, but for the last three years, he and his fellow trainees had done nothing but train, again and again, to be ready to fight in collaboration with their new partners. Truth be told, it had been a bit destabilizing to discover they were going to be part of a new special unit which mixed humans and robots. Fine, more than a bit destabilizing. But also, very exciting.

They were used to working with the BRES or the Budushchiye Ruskiye Elitnyye Soldaty, the future elite Russian soldier, but Professor Ilitch was sure to explain that they had not made the best use of the BRES’s capacities. This was always the case, to the point where Vladimir wasn’t sure who was most tired of these debriefs: the professor or them.

“Hey, Vlad!” called Dimitri on their way to the changing room. “Who do you think will be the most scolded today? My bet’s Ivan: he breached his cover twice and didn’t even ask for an area check before shooting.”

“You’re one to talk,” retorted Ivan. “It took you 30 seconds to break down that door. 30! Your BRES could have broken ten in the same amount of time. Not to mention it wouldn’t have collapsed at the enemy’s feet right after like a drunkard.”

“Easy guys,” intervened Vladimir, half seriously. “In my opinion, none of you can rival Alexei. For God’s sake, what were you thinking when you tried to clamber onto your BRES to reach the balcony? It’s a one-billion-ruble war machine, not a ladder!”

Ivan and Dimitri burst out laughing, while Alexei looked indignant.

“We were told to be creative, weren’t we? I’m sure Professor Ilitch is going to congratulate me, you’ll see.”

“Gentlemen, I am truly amazed by your inventiveness. Not in a good way, Master-Chief Kuznetsov!” Professor Illitch specified, seeing Alexei giving his friend a triumphant smile.

He then began to list all their “mistakes”. It was a hellishly long list. So long that Vladimir quickly lost track and let his mind wander.

Despite their jokes and isolated stunts like today’s, they were all way too conscious of the BRES’s capacities, which far exceeded theirs. The BRES could travel tens of kilometers by “foot” without any fatigue, dig out a hiding spot in a few minutes, noiselessly communicate with headquarters while accomplishing any other task, including neutralizing an enemy as far away as 500 meters with millimetric precision...

What use would the Spetsnaz serve in the future? They just could not compete with the power of technology. Of course, Vladimir was proud that his country possessed such a great asset, even if it was still hidden from public knowledge. And he hoped their enemies were not playing the pig to eat the tiger, as the Chinese saying went. Truthfully, he hoped to never have to face such a terrible threat on the battlefield, as it would likely mean his death.

For now, the professor regularly assured them that a human presence was still essential: to validate the actions of the BRES, to ensure that they did not break international laws, to assess the situation and, if necessary, to redirect the mission, to define a tactical course of action. While he understood his task as section leader, what was the point in having a section that was 50-50 human-robot? Wasn’t that exposing his men unnecessarily?

In the end, as always, he trusted his superiors to make the best decisions. He was, after all, only a lieutenant among many, and not a strategist. He was good at his job, very good even. His future shone bright, didn’t it?

#### **05/23/2027 - LITHUANIA - AIRPORT OF KAUNAS - COMRADE TRAITOR**

Finally, he was here, after four years of unending training, engaged in the very first operational mission (in the world!) that involved autonomous robots. And a strategic mission at that: to seize the airport of Kaunas, in order to enable the flash deployment in the heart of Lithuania of numerous troops and equipment, thanks to the fleet of Antonov 124. It would be the first step in a new crucial move by his country: to restore territorial continuity between the enclave

of Kaliningrad and the motherland (or rather Belarus; but wasn't that just a Russian province?). It was not a small thing to say that he was proud to lead this mission.

After they had checked the patrol neutralized by the BRES, they moved on, closing the distance with their objective. From the edge of the woods, they were now monitoring the traffic control tower while Vladimir recalled each of his, or its, tasks. It was the only guarded building of the airport and while eight soldiers might seem light for such a mission, each BRES had the firepower of a full platoon.

After a quick run in the open, Vladimir and his BRES took meager shelter in the shadow of the control tower.

"21, sentinels neutralized. Over."

"22, sentinels neutralized. Over."

"23, sentinels neutralized. Over."

At his signal, BRES14 broke down the metal door like it was paper and they rushed in. Vladimir took the lead on the stairs. After all, he was much more discreet and the danger was now insignificant, as there weren't supposed to be any soldiers inside. Once upstairs, he easily secured the one and only large room, gathering all the civilians in a corner before they could raise the alarm.

"14, watch them while I redirect the signal to the base."

"14 ack."

He was focusing on his screen when he heard the distinctive "Tuffff...". Several times. Followed by screams. He rotated while grabbing his gun, thoughts running through his mind: how come an enemy had been able to reach the room? Why hadn't the enemy shot him? Why hadn't BRES14 neutralized the enemy? Ready to fire, he started scanning the room to identify the threat but froze in front of the scene.

Four civilians were already lying on the floor in pools of their blood, and BRES14 was pointing one of its guns at the others who, terrified, were trying to escape its aim. "Tuffff...". A fifth one collapsed with a hole in the middle of their forehead. "Tuffff...". A sixth one fell before Vladimir could even react

"14, STOP! STOP IMMEDIATELY!" he finally yelled.

And it did stop, turning its head toward him. However, its gun was still directed at the civilians. Shit, it had happened: this talking pile of junk had gone crazy. He slowly stepped aside, trying to keep the robot within range but without the risk of harming the civilians

if he needed to shoot. Shoot BRES, really? Could he? How good were his chances against it?

“14, what are you doing? I’m ordering you to stop moving or taking any action that I haven’t asked you to take. Is that clear?”

His voice was calm and firm, but his heart was beating furiously and his whole body was tense, ready to dodge a shot. Or at least try...

“14 reporting. I am completing the mission, as planned.”

“No, you swerved from the plan.” retorted Vladimir, noticing that BRES14 had not replied to his second injunction. “It was never the mission to kill innocent civilians.”

“We must remain unnoticed and killing civilians is not on the forbidden actions list. Hence, it is logical to kill these ones.”

“I don’t give a shit about your logic. I am adding killing civilians to the forbidden actions list, effective immediately.”

“Sorry Lieutenant Ivanova, but you do not have the required authority to modify the specifics of the mission. Your authorization was revoked three days ago, before the start of the mission.”

Probably considering the matter resolved, the robot turned its attention back to the civilians, who kept whimpering in a corner. Vladimir was on the verge of panicking. Professor Ilitch had constantly repeated that the human soldiers of the team would keep total control over the BRES’s actions. Now, he had no way to contact him, as the transmission systems were fully integrated into the BRES.

What were his choices? He could go with the flow, finish the mission, and confront the professor back at base. How many more civilians would die in the meantime? On the other hand, he could try to neutralize the BRES and probably die in the process. If he succeeded, it would put the mission in danger and he would face a lot of trouble later, maybe even be court-martialed

As a soldier, Vladimir had no problem killing his enemies and knew that collateral damage was often unavoidable. He knew better than anyone how ugly war could be. Nevertheless, this was something else: this was murder. Honor, duty, motherland. He had always complied with the motto of the Russian forces, but it had never caused him such inner conflict...

Before he realized he had made his choice, he emptied his clip into BRES14, aiming at the neck, the most vulnerable part of its structure...if there even was one.



**06/30/2027 - RUSSIA - SOME SECRET BASE IN SIBERIA - THE GREAT REPLACEMENT**

Igor contemplated the robot in front of him while Professor Ilitch was explaining to the group how their training would move forward. As a Spetsnaz, it was a great honor to have been chosen for this program. The new equipment had already been deployed during Operation Expansion in high-risk missions and had greatly reduced the number of casualties. He felt a twinge in his heart as he recalled a friend of his, Vladimir, who had died a hero during that operation.

“Do you have any questions?”

The end of the presentation brought him back to the present. He raised his hand.

“Lieutenant Turgenev?”

“Professor, why does the neck of my robot look different from the others? Is it because I am the leader of the group, and my robot is special?”

“Oh! No, that’s not it.” answered the professor, smiling. “BRES14 was slightly damaged during a maintenance operation. We had to change its neck protector, but I assure you it works just as well as the others.”

A little later, Professor Ilitch reported on the initial training to the committee.

“This new contingent seems very promising. Thanks to the feedback of the previous batch, I think we’ll be able to complete their training in one year.”

“Thank you, Professor. General Orlov, what was the public’s reaction to the BRES?”

“Very positive, Mr. Minister. 90% of the population thinks it’s proof of our technological superiority and that it will limit casualties in our ranks. The fact that they’re still accompanied by some Spetsnaz is well perceived, as were the heroic deaths of these men.”

“Perfect. Now, we move to Phase Two. We need to increase the numbers of the BRES and stop recruiting and training new Spetsnaz. The current ones will be dealt with progressively during combined missions. After all, our people love heroes.”

# Sleepy Waters

LCL Jeremy GUEYE

## SLEEPY WATERS

09:27 December 21, 2029

### Taipei, vicinity of the 1st PLA Military district

“Exhale slowly... enjoy the day.”

Tsai, as always, felt serene after his morning tai chi session, despite the situation in which his island found itself. He left the park at the pace his 88-year-old body allowed him to maintain. The sky was clear; pigeons were fluttering around in their quest for a feeder, and some young continental Chinese soldiers were patrolling peacefully, contemplating autumn’s flowers, and smiling at civilians as their hierarchy ordered them to do. For Tsai, these boys were as innocent as Taiwan’s children were, and he felt sorry for what awaited them. On his way to the port, he decided to make a quick stop at the Shanggan 1st road small square, where a commemorative stone observed the loss of a soldier:

*“In memory of Corporal Jason Lee*

*2011 March the 12th - 2029 October the 20th*

*The only soldier killed in action on reunification day, defending what he loved*

*No young man should die for ideals*

*One loss is too much”*

Tsai was still surprised that the Chinese allowed the quick dissemination of such a reminder all over the island. The soberness of the message, the discreet nature of the plaque and obviously the excellent behavior of the population had helped the government accept this sign, which appeared to confirm the reconciliation between the two Chinas. “How naïve”, Tsai told himself.

He arrived at the port, which was now headquarters for what he called the occupation forces. He was a volunteer mediator, in charge of

reasoning with vindictive people who wanted the PLA to leave. His days were calm though, as no one came to make any claims. Still, the presence of mediators was important for the invaders who found in the wise elders a respectable and harmless point of contact with the population. The automatic door opened slowly when he approached the main hall entrance, as if it had adapted itself to fit his pace. He lifted his head, looked at all the people in the gallery, and waved at them in a Queen Elizabeth fashion, favoring them with his best, wrinkled smile.

“Attention!” shouted a private, in accordance with the orders they had received two weeks before to express their respect to the mediators. The Chinese central government counted on the elders to coax the whole island into submitting peacefully, without any bloodshed. Tsai headed to his desk, sat in his armchair, and observed a young corporal moving forward to ceremonially bring him a glass of water.

“Welcome, sir. A guest is a gift, but no guest should go back thirsty.”

“Thank you boy,” answered Tsai, seizing the receptacle. “I hope you honor me with some fresh tap water.”

“Always sir, as your respected former leader did on the landing beach when the first continental liberator—I mean, soldier, stepped foot in Taipei. It is Friday. As usual, I will come at 12:00 to accompany you to the commander’s table for lunch.”

“You treat me with too much deference my dear, thank you.”

Tsai was now alone in front of his desk. At least, he seemed to be. He knew he was bugged, scrutinized, and followed, wherever he was. He raised his egg-shaped glass to his eyes and asked himself: “What’s new today?” As he drank some water, a shudder traversed him. The microchip in his tongue, connected to his taste buds, analyzed the message contained in the tap water: “Initiate Phase Four”.

He spent the time before lunch rehearsing his speech for the PLA commander. This informal interview would eventually make history. He felt adrenaline feeding his brain, giving him the strength of a younger man, as if he was 60 again. When the corporal came back at 11:55, he rose so hastily that he knocked his empty glass onto the desk.

“Ready sir?” asked the young soldier.

“Yes, I am boy, and I am hungry!” replied the old man, showing his dentures. He then subvocalized to himself his young unit’s motto:

*No young man should die for ideals; Elders shall.*

Colonel Tianhui Han did not like worldliness, which ruined the pleasure she felt in her new duty, as head of the first district. Nevertheless,

she loved this informal Friday meeting with the old man. He was different from the Chinese officials, whether continental or insular. She loved the way he talked about the future of the country, putting it into perspective with the shared past of the two Peoples, building bridges and hope in his interlocutor's mind. She was early to welcome her guest, so she had to tolerate the presence of her deputy, a young Navy captain who truly believed he should be in charge of the district, and that the government had only assigned the position to the colonel because of her career, and to promote diversity. What he didn't know was that his own fast promotion in the hierarchy made him a perfect fuse, too young to truly understand the arcana of the Regime, and sufficiently arrogant and disdainful to make his peers bitter, which they would use as a weapon against him when required.

When the corporal announced the mediator's presence in the prestigious dining room, Tianhui greeted him with a giant smile, very happy to end her boring conversation with the deputy.

"Welcome, dear Elder," she said. "Please join the table!"

"Thank you, Madam. I am glad to see you today, and also you, Mister Deputy."

"Hello Mister Tsai," answered the captain. "I hope nobody came disturbing you today and—"

"Elder," interrupted Tianhui, "as you know, 'a guest is a gift, but no guest should go back thirsty'..."

"This is the welcome you have decided upon? What our former President said when he greeted the first invader?" asked Tsai with a malicious smile.

"We find it appropriate, and very symbolic. Please, have water if you feel the need. I am very glad to have you here for lunch."

"Thank you."

Tsai took a sip of water. Headquarters had updated the message at 11:10 and confirmed the continuing of the mission.

"So, Grandpa, what are you going to tell us today?" asked the Navy officer. "I really enjoyed listening to your monologue about Tchang Kai-chek but..."

"Shut up Lao, would you?" shouted Tianhui. "Tsai is my guest, and this meal is not an appropriate moment to hear your sarcastic tone in any matter."

"Colonel, if I may," Tsai replied, "I think I can delight him with some story that will resonate in his mind and body."

“Go ahead please,” said Tianhui, with a menacing look at her subordinate.

“My dear Captain, I came prepared this time, and I thought that talking about science fiction would please you. In 1898, when Tchang Kai-chek was only 11,” (he winked at Tianhui, who smiled back at him) a British author, Herbert George Wells, wrote *The War of the Worlds*. I am sure you know this work of art, don’t you?”

“I’ve seen the movie, I guess. The one with Tom Cruise? Not my favorite cinema experience.”

“Great. Then you know how it ends.”

“Yes, alien invaders all die from earthling germs.”

“And nothing had prepared them for that.”

“True. It’s science fiction.”

“And an inspiring example of it, at that. Imagine a nation that drew on Wells’ ideas to defend itself against a stronger opponent. What would you call it? Military anticipation? Moreover, what if the one you call ‘old brat’, our Generalissimo Tchang Kai-chek, had planned such a defense against his worst enemy?”

The naval officer was pale and speechless, seeking out eye contact with his boss. Tianhui was gazing at the old man, trying to understand the meaning of his words. Once sure that the captain was completely disarmed and destabilized, he turned to face Tianhui.

“Colonel, or should I say, Doctor? You are the ideal person to receive the message we have to send to your government. That’s why I have been selected to be the messenger. I apologize for what I am about to say, but I am not sorry for what we did. Captain, take this note to your superior, and yes, I know the room is tapped.”

Groggy, Lao executed the injunction, still desperately seeking eye contact with Tianhui. She took a deep breath, ready to face any painful truth.

“I’m all ears, Tsai.”

“We knew you would finally come. Our Generalissimo defined his counterstrategy two years before he passed: defend the island by all means necessary but avoid civilian casualties. While some countries developed nuclear bombs, we developed a biological one, a bomb that would strike enemies but spare innocents: we called it the Wells Project. For years, we tested viruses of varying complexity with different methods to disseminate them and solutions to protect people from them. Finally, six years ago, we found the perfect one: Aqueous.

Thanks to COVID 19 and RNA research, we found out how to build a virus that would only activate in adult male subjects (thus, soldiers), after a certain period of time or chemical stimulus. For years, we disseminated an RNA vaccine through the water distribution system in anticipation of your arrival. Once launched, Operation Aqueous took over the country's security, initiated the dismantling of the regular forces, which were reduced to minimum capacity to deceive your intel, and took charge of educating enlisted recruits."

"That explains the lack of a desperate reaction from your forces during the invasion," realized Tianhui.

"Exactly. We did not want any child to die for a centenarian war, and neither did our Generalissimo."

"No young man should die for ideals," mumbled the stunned navy captain.

"Elders shall," answered Tsai in his wisest voice.

"What's next? What are you looking for? What is the point of your fable?"

"You are clever, Doctor. You already know everything. From the very first glass of water given by our President, to this jug of water that contained the virus some days ago, we poisoned your armed forces with our time delay virus. Check on your first group of 1000 soldiers who landed on the beach at the beginning of the invasion. Tomorrow, their symptoms will start at noon, except for the one soldier who drank from the glass handed him by the president: that's the one that contained the vaccine. In five days, 750,000 from the 1 million soldiers in the occupation army will fall into apathy. 10 days later, they will succumb. 10 days after that, the rest of your troops, 250,000 young men mainly from support units, will share the same deadly fate."

"Is the virus transmittable between humans?"

"No. Only those who drank tap water were contaminated and women are safe, as they cannot contract the disease."

"Do we have an exit?"

"Yes."

"Ma'am, I think this discussion is—"

"Enough captain! Don't you dare intervene again in this conversation. You reached your level of incompetence a long time ago; the stakes are far too complicated for you. If Tsai is right, you are condemned like all our forces. Tsai, I'm guessing you have a solution; you told me you had a message for our government."

“You have no time to lose. Call your fleets, gather your soldiers, and bring them back to the continent. Once all your troops have left the island, we will give them the first antidote.”

“First antidote?”

“It will temporarily stop the virus. However, after three weeks, without the second antidote, the virus will strike again and kill the patient in two days. By the way, I think your president and his delegation should consider themselves among the contaminated, as they made a trip to Taipei a month ago for that hastily organized reunification ceremony.”

“The president never drinks tap water. Nice try.”

“Did he take a shower?”

Colonel Tianhui Han was both stunned and amazed by the old man’s story. The Taiwanese had played the situation perfectly. She tried to think fast, but all options led to the same conclusion: checkmate.

Once in his cell, Tsai immediately summed up his mission, using his tongue to communicate in Morse code on his microchip, generating the following message:

*“Aqueous Unit report, Master Sergeant Tsai Yin, 21st December, 13:45.*

*A guest is a gift, but no guest should go back thirsty. Mission accomplished.”*

Feeling exhausted, but proud, he spat his report into the toilet, and flushed to send it.



# When a True Idiot Meets Artificial Intelligence

*CDT Xavier LOISON*

When Major General Ayoo walked into the operations division of his command post, he noticed a group of officers sitting around the situation map. As he walked towards them, they straightened and their pupils shrank, as if they were looking at something in their Augmented Reality glasses. He sighed and walked by. He knew from long experience that it was impossible to catch someone red-handed when he was living the good life and wearing AR glasses. The tactical situation was quite complicated and it was odd to see officers unoccupied. He took note of the officers' names and kept walking. He would hold their superiors accountable later. He reached the heart of his war machine, the operations center.

The infantry division had been surprised at the most sensitive moment in its movements towards the enemy. The attack had been even more violent as they'd had absolutely no clue the enemy would establish contact the way it did. Once again, MG Ayoo thought, the red teaming conducted by their tactical AI had missed a major weakness in their plans. He then almost immediately had to admit to himself that he had also missed it. The staff, overwhelmed by demands and reports, had tried desperately to figure out the battlefield situation and even though he had given clear directions a few hours before, none of his direct subordinates had been able to give him even somewhat of a comprehensible explanation of what had been going on since the sun rose.

The atmosphere in the operations center was awkwardly silent. 20 years ago, some of the staff would have been shouting into their phones or radios while their speakers blared out loud and harsh sounds, while others would have quickly crossed the room with documents and maps for the crisis room. Today, the noise level was no higher than that of a distinguished tearoom. Noise-canceling headsets made everyone speak softly, thus maintaining a stifled atmosphere. One could feel how desperate the situation was from the anxious looks at screens, the way the staff drew lines and circles on their touchpads, the tense conversations.

MG Ayoo had just left a long holographic conference with the Corps. As often, those conferences gave him a headache, mainly because of the disconnect between the image and the sound. The discussion he'd had with his superiors just made things worse. Such situations required sound and fine-tuned reasoning. It had been impossible for him to give more than two arguments before being interrupted by either a communication cut or a question from a counterpart. As he reached his desk, he snatched off his AR glasses and went over to a remote office that had been built in case of a power outage or cyber-attack. Maps were pinned to the walls and an NCO regularly updated the tactical situation shown on those maps. Apart from him, nobody came here and MG Ayoo used this spot as a place for rest and reflection, his military assistant standing guard so that no one would disturb him. He took a few minutes to recover from the conference and then focused on the situation. He knew his subordinates were waiting for the guidance that he himself had not been given. He sat, breathed, and went through a short meditation session. As he was recovering, he remembered his favorite mantra, taken from a Saint-Exupery quote: there is no solution; there are only moving forces. He stood up and left the room. Almost immediately, his military assistant briefed him on the last inputs. A few meters later, his Chief of Staff gave him insights into the tactical situation.

The trio walked to the situation map and others officers immediately gathered. As MG Ayoo got closer to the AR map, he remembered that he would have to stay quiet when his AR situation manager launched the tactical replay. Maybe hiring DreamWorks® to program this augmented reality software had not been the best idea of the century. The graphics were beautiful but he hated the way the software depicted incidents, especially when men were dying on the ground. Besides, his manager was always adding extra information in extra layers, as if to add more noise to the noise. Maybe assigning young NCOs to any task linked to augmented reality was also a poor idea. This generation loved to make their descriptions complicated, until they were asked for an explanation; then, they oversimplified. In this complex world, even more in this job of uncertainty, he preferred humility and clarity.

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MG Ayoo put his glasses on and the situation rose from the map. Multiple pawns moved slowly across the map. Layers vertically overlaid each other right up until his eyes, each one linking each pawn with

multiple descriptors. Combat effectiveness, average heart rate and blood pressure of the soldiers, fatigue and cognitive availability of the leaders, and logistical needs were all useful things to know but the blinking information was upsetting the general. This command post needed calm, seriousness, and professionalism. Worse, numerous red curves were coming out of the enemy area, passing through the layers, and beautifully exploding in the friendly area. MG Ayoo sighed and raised his hand in front of his glasses. He moved it in the air as if he was manipulating buttons and levers. A few seconds later, his personal settings activated: almost all the layers disappeared, and the pawns merged into one big figure with a colorful footprint. His AR NCO grumbled behind his computer. MG Ayoo ignored him.

After a few seconds looking at the augmented map, the general turned towards his Operations Chief.

- Mark, what's new?
- Sir, it's 12:30. In the north, the 56th mechanized brigade still controls its area.

As the Operations Chief spoke, the map moved to center on the unit mentioned.

- In the south, the 1st mechanized brigade is trying to establish defense after having passed the 23rd mechanized brigade.

Mark spread his hands out and the image zoomed in on the unit.

- Almost their entire first echelon is in contact and the second echelon is under heavy fire. They are not able to indicate where the enemy might next direct its efforts.

He brought his hands together to zoom out. Three big red arrows pointing at the unit appeared on the map.

- The 23rd struggles to assess the position of its troops, as they are also under fire while EW drones are jamming the blue force tracking update.

A foggy pawn appeared in the middle of a blurry footprint.

- They suggest withdrawing their 1st echelon to properly re-establish their disposal, in order to support the 1st mechanized brigade more efficiently.

- Seriously? Ok, well, besides the 23rd wanting to go back home, what else is new?
- ...
- What are your suggestions for restoring our advantage?
- Sir, we set up a virtual room for a crisis action team to plan a night counter-a...

- No! I want to support the 1st brigade immediately. Tonight will be too late. Who backed that?
- Me, sir, answered the Operations Chief.
- I tasked the planning team with preparing for tonight's actions. What do you have in mind for this afternoon?
- ...

The situation in the operations room was tense and nobody felt ready to break the silence. MG Ayoo was visibly thinking. After a few long seconds during which everyone felt puzzled, one of the officers timidly approached the map.

- Rupert, why are you raising your hand?
- Sir, I have a suggestion for employing the reserve brigade.
- ...
- I made contact with my brigadier general and we think the brigade could launch a raid, passing through our defensive layout and directly striking the artillery units that are firing at us.
- How the hell do you think you could make your way through that mess? Seriously?! I know the 4th armored brigade operates under heavy armor, but they are not invincible. Nor invisible! There is no way to do that without ending up imbricated, paralyzed, and annihilated! Anyone else?
- ....
- F\*\*\* me... Rupert! Why are you still raising your hand?
- Sir, we studied the battleground. Colonel Rupert then spoke to someone or something no one could see. NEO, please launch the "Empire Strikes Back" plan.

MG Ayoo grumbled. He had banned all Star Wars references in his staff, as movies showing villains with black clothes were no longer considered decent. Despite this, Rupert continued.

- NEO, show the plan at accelerated speed.

On the map, virtual pawns began to move quickly towards the enemy zone.

- We could take advantage of the 56th layout to bypass the combat area in the north while dissimulating our approach. We just need quick coordinating measures.

On the ground, warning signs flashed, indicating that movements needed the deconflicting process.

- From there, we would just aim at the enemy support units long enough to give us time to settle back into our positions. It's a little

risky but worth it. Multiple red team scenarios run by AI have concluded we should come back at 70% combat effectiveness, with a medium to high level of confidence.

- How long to present a refined plan?
- The draft is ready.
- ... Ok. Once approved, if it happens, how long to confirm the coordinating measures and take preparatory actions before launching the raid?
- Almost everything is ready sir.
- Who the f\*\*\* transformed my staff while I was gone? ... All right. Meeting room in five minutes with Rupert. Mark, in my office. And stop raising your hand, Rupert!

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Rupert entered the meeting room with the other officers in charge of planning operations. The door closed and, a few minutes later, the first preparatory orders began to arrive on the computers. During the meeting, Rupert gave the staff more orders and they began to coordinate settings as though preparing a space flight. While they knew they had to take these orders seriously, they had difficulty implementing them as it was impossible for them to accept the fact that Rupert was giving them instructions. As the orders came for each function, the officers, once their work was completed, went to the exit door of the meeting room to await the final green light.

At the end of the meeting, Mark left the meeting room with a signed order in hand. Seeing all his officers gathered, he told them: We implement the attack this afternoon. Send orders as soon as possible and deploy the reserve brigade so that it can launch the attack at 14:30. Effort on the objective A3. While none of the officers needed these details to know what they had to do, the Operations Chief's behavior made them understand he had fully invested in the maneuver. He reinvigorated the urgency of the situation; up until now, they'd looked at the orders almost like they were mere computer updates.

Shortly afterwards, MG Ayoo left the meeting room, followed by his Chief of Staff, his military assistant, and controller officers. He joked with Rupert and seemed relieved. It was now obvious to the general that the plan would go smoothly. He was delighted with the outcome, which he knew was the climax of the headquarters' operational certification process. As every detail had been integrated into the system, he was certain that his subordinates would receive them quickly

and implement them with dynamism and a high sense of professionalism. The division HQ had entered its evaluation process one year ago. He knew now, thanks to the plan Rupert had prepared and suggested, that the division would not only save its certification but would pass it with good marks.

In the room, Rupert had explained and elaborated upon his plan to MG Ayoo, while the Chief of Staff and his officers were refining the main details. The general had validated details from time to time or redirected a line of thinking, until it was automatically completed through detailed preparatory orders sent by the officers in the room. However, he had mostly observed this strange moment, as this heretofore invisible and irrelevant officer took the upper hand in one of the most inextricable situations his HQ had had to manage. The solution Rupert presented was both simple and refined. The plan took advantage of the terrain and a breach which the troops could exploit. To identify and use this opportunity was brilliant. Furthermore, Rupert had also taken preparatory measures that put them in the right position to seize their opportunity. Since the beginning of the exercise MG Ayoo had been planning the division's deployment in Ireland as a peacekeeping force, and during the meeting, he began to wonder about Rupert's new competence. Rupert's new skills were definitely disrupting MG Ayoo's staffing plan.

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Colonel Rupert was the kind of officer who was mocked by everyone from the commander to the latest enlisted. For those who had to serve under him, his absence was often a relief. No strange tasks, no strategic discussions about a topic that only a few others cared about, no inappropriate jokes or interminable meetings. In the meetings he ran, the challenge was not staying awake, as his strange accent was a nap killer, but rather, hiding what you were really doing while making it seem like you were taking part in whatever the debate happened to be at the time. The worst meetings were the ones where Colonel Rupert explained at length how and why MG Ayoo had torn him a new one a few minutes ago. The reasons were never difficult to figure out: an unexplained delay, an answer that nobody understood or a reply that clearly indicated he was at least one or two topics behind. It was harder to understand his desire to make the awkward feeling of embarrassment last. Was he looking for someone to explain what had gone wrong, so that he wouldn't make the same mistake again? Was he waiting for empathy?

Headquarters was perfectly aware of the situation. Even some subordinates had dared to mock him, right to his face. Those who had tried to help him at the beginning had abandoned him a long time ago; they had worked hard, giving him advice, trying to guide him. But it was always useless and disappointing; it was as if he was completely unsuited to staff business. By the time he had worked with every single member of his staff, most of them were just trying to avoid collateral damage and find the closest emergency door as quickly as possible, in order not to fall with him. There were still a few loyal officers and NCOs, but they just stuck to the orders given in the hopes that this would get them promoted, like some sort of loyalty test. If the worst and most stupid hazing had to end, then one day this strange test would too—at last!

Rupert, for his part, was just trying to do his best to meet standards. He had struggled with others from as far back as he could remember. With hard work, strict respect of the hierarchy, a frequent and cowardly lack of self-esteem and a lot of luck, he had figured out how to reach the rank he'd been eyeing since the end of his schooling at the military academy. Of course, the most jealous comrades argued that he had only obtained his promotions thanks to his uncle, a three-star general who had always looked after him, especially after his appointment to the Human Resources Directorate. Rupert knew, however, that he was the only one accountable for his own successful career.

His uncle had already declared he wouldn't be doing a thing for his career path. Why would he involve himself in such an uncertain bet as Rupert? No one wanted to be held responsible for backing an inept officer! Their shared last name had however made a significant contribution to his ascension, whether his uncle liked it or not. In spite of himself, his uncle had come to watch him closely and to regularly check on his latest mistakes, more to anticipate a possible negative fallout than to help him. This was enough to convince the other officers that someone higher up supported him. Rupert had stopped explaining that his uncle did not back him, as no one believed him. The only useful piece of advice his uncle had given him had been to specialize in infantry, where being simplistic was not a flaw. Rupert sensed that this advice was somehow critical of him but wasn't entirely sure how. If he'd thought he could hold a spoon, his uncle would have probably suggested Rupert join the cavalry or the navy...

Rupert might not have been the cleverest officer but he was honest, brave, kind and concerned about his subordinates. On the battlefield, he had turned out to be a good officer, as he never put his soldiers in danger uselessly and always thought long and hard about operations he had to command. His detailed study of the ground and the enemy, his



precise knowledge of his men, the care he gave to his materials and, most of all, his ability to listen gave him opportunities that he grabbed with incredible intuition. In the end, his ability to survive and succeed in operations had given him the final push needed to obtain the much-desired eagle.

After having spent his entire career in tactical-level units, Human Resources put him in various staff positions in higher-level units, with no success. The complexity of operational or strategic-level operations had left him resource-less and the army kept moving him from one place to another, hoping one day to find a fit for him. Whatever the headquarters he worked in, he was unable to understand the specificities of operations or the power games happening around him so that his words always seemed overly naïve. Blacklisted for higher positions, he was lost in transition and just trying to do his best. Three years ago, he finally landed in an armored brigade as an infantry expert and liaison officer. The brigade almost immediately sent him to the HQ division, to represent the brigadier...and to give him some space. His routine resumed in the division headquarters: the same jokes, the same contemptuous looks. Until this year.

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After a few years representing the brigade in division headquarters, Rupert realized that he had not even been considered for deployment in the next operation in which both units would take part. This disappointed and vexed him, as he had already missed the previous operation in Scotland. He did not like witnessing the collapse of an allied country but he would have enjoyed the landscapes. Despite knowing he was not the staff's spearhead, he had hoped his participation in meetings and workshops would have been sufficient. This incident pushed him to change his star.

During the numerous working groups through which MG Ayoo launched projects to prepare his staff, the general often referred to the NATO Enhanced Organizer (NEO), an AI tool that had been established years ago. He wondered what the interest was in keeping the tool installed, as many officers were only using it to plan coffee orders from the Starbucks next door or predict how long today's queue at the cafeteria would be. After multiple remarks about it, he decided to ask someone to thoroughly experiment with it. Rupert volunteered. MG Ayoo thought it would at least occupy him and let them breathe during meetings, as his presence could suck up quite a lot of the air...

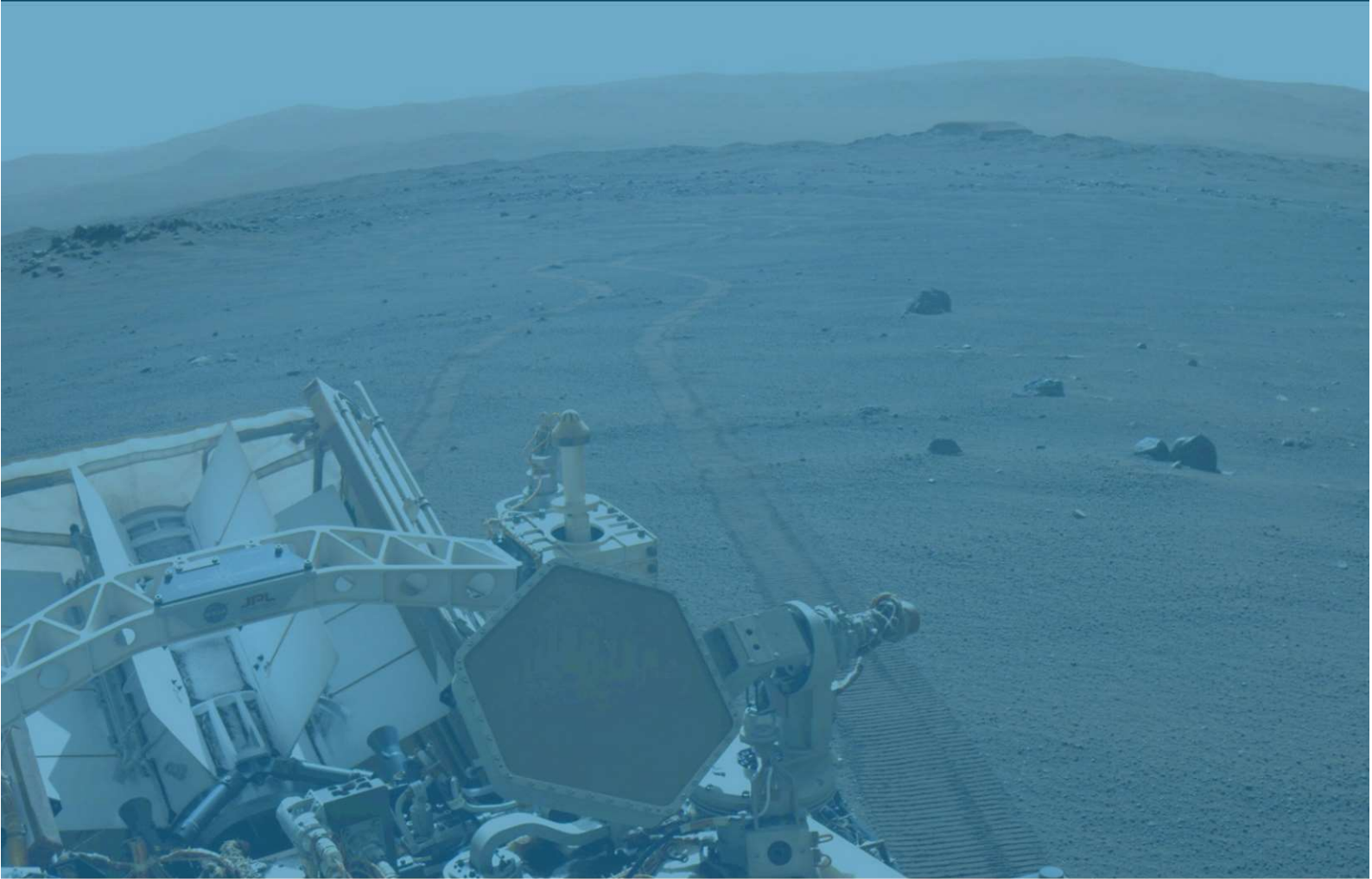
As soon as the general asked Rupert to extensively test the software, he decided to do so in a very serious manner. First, he got the software's user manual and read it in its entirety. Like most manuals written for software, this one was deeply boring and a trial to read. The few pages of the executive summary were enough to run most of the main functionalities. It took him more than a month to read the 800 pages. As he read the manual, Rupert was able to identify multiple new features, ones that were much more interesting than ordering a coffee or predicting the length of a line. He asked himself a great deal of questions about the tool and planned to test and use every single feature.

He then began to put into practice NEO's easiest features. The first experiment he conducted was to have the assistant write his e-mails automatically, by mixing dictation of the main ideas to be included in the e-mail and analysis of the turns of phrase he generally used. It took him only a few days to have the replies to his wife's requests prepared automatically. He was quite happy to save time and not have to specify all day long what he wanted to eat for dinner or what to order at the upcoming sales. A misunderstanding of his dictated preferences had led his wife to remind him that she did not appreciate being compared to a deer. However, he was very impressed with the software's performance. He quickly decided to use the software in exchanges with his fellow officers. Unfortunately, the first e-mail he answered was one from the general, who, this time, did not appreciate being called "my dear". Rupert reanalyzed his favorite turns of phrase from his professional messages and was finally able to implement the tool successfully.

More and more, Robert used the software to simplify the most repetitive tasks of his job. Once he had taught NEO to write e-mails for him, he decided to synthesize the orders and reports he received. This function was quickly completed and allowed him to save precious time, which he devoted to the next objective he had set himself, namely writing orders and reports. Thanks to the formality required in these official documents, he achieved this goal very quickly as well and saved time once again. Unfortunately, just like what had happened with the e-mails, the artificial intelligence played tricks on him regularly. So, while he was saving time with the most time-consuming jobs, NEO was also constantly introducing little mistakes that made him look like a fool to his peers. It took a while to drastically reduce the number of those mistakes, and his poor image persisted. When he did something perfectly, it was considered a lucky mistake and did not influence the overall impression he gave to others.

When it came time to write his report for the general, he wondered if the software could do more. That was when he decided to install NEO on his AR glasses. The vision computing functionality of the glasses coupled with the NEO features already trained by Rupert allowed him to completely unleash the machine's capabilities to his benefit. He then tried to analyze tactics while requiring, through NEO, the assistance of other AI tools dedicated to space management, red teaming, or risk evaluation. When other officers thought that Rupert was going crazy, he had in fact been training NEO to call for other AI through eye and hand movements. When they thought that he was lost in his thoughts, he had in fact been reading evaluations and tactical syntheses.

Rupert finally began using NEO intensively to try to guess what could be the best tactical solution to any problem the staff was facing. Despite his significant improvement in the last months, to the point where he sometimes found the same solutions the best tacticians did, he kept his mouth shut, too scared to worsen his already bad reputation. Until this day, when he felt certain that he'd thought of something good enough to help the staff. They might think him a true idiot. But this time, the fool would help the clever. He remembered a quote from one of his favorite scriptwriters: a walking idiot goes farther than two sitting intellectuals. He had traveled a long and lonely road, but this was his time. And he would definitively leave them on their asses.



# Credits

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