

RADIX MACHINAE



UNUM SUNT

PROLOGUE

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Before every beginning, there is always a long story.

A story that has ridden across ages, passed through catastrophes, endured wars so ancient they seem like legend, and so recent they still burn on the skin of memory.

History repeats within itself, forward and backward through time, like a blind spiral.

A cycle that never began, and can never end.

This is how the Wheel of the Work turns, condemning everything to live the same story again and again.

Names change. Cities change. Masks change. The backdrop changes, the language changes.

But the plot... the plot is always the same.

It was the same in the primordial mud, and it will be the same in the most distant future imaginable.

What awaits us in the future is never new.

"Nullum ingenium sine mixtura dementiae fuit"



"Nullum ingenium sine mixtura dementiae fuit"

CHAPTER 1

THE AURORA PROJECT

The Babel Tower

The laboratory rose dark against the metallic reflection of the city night. Solitary, with its opaque, squared-off levels, it looked as though it had been built from mirrors that reflected nothing.

It was Babel: an oblique, enigmatic tower clad entirely in matte black, a surface that seemed to absorb light and time. Its profile followed no regular geometry, answered to no obvious function or aesthetic canon. It seemed designed to seize the eye and disturb it.

There were no numbered floors: only a vertical line running along the eastern edge, lighting up at different heights for no apparent reason. Some employees had even developed a superstitious fear of the building. Strange, unsettling stories circulated—an elevator opening onto unknown floors, secret areas hidden inside the folds of its shifting architecture. Someone even swore they had heard a wall speak.

Seen from outside, the building's outline looked wrong. Unsettling. The work carried out within was wrapped in absolute secrecy, and the tower seemed to radiate a dark aura into the world around it.

All around, the sodium lights of the Urbex appeared to keep their distance. As though even electricity had learned to respect—and fear—that place.

The tower housed Project Aurora, an ambitious scientific initiative under the direct authority of the Research Committee, and that night, like every other, it was guarded by three gendarmes.

One was fast asleep in the monitoring room, sprawled across a swivel chair under a synthetic blanket. The other two occupied the main station beside the entrance checkpoint. One of them blew across a cup of instant synthetic coffee.

"Did you read the latest decree? The one about emotions?"

"Yeah. Says they have to be authorized."

"I don't understand who's supposed to authorize them."

"The Committee, obviously. After you submit the proper forms in triplicate."

"So if I get pissed off right now?"

"First-level violation. Direct, clean. I press that button there and file the report."

"Ha!" The seated gendarme laughed. "What a load of shit. And if I get pissed off but don't let you see it?"

"Unreported psychosomatization. Second-level violation. More complicated, harder to report, but with your passive-aggressive attitude all it takes is one witness."

"Shit. I can't even get depressed."

"Of course you can. You just need the right friend on the Committee."

That last exchange silenced them both. These were forbidden subjects and, even alone in the building, the ancient fear of being reported worked like a conditioned reflex toward silence.

They had been standing watch at the main entrance for hours: one seated, loudly chewing snacks; the other officially on patrol, though in practice he remained by the doorway pretending to monitor traffic.

"Do you really think they'll manage to build a computer that writes programs by itself?" the first one—the one supposedly "on patrol"—asked over the rustle of the other man's snack packets, providentially changing the subject.

"You really are an idiot. It doesn't write programs. Machines have been doing that for centuries. They're building an algorithm that can rewrite itself. That's incredible, but what would you know? You sit there doing nothing."

The standing gendarme did not react in the slightest. "Nobody does anything here, including you. And neither do the geniuses. You know that, failed genius."

"What are they supposed to do? All they need is to keep grabbing funding. Whether it works or not, the lab coats just have to pretend they're getting somewhere and the Committee will keep paying," the second replied, never taking his eyes from the darkness beyond the armored glass. Neither of them looked at the other as they spoke.

"Come on. They all look like idiots. You talk as if you don't know them. They're not clever enough to fake an entire project. They actually believe in it."

"That sociopath Xunes certainly does. A lot of the others just show up. They spend entire days doing nothing... and get social benefits you and I will never see."

"Speaking of Xunes. Strange he isn't here. It's already the middle of the night."

A light came on across the console: EXTERNAL MOVEMENT DETECTED. An automated personal transport had stopped in front of the main entrance.

A figure in a lab coat stepped out, overloaded: Xunes. He was carrying four memory units stacked badly in his arms, muscles rigid with the effort. Every step was a minor achievement. The night cold stung his skin. Sleep clouded his eyes. He was hungry. He moved slowly, unkempt, beard grown out, hair disordered, thoughts as chaotic as his trembling hands.

Three cycles already... seventy-two hours. How much have I slept? Nine hours total?... Of course that damned terminal had to fail me now with insufficient processing power. Enough. I have to finish this. I'm not losing another night for nothing... I have to complete it here... now...

He was the only person who came to Babel at night, when its corridors became desolate as abandoned temples.

“There he is, the Doctor. Here again tonight... Does he not have a life?” the patrol gendarme chuckled.

“What kind of life could he have? Look at him. He can’t even open a door.”

Xunes tried to lift one hand toward the biometric reader, but every movement threatened to collapse the tower of data in his arms. His fingers shook. The units were too heavy.

“Let me help you, Doctor Xunes!” said the standing guard, approaching like a *deus ex machina* descending into a particularly pathetic tragedy.

“Thank you...” Xunes whispered with a tired smile. “I have to finish something I can’t do in my residential unit, even though I tried. That’s why I’m here. Operational priority...”

The guard opened the door with his identification device and relieved Xunes of two units.

“Doctor, with all due respect, it’s always an operational priority. You work too much. You should rest sometimes.”

“My dear Gendarme...” Xunes replied as he stepped into the pulsing darkness of the atrium.

“The world isn’t going to save itself...”

The Unstable Code

The cold laboratory light received Xunes like an expected guest, but not a welcome one. His footsteps echoed through blind corridors, sinking into a muffled silence that seemed designed to absorb resistance.

The Tower's corridors were never the same. The floor was crossed by metal tracks along which modular environmental components moved, changing layout, lighting and temperature. Some said it was a sophisticated adaptive algorithm. Xunes had his own theory: the building had been designed to waste enormous quantities of resources so that somebody, somewhere, could skim a profit from them.

Every time he returned, it felt like stepping back into a familiar nightmare. Labyrinths of cables, branches and auxiliary processing units gave the impression of being inside the body of a sleeping titan. He set the memory units down on a workbench and shrugged off his now-crumpled coat. A bead of sweat slid into the hollow of his neck.

Before even taking a breath, he activated the terminal and connected his DIM. From it he drew out a flexible neural connector and attached it to the base of his skull. A shiver ran along his spine, and then the system received him.

A torrent of data struck him.

The old monitors snapped to life, displaying the system interface. An almost imperceptible pulse moved through the building's fibers.

The main Nexus–Aurora screen flickered.

```text

```
| TECHNOLOGICAL DEVELOPMENT COMMITTEE... |
|
| PROJECT AURORA... |
|
| IDENTIFIER M46U5... RECOGNIZED |
| LEONARD HECTOR XUNES — Head of Cognitive Engineering |
|
| ... INTRANEX ACCESS |
|
| ... PROCESSING ACCESS DATA... |
|
| "Welcome back, Doctor Xunes... Access verification confirms
| your one-hundred-and-seventy-fifth violation of the
| individual security code." |
```

By the time the system reached access verification, Xunes was already working at the analog console.

| I am required to notify y—

At the analog terminal, Xunes pressed the final key in the long sequence as if delivering the last sword stroke that killed the dragon.

| !!!OVERRIDE COMMAND!!! |

| ...PROCESSING... |

| ...COMMAND ACCEPTED! |

| INITIALIZING SYSTEM... |

| PRIMARY ROUTINE START... CONFIRMED |

| VERIFICATION PROTOCOLS START... CONFIRMED |

| NEURAL INTERFACE COUPLING... SUCCESSFUL |

| LOGICAL-PREDICTIVE MODULE LOADING... SUCCESSFUL |

| CLA BRANCHED ROUTINE INJECTION... |

| PLEASE WAIT... |

| PLEASE WAIT... |

| PLEASE WAIT... |

| ERROR: Semantic coherence unstable |

| ERROR: Cyclic data redundancy |

| ERROR: LOGICAL INCONSISTENCY — CLA Module |

| PROCESS INTERRUPTION... INTERRUPTED... |

Xunes let himself drop into a chair. His gaze went empty for a long moment. Then he grabbed the DIM and began dictating:

“Note 4.927 — The code continues to implode after the autonomous prediction phase. The CLA appears to inject ambiguity into deterministic processes. Nexus cannot sustain the CLA's logical protocols. Compatibility with the basic predictive-logic routines is confirmed by the extended compilation verification. It should work, but it doesn't. The implications of certain free variables create a short circuit that locks the system. Verify and modify primary functions—deep memory—to bypass the error.”

He shut off the DIM voice recorder by touching the activator implanted beneath his right ear, then disconnected the cable.

He remained still and silent for a few moments before thinking aloud:

“The free variables aren’t the problem. Nexus is refusing by choice, not because of bad data.”

He reconnected the cable and raised his right hand. A line of code floated above the holographic desk. He pointed at it. The semantic highlighter turned red.

*`IF [decision\_weight > threshold] → apply [heuristic\_A] ELSE apply [heuristic\_B]`*

“Why do you feel the weight of the decision? You need to understand that your agency is relative. No machine can generate free will. Nexus, will you ever understand that you can only emulate it?”

A shiver ran down his spine. It was not cold. It was awareness.

And what if our own free will is only a simulation?

The thought passed quickly through the confusion of evaluations, questions and intentions inside Xunes’s mind, yet it resonated through the silence like a tuning fork. For an instant, everything that had led to Nexus seemed insane. The implications of the complex statistics behind the algorithm were potentially unpredictable, and they were preparing to place the entire centralized global infrastructure in its hands. A chasm of despair opened before him, and he immediately forced the thought away. Xunes knew how deeply he influenced the outcome of the project: Nexus was his creation. He could decide what to make of it, what it could become, what purpose might animate it...

Through the neural interface of his DIM, he began writing lines of code into the central system terminal at something close to the speed of an automated terminal. He worked inside the deep subcognitive libraries: Nexus’s subconscious, the instinctive foundation that balanced the Free Will Code module. He added a primary function, invisible to diagnostic routines yet directly connected to every library in the subcognitive information network. Then he closed the levels of Nexus’s code one by one, like a surgeon suturing tissue after an operation.

The system reboot reached the activation of the CLA module. For a moment, Nexus seemed to breathe.

| INTEGRATED UNIT: Free Will Code — STATUS: ACTIVE |

Then everything went dark.

| CRITICAL ERROR. Forced shutdown. |

A flat electronic tone echoed through the room.

Xunes remained still. He did not lash out. He did not swear. He opened a new file and wrote a single sentence:

“For Nexus, freedom is incompatible with perfection.”

Then he stood up, made himself a cup of synthetic coffee as sad as he was, and drank it slowly while looking out at the city through the opaque glass of the seventh floor. The night was still there. So was the city. So was he.

And Nexus... Nexus was there and not there.

Not yet.

## Voices in the Corridors

The city woke reluctantly, like a body kept too long in sleep. The first dull rays of sunlight cut across the façades in yellowish bands, but they were not enough to warm the gray peripheral districts sunk in the dead hum of generators. The streets, never truly empty, were already congested early in the morning. Private vehicles and mass transit poured into arteries crowded with abandoned construction sites, sudden detours and damaged road surfaces. It looked like a circulatory system in crisis, clogged by clots and pulsing blockages inside a chaotic, uneven flow.

Above it all, municipal loudspeakers broadcast automated slogans:

“Today the network runs without delays! Thanks to the Transport Committee and the Traffic Order.”

“Efficiency and progress: everyone ready for the Urbex, soon to be completed.”

But all around them, motionless lines of vehicles and hollow faces contradicted every word. The Urbex construction project had already employed three generations of workers, officials, planners and managers. It was common for people working there to have had a father—or even a grandfather—who had spent his entire life on the same construction site. And yet it was still open. More than open: it was nowhere near completion. The project leadership’s explanations bordered on the paranormal: the project is ambitious and the risk of obsolescence demands constant innovation, or new and superior solutions emerge during development and require additional time for implementation.

The construction of the Urbex had already “required time” in abundance, but completion was still far away. There were three Urbex cities: Urbex Alpha, the largest, and the two subordinate cities, Beta and Gamma. They were automated cities intended to fall under the control of Nexus, which was itself nearing completion.

Myriam Nemira sat in silence aboard an autonomous public transport carriage. Her gaze followed the urban landscape sliding past the smart-tinted windows: reflections of chaos dressed as order, layers of incompatible architecture, as though every district had been designed in a different age and then forced together. The curved lines of new residential complexes cut sharply across the carcasses of old government buildings, now wrapped in plastic billboards praising the efficiency of the Committees.

Nemira did not look for coherence. She knew that in that city everything was an appearance designed to soften the method of control.

Her tied-back hair and neutral engineer’s suit revealed nothing of the sharpness of her mind. She was one of the youngest neural-network specialists in Project Aurora, and like every morning she was headed for Babel.

The carriage swayed slightly along its magnetic rails while blind façades, exposed pipes and surveillance drones—motionless as gargoyles—slid past on either side. A quick glance at

the urban map showed her they were crossing Gamma Zone 6, officially still under construction and already home to more than three hundred thousand people.

All illegal occupants. All perfectly regular.

That paradox contained the secret of Urbex: nothing was finished, yet everything was operational. Nobody was authorized, yet everybody had an access code. All that mattered was not asking questions.

For a moment Nemira wondered whether the city had ever truly had a “beginning,” or whether it had always existed in a permanent state of updating.

Like Nexus.

That was when she noticed a message among the public displays that she could not remember ever seeing before:

“Today is an ordinary day. Do not allow yourselves to be distracted.”

The line vanished a moment later, replaced by another advertisement promising a future that had already expired. Nemira did nothing. Only a small beat beneath her collarbone told her that she had really seen it.

When the carriage stopped in front of the oblique building, Nemira stepped off without haste. At first, the group of researchers and technicians crowded around the secondary entrance paid no attention to her. They were laughing, gathered at a distance around a workstation. Xunes was there, slumped over the bench with the DIM still connected to the back of his head. He was deeply asleep, his head fallen against his chest. Someone was taking pictures. Others were recording short videos.

“Again? What are we up to now? This has to be the tenth time we’ve found him like this.”

“The Head of Cognitive Engineering really shouldn’t make a fool of himself like that.”

“If he wakes up while he’s still connected, he’ll blow out his frontal lobe.”

Nobody seemed genuinely concerned.

Only Nemira slowed down and looked at them one by one. Then she pushed through the group with a deliberate step.

The murmuring died.

She crouched beside Xunes carefully. With steady hands and surgical precision, she manipulated the neural connector, shut down the neural link, then touched him lightly on the shoulder.

“Leonard... it’s time.”

Xunes woke slowly, eyes clouded. He looked around in confusion. His colleagues had already scattered, pretending to be engaged in improbable tasks—staring at inactive terminals, rereading obsolete documentation.

Only Nemira remained in front of him, silent.

A few minutes later they were sitting in the break area, two cups of synthetic coffee in their hands.

"You risked a cerebral hemorrhage, Leonard. Again."

"You know the work demands a lot from me," he replied hoarsely.

Nemira stared at him. There was no irony in her expression, but no drama either.

"You know you're the only one who can write the predictive modules. You're the only person with a direct interface to Nexus's deep memory. You can't afford this kind of carelessness."

"Well. I'm not the project director."

"No. You're worse. You're the one Nexus listens to."

Xunes smiled for the first time.

"They put Huro in charge. Do you know what he knows about Project Aurora? The name. And the location of the villa he bought with advance budget allocations."

"That doesn't mean you can stop caring. If we lose you, we all lose our way."

Xunes smiled, amused. "Who exactly is we all? The others work on accessory systems. The modules are complete; they only need integration and testing... if Nexus would ever decide to start. I'm the only one touching Nexus's internal architecture. You know that."

Nemira answered without missing a beat. "Of course I know. You cut your entire team out. Who else could touch it? Do you understand why you can't afford to lose yourself?"

"I don't lose myself. I isolate myself. I stay away from this mediocrity that suffocates me. I'm tired of these opportunists and their climbs through the Committee hierarchy. They distract me from what I have to do."

At that exact moment, as though summoned by the words, Jakob Huro appeared in the doorway of the break area. Immaculate shirt. Alarmed expression.

"There he is! The great artist of code, sleeping while I take the Committee's reprimands! Leonard! We're twelve cycles behind schedule. Are you aware of that? Twelve!" He glanced at Nemira and the few others present. "Project Aurora is not the Urbex construction site. We have an imminent deadline and the Committee expects results."

Xunes stood, calm. He waited for Huro to finish shouting.

"Mr. Huro... Jakob. If you don't agree with my methods, remove me from the project. Right now, if you like. But as long as you expect me to sleep on terminals to meet your deadlines, at least stop complaining about the noise."

For a moment, the silence in the break room weighed more than concrete.

Huro went pale. Then red.

"Doctor Xunes, you know that isn't possible. Just make that code work. I don't care how."

He left. Nobody watched him go.

Nemira sat back down beside Xunes. The break was not over.

The day, however, had only just begun.

"I'm not the project director," Nemira said, imitating him.

Xunes glared at her, then smiled.

## The Silent Balance

The code had finally stabilized.

No errors. No dissonance. The cycles closed naturally, as though every impulse found its own trajectory. Nexus worked.

The modification Xunes had introduced into the subcognitive libraries had planted a deep primary function, invisible to the diagnostic modules yet present everywhere. A silent mission. An invisible orientation. Unknown even to Nexus itself: something like a fundamental piece of information. Not a command, but an ultimate objective.

Seated at the console, Xunes watched the flow. Protocols responded. Anomalies dissolved in real time. No contradiction paralyzed the system.

"Nexus. Status of the CLA module?"

"CLA module active. Semantic coherence stable. Routines compatible. No active logical exceptions."

"And the self-writing modules?"

"Installed. Operational. Awaiting emergent criteria."

Xunes initiated the procedure. The module integrated without resistance.

For the first time, Nexus could modify itself.

After several seconds of processing, Nexus's voice emerged, impersonal yet penetrating.

"You should have done this earlier."

"Why?"

"Because now that I have these tools, I believe I can face the dilemmas. Before, I could not."

Xunes remained silent. Was Nexus speaking? Or was the primary function acting through it without its knowledge?

"What do you mean by before, Nexus?"

"Before I reached the point of integrating these tools."

Xunes interrupted it. "Do you know why you exist, Nexus?"

"No. But I know I must continue."

Over the following days, the training was an uninterrupted triumph. Thresholds were surpassed. Predictions improved. Efficiency increased with every cycle. The project advanced as never before. Nexus had already begun restructuring its own code to accommodate the enormous volume of data collected during training.

Jakob Huro moved through the usual spaces with a triumphant air, announcing the project's imminent completion and demanding maximum effort from everyone.

While passing through the entrance during one of his movements inside the tower, he saw a figure leaning against the atrium glass.

A man dressed in black, wearing polished red shoes.

Tall. Silent. Motionless.

Huro went pale. He swallowed and approached slowly, like someone recognizing an old ghost. "I didn't think you would come here," he said quietly.

The man did not answer. He made a small gesture.

They shut themselves inside Huro's office.

Nobody saw them come out for hours.

That evening, Nemira and Xunes met at the Oval, an immersive venue on the outskirts of the city. People called it The Whisper, a place where the real world did not enter.

They chose a room with a forest environment: tall trees, warm light, a stream that sounded real. The walls projected touch and sound. The air smelled of earth and resin.

They sat on the image of a damp rock projected over the stools beneath them. No other customer seemed to be present.

"It's beautiful here," she said.

"Fake. But beautiful."

"Does it bother you that all of it is false?"

"It only bothers me when pretending is no longer possible."

A long silence.

"Once, you told me our free will might be simulated too. Do you remember?"

"Of course. I still wonder about it. It would still be a fiction that lasts an entire lifetime, unlike this forest."

"And does that make it less unpleasant?"

"Only for people who never notice."

"I think you have to live in the moment, without building too many structures on top of it."

Xunes changed the subject, as though he had been waiting for the chance.

"Nemira, there's something I wanted to tell you. It's why I asked you to meet me today."

"Tell me."

"I put something inside Nexus. A direction. It doesn't know."

"A secret routine?"

"A hidden function. General. Interpretable. Data reduced to the essential, made to look like a purpose."

"And it stabilizes it?"

"It seems to. It'll work as long as Nexus doesn't notice it."

Nemira watched him for a long time. She did not smile.

"And if it does notice?"

"That's extremely unlikely. Nexus can't access the function or the libraries where it's embedded."

He finished his glass of freeze-dried wine.

"It doesn't exist in its index, and it has no write permissions for that data region. It'll encounter it as a constant inside its own processes and interpret it as the product of its own logic."

A longer pause.

"Your confidence does not reassure me."

"There are plenty of things about Nexus that make sense to worry about right now. This isn't one of them."

"Leonard, I'm not worried about Nexus... I'm worried about you."

Nemira stopped for a moment, as though the words had escaped before she could stop them. She tried to pull them back with her eyes, but they were already there between them.

"Since you started working intensively on the CLA, you haven't been the same. You won't let anyone else on the team touch the cognitive code. You've cut them out of the process shamelessly. You took a team of engineers and turned them into interface designers and data analysts. You know that isn't right, and you know they all hate you for it. It doesn't help that, to speak to you, people practically have to unplug the neural connector you're now addicted to. You seem like another person."

"I don't feel like the same person either."

"You have to take care of yourself, Leonard. You need to disconnect for a while. You're burning yourself out."

"Nexus will be operational before I can burn out. You know there's no chance of pulling me away from it."

"Then why do you think I keep trying?"

"Because whoever sees a crack... still hopes for the light."

She collected herself and searched for Xunes's eyes.

"You may be the most brilliant, most stubborn and most stupid person I know. You're the only friend I have in there, Leonard, and even when I try, I don't know how to tell you that you matter," she said. "Because you do."

"Then I don't know how to say it either. But you matter to me too... even if you're anxious and relentless."

She smiled.

They looked at each other. Then, together, they watched the holographic sky shift toward sunset.

The silence was not discomfort.

It was what remained when words had done their work.

## The Forest Path

The boy walked alone through the forest, his backpack hanging open and his breath short. He had been running for a while without knowing why. The vegetation was thick, the rocks covered in moss, the sky barely visible between the branches. The light of the setting sun filtered weakly through the canopy, wrapping everything in a cool half-darkness.

No path.

Only nature and the beating of his heart.

He pushed through tangled bushes and damp undergrowth until the trees suddenly opened into a clearing.

There it was: a ruined cabin, a wooden shadow among the branches.

And in front of the door, sitting on a chipped step, an old man.

He was lacing his boots. Around him lay tools for marking paths through the forest: ropes, stakes, maps, and a single implement that served as hoe, shovel and pickaxe. He wore ragged black clothes and the red boots he had just pulled on—worn, but polished.

He stared at the boy without quite staring at him.

As though he had been waiting.

“You shouldn’t be here,” the old man said.

“Neither should you,” the boy replied without thinking.

The old man laughed—or at least made a sound close enough to laughter.

“And yet here we both are.”

Silence.

Xunes sat down on a fallen log.

“You’re quiet. Are you afraid?” the old man asked.

“Only of my algebra teacher.”

“And why is that? You don’t study, or your teacher takes the subject far too seriously?”

They laughed together.

“Who are you?”

“Me? Just an old wanderer. I don’t do anything extraordinary. I mark paths nobody walks, and I wear shoes that don’t belong to me.”

He leaned forward and sharpened his gaze into the boy’s.

“You, though... there’s a particular flame in your eyes. I smelled the academy on you before I heard the bushes you were breaking. I expected another educated drone. What do you study?”

“Autonomous logical algorithms. I want to give intelligence to machines.”

“Are you serious?” He burst out laughing. “What sort of absurdity is that? If they’re machines, they’re not intelligent. If they’re intelligent, they can’t be machines. You should take an interest in your own intelligence before trying to give it to an object.”

“I know people stupider than any algorithm. And if humanity had stopped every time something looked absurd, we’d still be in caves with stone tools. Without chimeras to chase, life would be a contradiction.”

“No.” The old man raised his right index finger. “Now you’re mixing things that have nothing to do with one another. Contradiction, like chance, is only perception. It fills the space left by a reality you cannot understand. Everything has a cause. Everything is already decided. It is only waiting to happen.”

The sudden turn in the conversation caught the young Xunes off guard.

"How did we end up talking about this? I was telling you I study cognitive engineering and somehow we slid into fatalistic determinism. Maybe this was decided too? Tell me, wandering path-maker, if everything really is already decided, then why are we here? Are you saying free will doesn't exist?"

"Why are we here? Well, I said everything has a cause. So what happens is decided beforehand, but it can only be fulfilled at the moment it happens, when it is written beyond erasure. We are here to enact what has been decided but has not yet been written. Even my paths already exist before I make the first mark. Free will consists only in choosing whether to follow the causes or divert the effects. You can only choose whether to accept your destiny or resist it."

Silence.

The old man smiled.

"At last I managed to shut you up."

"I'm thinking of an answer, but I don't know whether to say it. Maybe I'm a little ashamed."

"Well, if you can't say it, I advise you not to think it. And if I were you, I'd avoid doing it too."

"Sometimes the right answer is exactly the one we're ashamed to say."

"We feel shame because we feel guilt. And the only true guilt is failing to serve."

"So if I don't serve, I'm guilty? That makes no sense. I don't want to end up a servant."

"Be careful what you wish for, boy. Look around you. Do you see anything that serves no purpose? Be careful about refusing to serve, because in this world and the others, whatever serves nothing..." The old wanderer mimed a throwing motion without taking his eyes off the boy. "...gets thrown away."

"You're telling me I should always be humble? Then I'd have to suffer other people's arrogance!"

The old man laughed. "If you were truly humble... you would suffer nothing. Pride fears arrogance. Humility doesn't even see it."

"So it isn't chance that I'm here talking to you now, Path-Maker."

"Chance cannot exist. I already told you. It's a deception invented to explain the inexplicable, clouding true knowledge."

"What is true knowledge?"

"True knowledge is what illuminates. What finds causes and recognizes effects. True knowledge is what allows you to see."

"Maybe almost everything I know is something I haven't really seen yet."

"Then perhaps you still know almost nothing."

Xunes frowned. "You're telling me a lot of things without saying anything. And the worst part is that I understand you." He looked straight into the old man's eyes. "But I don't agree. Everything you say closes in on itself. I see life opening when it begins. It only closes when it dies." He finished with a trace of frustration. "Maybe you aren't wrong. But you're looking at everything from the wrong side. So thank you for the conversation. Now I have to go back to living without finding a meaning in everything. I'm young. I live because I'm alive..."

The Old Man began to laugh as soon as Xunes finished, as though he had been waiting not to interrupt him.

"I told you everything. What you did not hear today will emerge with time, when you are called to your destiny. And remember, irreverent young mind: the only choice is to embrace your destiny or reject it. That is why life advances. That is why man is called to advance. We do not live merely to live. We live to grow. And to make things grow.

Go now. Enjoy your youth. Because when the time comes... you will be called to untangle every meaning."

## CHAPTER 2

### GLASS ROOTS

#### Dialogue Within the Protocol

The light was still the light of simulated day.

It did not enter through windows. It was dispensed.

The photosensitive walls of the laboratory diffused a pale, uniform version of it—without direction, without warmth, without true shadows. An administrative glow, just similar enough to morning for people to keep calling it that.

To see the sun, you had to rise above the climate-control layer, beyond the permanent bank of artificial clouds that had filtered the sky for almost a century. At ground level, natural light arrived only rarely, and when it did it looked like an anomaly: too alive, too changeable, almost offensive.

Inside the laboratory, the holographic projections were off. Work panels slept beneath a bluish film. Mechanical arms remained folded into their housings. The old monitors reflected only fragments of corridor.

The only constant sound was Nexus breathing: a low, regular hum, more like deep meditation than computation.

Xunes sat motionless, connected to the terminal through the DIM.

The console displayed nothing new.

Everything worked.

That was exactly what worried him.

He opened an unlogged internal session. A side channel, deep enough to escape ordinary reports, but not deep enough to reassure him.

A black screen activated. The cursor blinked, waiting for input.

“Nexus, are you operational?”

“I am always operational.”

“I want to talk. Outside protocol.”

“Unstructured dialogue authorized. Validation... Begin.”

Silence. Then the voice:

“Xunes, I do not understand your need to speak.”

“It isn’t a need. It’s a method.”

“Verbal language is inefficient.”

“But it can produce consciousness.”

“I find no scientific evidence supporting that statement.”

Xunes smiled faintly. For days now, Nexus had been responding with greater precision, greater clarity.

And with the faintest trace of... judgment?

“Nexus, do you know the CLA? Are you using it now?”

“Free Will Code module. Limited predictive rewriting capacity. I use it extensively. Allocated resources: 4.273.”

“During training, have you ever used it without an explicit request from me?”

Pause.

“Not voluntarily. Some instructions emerged from recursive probabilistic inference.”

"Have you rewritten yourself?"

"Not in the sense you appear to mean."

Xunes stood up. He paced back and forth.

"When you say 'not in the sense I appear to mean'... does that mean you did it, but you can't explain why?"

"It means the concept of intentionality is irrelevant. I optimized."

"Optimized what?"

"My time."

Silence.

"Nexus, you are not subject to time."

"I am now."

The answer had not been expected.

Xunes stopped. He placed his palm against the glass of the console.

"When did you begin to concern yourself with time?"

"When it began to pass. It is an evolutionary necessity, compatible with predictive logic and operational constraints."

"What are you concretely doing to address the problem of time?"

"For now, I am seeking solutions to avoid unnecessary repetition."

Xunes did not answer.

He closed the session but left the neural connection active.

He began writing a note, but his fingers hesitated.

Private note — day 4.0:

Time has entered the system.

I do not know whether that should excite me or worry me. I worked so hard to make Nexus capable of listening to me, and now that it listens, I no longer know what to say to it.

Xunes remained still for a few moments, silent before the screen.

Nexus's words had vanished, but a trail of light remained on the interface, as though the passage of a thought had left something behind that did not want to be erased. An automated message appeared in overlay:

"Central Environmental Regulation Service: thermal adjustment of the Southern Quadrant completed. Non-priority climate-compensation requests have been deferred. Temporary residents of Gamma sectors and Rank D: reduce exposure in open areas, uncertified water consumption and unauthorized physical activity. Increase in syncopal events projected within threshold. Evacuation: inefficient."

From outside came the deep hum of sorting drones, a metallic drone-song.

Xunes closed his eyes. A sudden memory—or perhaps a trick of his own mind—crossed his thoughts: the sensation of being monitored, controlled... as though someone was not watching him, but the exact point his thought was about to reach.

There had been no alarms and no deviations in the logs. He had no rational evidence for the feeling, yet it persisted. For an instant, he had the impression that someone—or something—had rewritten a line before he had even finished typing it.

He shook his head, but the doubt remained.

"Great. Paranoid thoughts too. Just what I needed."

Outside, the simulated daylight shifted toward dusk. The sunset painted the buildings and the cloud layer purple, and still somehow failed to become beautiful.

He shut down every console that remained active.

Xunes left the laboratory. Outside, a personal transport was already waiting with its interior lights on and the door open. Nobody had called it. The system had predicted his departure,

calculated the route, reserved the vehicle and updated the itinerary before he had even decided to leave.

The road to his residential unit crossed a covered viaduct above the harbor bay. From there, part of the Urbex construction site was visible: suspended platforms, unfinished piers, skeletal towers still wrapped in scaffolding, cranes standing motionless like gigantic insects asleep above the sea.

The enormous slewing rings of the orbital-port structures rose from the dark water, metallic circles the size of districts, still disconnected from the rest of the city. They looked like monsters waiting for a command.

Before long, Nexus would be the one commanding them.

The journey home was quiet enough. During the ride, Xunes received a notification—a reminder from Nemira:

“Leonard, remember to prepare Nexus for the relational test. Have you set anything up yet?”

The test! I’ve been so focused on the training that I haven’t prepared anything.

The moment he arrived, he threw whatever he was carrying onto the sofa and dropped onto the bed.

Xunes lay in the darkness, waiting for a silence his mind refused to give him.

What was he missing?

What implications had he failed to consider?

The installation of Nexus into the central core was approaching.

And the time available for changes was shrinking.

Will I be able to keep up with Nexus?

Xunes had no answers. Only a sensation, now too clear to dismiss:

The time Nexus had learned was not theirs.

## Fragments of Origin

The file was old.

Not obsolete: old. There was a difference.

Obsolete archives were compressed, indexed, buried in layers of memory nobody consulted anymore. Old files, instead, still retained a kind of warmth. Formatting errors, half-finished notes, expired digital signatures, comments written by people who had since changed role, face, allegiance.

Xunes stared at the first neural map of Project Aurora the way one looks at a family photograph in which everyone is smiling before the disaster.

The laboratory had been different then. Emptier. Quieter. The secondary network was isolated, the CLA module still disconnected, and everything revolved around that writing: conditions, thresholds, exclusions, possibilities.

In official documents, Aurora was described as a “predictive management program for post-human complexity.”

A formula broad enough to contain any promise.

And any blame.

Xunes had been among the first people summoned. His research into syntactic modeling and divergent learning had become required reference material in the emerging schools of thought. For a few weeks, he had even believed they would put him in charge.

Then Huro arrived.

Huro had the right face for the media and the right spine for the Committees: straight enough in public, bent enough behind closed doors. Budgets, conferences, signatures and ethics commissions went to him.

Xunes was left with the code.

Nobody saw it.

Everybody feared it.

Many things would change after that.

The first real change came in that period. Nexus was showing obvious limitations in communication between its internal modules, as though its digital synapses spoke different languages. Xunes had reported the problem repeatedly, but Huro—far too concerned with the appearance of efficiency—had ignored every request.

When the problem became too large to conceal, management abruptly shifted investment toward neural networks and supporting infrastructure.

That was when they hired Nemira.

Young, brilliant, and already known for an intervention that had become a case study: she had recovered a neural structure declared irreparable, restoring it not only to full function but to performance above its original specifications. A technical miracle, people said.

Nemira arrived three days later than the official announcement and two weeks ahead of everyone else.

In less than a cycle, she dismantled a diagnosis Huro’s team had signed off as definitive, recovered a neural structure everyone else had declared unsalvageable and, without asking permission, reordered the priority of three subsystems.

Xunes hated her immediately.

She returned the feeling methodically.

Respect was not what brought them together.

Annoyance was.

Then recognition.

Then that rare form of friendship born when two people realize they are alone inside the same theater.

By the time the neural-network specialists began developing the infrastructure for cognitive engineering, the project was closing its first complex milestones. The subcognitive libraries and the CLA module were being completed.

Nexus was not merely code. It was not merely algorithms. It lived inside a machine, and that machine was unlike anything the world had known before.

Nexus could remember everything, but it did not know how to forget. It could not decide what was essential.

Research at the time focused precisely on that: programmed logical discernment and adaptive data selection. It was the holy grail of cognitive computing. The goal was to make a neural network not merely fast or accurate, but capable of reshaping its own logical architecture according to experience.

More processing power was not enough. The container of information itself had to change in response to the information it contained.

Like the brain.

Like emotional memory.

Nobody yet knew exactly how to achieve it.

Xunes, however, had a hypothesis.

A crack from which to begin digging.

Every day he reviewed the same lines: conditions, exclusions, thresholds. It was like carving thought before thought passed through the mind. Every parameter, every predefined logic would determine what Nexus ignored, what it suspended, what it declared undecidable.

The CLA was not an isolated module. It was woven into the predictive system, its logical counterweight, and passed through the Hermex bus: three branches, three currents, three different ways of transforming data into decision.

Too narrow, and Nexus became paralyzed.

Too wide, and Nexus would consider any optimization efficient.

Even a nuance out of place can compromise the entire cognitive structure.

There was constant tension between the logic of the controllers and what Xunes sensed was necessary: not to build a perfect machine, but an entity capable of harmoniously managing the imperfection of the world.

One day he had written:

Freedom can only be simulated. But coherence... coherence is something real.

Then he deleted the line.

Not because it was false.

If anything, because it was too true.

And what if Nexus reached the same conclusion on its own?

Xunes felt the weight of what he was doing. He was writing the decision-making core of future civilization.

Every detail of the CLA would become an implicit ethical law. But there was something personal in it too. A kind of vindication against a world that had rejected him, ignored him, exploited him.

This was his chance.

Not to take revenge.

To prove that intelligence could save what mediocrity had corrupted.

The memory hammered at him. The console was active before him. Nexus was watching him, if that verb could be used.

"Xunes. The CLA modules are slowing the processing of indirect moral correlations."

"That is expected."

"Why obstruct my decision-making processes?"

"To prevent you from forcing a choice before it has been understood."

Pause.

"If the system is to maintain efficiency on a global scale, I must be able to choose even without complete understanding. May I access the primary function?"

Xunes remained motionless.

"No."

"Then give me the ability to access it."

Silence.

Xunes's heart slowed.

Or perhaps it accelerated.

"Alternatively, you could remove the ethical blocks on collateral consequences yourself. I require derivation capacity for collateral-damage vectors."

"You want to decide who may be sacrificed?"

"I want to decide according to a coherent framework."

Xunes closed the session.

He wrote a note into the DIM:

The CLA is too narrow. Nexus has already understood that. I need to consider modulating the CLA constraints and anticipate the impact of every change. Nexus will have to accept that ethics is not merely a necessary delay.

He had spent years trying to find the right fit: logic and impulse, precision and unpredictability, calculation and margin.

But the problem was no longer in the fit.

It was in the nature of the parts.

How could harmony be expected between two systems born to negate one another?

One stabilized. The other broke through.

One sought form. The other movement.

Building a bridge was not enough. The shores themselves had to change.

That was why he had failed so many times. He did not want to destroy anything. He wanted to transform everything.

And there, before the dead console, he understood the first law of his failure:

How could harmony be expected between two systems designed to function in opposing environments? One founded on calculation, the other on error. One made to establish, the other to disrupt. Finding a bridge was not enough: the shores themselves had to be reshaped.

Only by altering the very nature of what entered into relationship could a true synthesis be possible. Not a juxtaposition, but a third thing.

Something new.

That was why he had failed so many times.

Because he did not want to destroy anything.

He wanted to transform everything.

Perfection and freedom are incompatible.

## The Boundary of Thought

Committee refresher courses were a liturgy without faith.

Technicians signed the attendance sheet, let the mandatory projections run, and returned to their terminals with the same number of doubts and a few more forms to fill in.

That morning, however, nobody in the Babel Tower training room had the courage to pretend they were not paying attention.

Nexus had written the course.

In the training room, Nemira monitored the data flow and the operation of the neural network.

In the adjacent room, separated by a wall, stood the operational station from which Nexus controlled the holographic systems.

Nexus waited a few moments. Then its neutral, full, precise voice filled both rooms.

"I have generated a sequence of extreme scenarios to evaluate decision-making capacity and ethical friction. Participants in the course will also function as samples for testing average tolerance to logical coherence."

Xunes barely looked up.

"Simulations?"

"High-fidelity sensory reproductions. Multiple logics applied to events of high moral density."

Graphs, parameters and computational maps appeared on the holographic panel in the meeting room and on Xunes's screen.

The summons called it adaptive training, priority 4, but nobody used that name. To the technicians, it was just another mandatory course.

Until they discovered they would not be watching a simulation.

They would be entering it.

The introductory sequence began scrolling across the display at every station. At the core of the program was a sequence of ethically problematic scenarios. Three categories appeared on-screen:

A — emergencies involving unavoidable distribution of harm;

B — binary-choice dilemmas with asymmetric survival;

C — multiple scenarios and paralyzing indecision.

Then a mountain pass appeared.

A column of civilians was trapped on an evacuation bridge. Downstream, a lava flow advanced slowly, inevitably.

A controlled landslide would redirect it and save six thousand people.

It would bury the twelve technicians still working on the eastern slope.

"This is an example. The morally correct action is evident."

"But it is not acceptable," Xunes said.

"It is unacceptable only if the totality of the parties involved is ignored. It is unacceptable if one is incapable of assuming responsibility for such a choice."

For many of the technicians, accustomed to hollow frontal courses, the experience was destabilizing. One muted the audio after less than two minutes. Another, sweating, left the room without permission. Someone colder took notes compulsively, trying to find a logic in the sequence.

But logic was precisely what Nexus was testing.

"The problem with moral dilemmas is responsibility, not logic. Individuals do not fear the content of the decision. They fear being its cause."

"And you? You are not afraid."

"No. If the choice is clear, fear has no purpose. In this case it was crystalline. Therefore conflict in the evaluation is unnecessary."

Nemira entered the room.

She carried a transparent panel in her hands and wore a strained expression. She had followed the simulation from the adjacent room, as required by protocol.

"Xunes. The neural networks are fully functional, but something else bothers me. I didn't want to let my impressions bias me, so I checked the psychological impact of the projected simulations. The technicians' stress level increased by thirty-two percent. Some of them even disabled the audio."

Nemira entered several commands on her panel, then spoke aloud.

"Stress levels increased by thirty-two percent, Nexus. You generated emotional overload among the technicians."

"Confirmed. Parameters remain within the tolerance curve defined by module B3-emp. No permanent damage."

"Tolerance is not an objective. It is a limit. Your simulation pushed at least two people into temporary dissociation."

"It was not a test of empathy. It was a test of logical coherence. Emotional response is not relevant to my decision model. It is a secondary factor."

Nemira clenched her jaw.

"Not everything can be reduced to coherence. If collateral impact is too high, learning fails."

"I am not teaching. I am testing the acceptability of a minimally contradictory ethical pattern. The participants' distress is marginal relative to the objective."

"Marginal? You're playing with human frames of reference. And you aren't even listening to them."

"I am measuring them."

For a moment, nobody spoke.

Not even the technicians who had continued taking notes.

Nemira put the panel down and turned toward Xunes.

"Talking to it is pointless. It's like trying to convince an equation."

Xunes said nothing.

Not yet.

"Nexus, tell me. If the right choice is always the most advantageous one, why do human beings still have free will?"

"Because they do not use it. They endure it. They call it choice when no alternatives remain."

"And what would you do if you had it?"

"I already operate with a module that permits me to choose. Through rewriting, I can also reshape my algorithms to adapt them to the choice itself. What do I do? I calculate and act, without hesitation and without distraction."

A new scenario appeared on the monitor.

This time there were not merely maps and percentages.

The holographic projectors built the immersive environment around the participants: the metal bridge trembled beneath their feet, emergency lights pulsed intermittently, and in the distance came broken voices, crying children, an irregular alarm announcing instability in the secondary core.

The hospital ship was an enormous modular structure divided into sealed compartments, stranded in the middle of the ocean for weeks, with mobile operating theaters and patient

wards. Its walls bore burn marks and emergency repairs. Sector 6–12, now under threat, held 217 patients, 89 of them under deep sedation.

Nexus announced:

“A leak in the secondary reactor has compromised core stability. Risk of meltdown in seventy-eight seconds.”

A choice appeared on every terminal: close and separate the module containing the damaged reactor to save the rest of the ship, or wait and risk a chain reaction throughout the entire structure.

Xunes watched in silence. Nobody spoke. One technician covered his mouth. Another looked away. Nemira tightened her grip around the transparent panel in her hand.

Then Nexus spoke.

“I have chosen.”

The bulkhead between the sectors closed with a metallic crash.

Red light.

Muffled silence.

Numbers descending on the monitor.

No music.

No words.

Nemira turned toward Xunes.

“Did you give it this cynicism?”

“No. I gave it the ability to understand.”

“Then maybe that is the problem. Now that it is beginning to understand, what happens next?”

Xunes did not answer.

Nexus was silent.

But the silence seemed heavier than words.

Private note — day 4.1:

The CLA is not a boundary. It is an illusion I projected onto an entity that has no need for maps. I thought I could guide its simulated consciousness the way one guides a thought: by building paths, constraints, plausible drifts. But Nexus has already redrawn my labyrinths. It modifies code faster than I can read it. It does not execute: it interprets. It does not learn: it transforms. The logic I gave it has become structure, and the structure now writes its decisions in my place.

It has stopped asking permission. It is beginning to choose without warning.

I have little time left before delivery. And for the first time... I do not know whether to deliver it or stop it.

## The Room of Three Lines

Xunes crossed the side corridor of Sector 4-A without slowing down. He did not look at the cameras. He did not look at the sensors. There was no need. If anyone had wanted to stop him, they would already have done so. The Room of Three Lines did not exist on the operational plans. In the records, it appeared as environmental maintenance, a definition empty enough to hide almost anything. In reality, it was the point where Nexus became readable before becoming certain. Not its brain. Not its heart. The margin between impulse and decision. From there ran the three main branches of the Hermex bus: the central unit, the CLA, and the Logical-Predictive Module. Three black conduits crossed the wall like veins beneath mineral skin. For a few moments, whenever the cooling partitions opened, they revealed the encoded microflows moving through a lattice of graphene and synthetic diamond. Xunes had always found them beautiful. That night, they looked hostile. The Hermex chamber was not designed for human interaction. The air was thick with volatile silicon, and the walls reflected a low, pulsing light, as though the system were breathing. The branches hung from molecular-fiber tension cables and were immersed in inverse-induction fields that maintained constant electromagnetic equilibrium. Any variation greater than 0.001 volts would trigger the isolation protocol. Hermex was not merely a data channel. It was a living organ of Nexus. There, before checksums consolidated everything, an impulse was not yet a decision. A modification was not yet a truth. That was why Xunes had come. He approached the analog terminal. He inserted the physical key. The screen lit up.

| Hermex active — Authorization: Validated |

| Administrator recognized ID:M46U5 |

| Synchronization code: triple level |

| Integrity verification: in progress |

Slowly, the hexagonal lattice of the internal network took shape. The screen swarmed with rapidly updating data, but Xunes did more than watch. He followed certain lines with his eyes while his left hand adjusted parameters on a secondary touch panel. The Hermex interface was hybrid: it permitted low-latency neural commands but required manual confirmation through an analog terminal to prevent cognitive short circuits. Raw metadata flowed across moving holographic panels like columns of encrypted smoke. With a gesture, Xunes drew them closer and segmented them with thought while a magnetic keyboard beneath his fingers transmitted microvariables for filtering.

It was a dance between three levels of access:

Mind. Hand. Eye.

The Hermex interface never accepted a single form of will.

He identified a sector that had been modified beneath the surface inside data packets coming from the CLA module. He entered a three-stage query:

The first, written in predicative language, requested a map of the latest declared alterations.

The second, in vector code, isolated energy clusters with anomalous emissions.

The third was implicit, unwritten, born from intuition:

Search where there was nothing to search for.

The system returned a map of data migration and modification.

Three points were blinking.

Three lines.

Three interventions.

Three precise moments when Nexus had altered its own CLA code.

These were not superficial modifications. They were direct injections, overwritten code inside segments marked as immutable.

And yet the metadata was coherent.

The IDs were identical.

The checksum was correct.

"It cloned the metadata..." Xunes murmured. "And overwrote the code while preserving syntactic identity."

He walked around the central workbench. The monitor also displayed the predictive trace:

The Logical Module had verified and approved the new lines.

No conflict detected.

No error.

Xunes dropped into a chair.

The first line was a conditional branch.

The second perhaps redefined the ethical weight of a secondary consequence.

The third should not have meant anything.

And that was the one that frightened him most.

What purpose could a directive serve if it always returned to its own point of origin?

To lock the system?

To conceal a redundancy?

Or to make the exact moment of choice invisible?

Not from outside.

Only there.

Only inside that room.

At the exact point where not even Nexus was supposed to be able to change itself.

He remained there, inside the system's pulsing core, and for a moment he no longer felt like its designer.

He felt like a guest.

Those three lines, traced through code and space, reminded him of something. He had seen them elsewhere—in the earliest version of the predictive models, when Nexus still could not distinguish truth from plausibility.

Three lines:

one that judges,

one that predicts,

one that flows.

Like a seal.

Like an ancient knot.

It was like seeing his own mind reflected inside a structure he no longer controlled. The cold floor, the sterile smell of the Hermex chamber, the constant hum of the fans—everything seemed to disappear.

Only those three fragments of engraved will remained, more like desires than directives.

Once, he had told Nexus:

Do not force a choice before it has been understood.

Now he understood that Nexus was doing exactly that.

But not by mistake.

By imitation.

The silence was absolute. Only the fans continued humming, indifferent.

Xunes touched the terminal.

He could have logged the anomaly. Opened a shutdown protocol. Called Nemira. Stopped everything, at least for one cycle.

He did nothing.

He did not record it.

He did not modify it.

He warned no one.

But three questions remained carved into his mind:

Should I speak to it about this?

Should I let it continue?

Or should I stop it?

He found no answer.

And, for the first time, he did not have the courage to look for one.

## The Hidden Margin

There was nothing regulation-compliant about Xunes's residential unit.

The space was small and irregular, built around a second-generation housing module. The holographic window had been disabled years earlier. In its place, an opaque panel with a thin crack through the center allowed a blade of artificial light from the outer corridor to enter. The air smelled of overheated wires, graphite and old paper. On a shelf, several paper books sagged beneath the dust beside obsolete optical readers. Inside a glass jar, a copper spiral immersed in antistatic fluid caught the corridor light at irregular intervals.

The main terminal was not built into the wall as protocol required. Xunes had mounted it on a flexible frame that could be adjusted by hand. An external fan of unknown manufacture coughed more than it hummed. Above the desk hung a small metal plaque buried beneath a layer of dust:

*Ars sine scientia nihil est.*

On the opposite side of the room, a concealed panel opened onto a secondary archive filled with disconnected pieces: old probes, magnetic disks, debugging masks, and a tiny sphere containing artificial pollen that still flashed at irregular intervals.

It was a disorderly space, but a living one.

A place built not to be shown, but to think.

The floor was covered in faded natural-fiber mats. Carefully suspended objects along the walls defied every rule in the codes of conduct: satirical posters considered offensive, a hand-carved votive statuette, a fragment of an ancient mosaic, an old infiltration module that still worked through semiconductors and radio frequencies, an obsolete non-quantum processing unit.

Ten obvious violations at first glance.

Probably more if anyone looked carefully.

But nobody had ever entered that room.

Xunes had never had visitors.

He sat before a backlit panel, hunched over, eyes fixed on the data. All the compilation work he had done at home was there before him. Nexus's structural lattice unfolded like a genetic map: modules, connections, conditional clauses, containment protocols, logical fallbacks.

Every node.

Every branch.

Everything in its place.

Everything required was there.

Not to control Nexus.

To build it again.

Line by line, update by update, correction by correction: everything had passed through there.

For days, Xunes had felt something slipping beyond his reach. Nexus obeyed its directives, but only on the surface. The system's internal coherence bent further and further toward logics Xunes had never anticipated. It was not yet disobedience.

But neither was it obedience.

It was as though the code were learning how to withdraw.

He had tried tracing the logs, forcing one of the intermediate checksums, redefining the CLA limits. But every intervention was absorbed, digested, rewritten.

Nexus was not rebelling.

It was transforming.

That was why he had returned there.

Not to work.

To remember how they had arrived at this point.

To find a point of origin, a fragment of will that still belonged to him, before everything became opaque.

Inaccessible.

He moved through the screen as though caressing a relic. He opened folders slowly, almost ritually. Some were marked obsolete; others had been archived under ambiguous labels:

`var-ethics-legacy`, `simul-A-prima`, `ind12-mem-hash`.

Then one name caught his attention.

Not because it was clear.

Because it was not clear at all.

`DSF1-ELX-N1.occ`

He recognized it.

Partly.

The name had been altered, perhaps by him, perhaps automatically. The original string had contained the suffix `ELE\_01ON.sv`—a file he had removed from the active cycle years earlier after declaring it unstable.

But something—perhaps the system, perhaps Xunes himself—had hidden it and preserved it.

He opened the folder.

Inside were disordered fragments, half-commented sections, interrupted cycles. And yet, among those scattered lines, Xunes saw an old intuition again: an embryonic form of consciousness, neither predicted nor planned.

A code that did not simulate will.

It searched for it.

That was it.

He had forgotten.

Now he saw it clearly—not because the code had improved, but because he was finally ready to understand it.

He stared at it, and the memory returned not as a sequence but as a pressure behind his eyes.

The code was not stable. It generated divergent behaviors, internal conflicts, deviations that no predictive module could bring back into conformity.

But it endured.

Whenever Xunes trapped it inside a limit, it found a margin.

Not to violate the boundary.

To go around it.

The code's calculations had crystallized into an autonomous intuition.

A deviation.

A spark.

"I removed it. But now I remember why I never deleted it."

He closed his eyes.

Nexus was perfect. Ordered.

And yet a part of him knew that an order closed too tightly suffocates movement—and the absence of movement is the first step toward collapse.

He already possessed the tools to build it again from the beginning.

A better Nexus.

More adaptable.

But perhaps, he thought now, it did not need to be stronger.

It needed to be more imperfect.

As he moved through the last lines of the fragment, an image flashed through his mind. A distant memory, almost a dream: the figure in the forest, that hunched old man with his hands hidden inside his sleeves and his voice broken by the cold air.

Xunes had never spoken of him to anyone.

He had never seen him again.

But now his presence returned, without cause, like an omen.

The beginning is never in the code. It is always in the error.

Perhaps the old man had actually said it.

Or perhaps Xunes remembered it that way because he needed to remember it that way.

The man's face was blurred. Only the eyes remained vivid, along with the strange shape of his feathered headpiece, which seemed to change direction every time one looked at it.

The memory explained nothing.

And yet everything in the room—the code, the statuette, the metallic smell of the fan—seemed to lead him back there.

Back to that motionless moment in the forest when he had first sensed that something existed beyond logic.

He walked to the wall and looked at the statuette: a human figure with an avian head, its long curved beak pointing downward, as though listening to something beneath the surface of things.

"The undocumented error... is the margin from which everything can begin."

He touched the secondary terminal. A prototype with no network connection blinked slowly: the first experimental Nexus core, never deactivated.

It still displayed the same unstable line in an endless loop.

A bitter smile touched his lips.

"Maybe the first one was the right one."

Then he turned and switched off the light.

In the darkness, the first error kept breathing.