

A Shot in the Dark

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Dominic Vadas hadn't set out to break records. Hadn't intended to become the furthest outpost of humanity in existence, or famous in any way. He'd simply wanted to slip away from the rest of humanity unnoticed.

One billion miles from Earth, 2.5 hours of radio pause separated him from the world he'd left behind. Here on Titania, locked in the oddly tilted orbital embrace of Uranus, swathed by the chilly ice giant's magneto-sphere, there were days when he didn't have to think about other humans at all.

His rover's treads crunched the ice of the surface as he piloted it toward the drilling station. Robots could do most of the work, but the radio delay from Earth meant that it was advantageous to have a human present, so that if a problem occurred, the entire system didn't grind to a halt over the course of days of fault-isolation, decision-making, and transmissions back and forth between U.N. Space Control Agency and the outpost.

At the station, Dominic hopped out of the airlock. Even after four years, he relished the light gravity of this orbiting snowball. Just $.367 \text{ m/s}^2$ —ten times less than on Mars, where his frame had weighed thirty-four kilograms. Here? He weighed three.

Minimal atmosphere meant that the Sun and stars were unwavering diamonds in the sky. With the off-kilter logic of the Uranian system, his position just north of the equator meant that the sun would beam down on the wide solar arrays for forty-two years, until Uranus and its flock of moons moved to the other side of the Solar System, and their southern hemispheres would take their turns to bask in the faint warmth of that distant star.

Now, his gloved hands swept over the ice-encrusted robotic coring platform that had sounded the alert that had drawn him here. He found the obstruction quickly—a piece of rock, somehow embedded in the icy crust, a foreign intrusion into the otherwise pristine matrix through which they were drilling—and removed it, rattling it between his caged fingers as the drill churned back to life, vibrations rattling his frame.

"Enara," Dominic said, triggering his AI assistant inside his suit as he bounced back to the rover. "Corer three is back online. Please inform UNSCA. Propellant tanks are almost full, so we're on schedule for refueling the next drone flight out to Neptune. Survey drill four has struck what looks like a liquid pocket with ammonium perchlorate salts. If we can pump and separate it, they'll have additional oxidizers for future refueling." He paused. "Also tell them I'd like to pursue

the plan to take a rover over the equator to check out Messina Chasma. If the ice is actually fractured down to the rock there, it'd be nice to get samples." *And, damn it, I've earned a break from looking at the same four craters for a while.*

He didn't expect more of a reply than, "Composing message for transmission." Enara, like most active-learning AIs, had adapted herself to the behavior of her target human, and it had only taken five or six "thumbs down" responses from him to start modulating her behavior to his desire for less chatter, more silence. After twenty years, Dominic thought he'd achieved a reasonable balance with the AI: she told him what Control wanted. He did it.

So it surprised him when Enara paused before replying, "Incoming message from UNSCA."

"Eh," Dominic muttered, getting into the rover and tossing the rock he'd extracted into a containment bin for later study. "Ten gets you one they're going to shitcan the Messina expedition. Too dangerous. Too dark. Relying on radar and floodlights, and no solar panels for backup if the batteries die."

Another pause as Enara processed his unusual volubility. "Are you actually proposing a bet with me?" the AI asked.

"Not like either of us have anything to bet."

Another pause. "That's not technically correct. Between contract duration and hazard pay, your net worth is in the millions. Though you're correct in one regard: I have no personal property."

Dominic rolled his eyes inside his helmet. "Not a lot for me to spend it on out here."

He knew that he was likely to die out here alone. He'd already agreed with UNSCA that when his heart stopped, they'd send some of the habitat robots to fetch his body and put it in the composting area of his underground farm, so it would add to the carbon-load there. Most days, he was okay with that, regarding it with a clinical detachment.

On the rare occasions when he sat up late, wondering what the *hell* he'd done with his life, to wind up as a hermit in his fifties, on an ice cube in the middle of nowhere, all he had to do was picture what life on Earth would've looked like: a cubicle job at UNSCA. Driving to work every day. Driving home. Listening to kids squabble and a wife complain about the boredom of her own job. Fretting over dollars in bank accounts.

Suddenly, the cold walls of ice surrounding his tiny, fragile bubble of human space would look clean, stark, and perfect once more. The only concern here was *survival*. And even in the outermost darkness, that was easier to deal with than the humdrum entanglements of human existence.

"I propose a counter-bet," Enara said, her words breaking his reverie.

"Hmm?"

"That they wish to interview you again for the newsfeeds. The human living the furthest from the rest of humanity is an object of some curiosity."

"You'd think they'd know better by now." He grunted. "Just patch it through."

A crackle in his helmet as the rover spluttered to life, its engine processing energy from the hydrogen-cell batteries deep inside its insulated core. "Vadas," a voice began in the recording sent hours before. "We're going to need you to set the drones up for autonomous production and refinement—"

"They *are*," Dominic muttered under his breath.

"—and refuel your ship in preparation for departure."

Dominic brought the rover to a halt, smothering a curse. *Don't haul my happy ass back to Mars. The colonial population's up to seven hundred, I hear. Reacclimating to higher gravity would suck...*

"We're appending a manifest for how much propellant you'll need. This isn't going to be a short hop, Vadas," the recorded voice continued.

Dominic restarted the rover and grimaced, his stomach churning. *Okay, fine. At least send me on. Triton sounds nice. I mean, I'd have to load up all the gear, just leave the filled tanks and habitat for the next crew, and yeah, could die of old age before I finish setting up the station—*

“Thing is, Vadas, you’re the closest person we’ve got. There’s an exosolar object that’s just entered the system that will transit Uranus’ orbit. We’re going to need you to catch up with it so we can study it.”

Once again, the rover ground to a halt. “You want me to do *what* now?” he asked, his lips feeling numb.

“It would seem,” Enara pointed out sweetly, “that we both lost our bet.”

* * *

Protesting his orders wouldn’t do much. He was a qualified pilot. He’d had to be, for the long trip from Mars to Titania, because if there’d been a computer malfunction at the far end, a two-hour radio delay from Mission Control wouldn’t have helped save his life.

The first leg of that flight, he’d been with two other ships, bound for Callisto. All three had been named for the ships of Captain Cook—the *Endeavor*, the *Resolution*, and the *Adventure*. He thought privately that he’d gotten the best of the three with the *Resolution*.

They’d all stopped in the Jovian system—a trip that had taken the Galileo probe six years to reach from Earth, but from Mars it had taken fewer. There, the *Endeavor* descended to set up pumps and the first habitat, allowing the remaining ships to refuel as the new Callisto hermit, Elias Pedersen, shuttled propellant up to them. Then Dominic and Feodor Preobrazhensky had headed for Saturn. When Cassini had made that trip, decades ago, it had taken the probe seven years to travel from Earth to the ringed giant. Again, starting from Jupiter and building up speed with gravity assist from the king of planets had shaved time off their journey.

At Saturn, Feodor had landed on Enceladus, refueling Dominic and the *Resolution*. And then he’d moved on to Uranus.

There hadn’t been the call yet to send anyone out to Neptune. Too far, UNSCA had decided. Not enough value, when Uranus could serve as a resupply station for drones heading for the Kuiper belt just as well. And the gas giants had been in optimal positions during his first trip, which they wouldn’t be again for decades.

Now Dominic checked the math on the course UNSCA sent him. Repeatedly. And had Enara check them for good measure. “You’re paranoid,” the AI accused after his fifth set of computations. “You *are* getting to the age at which this can occur in humans.”

“Enara, I haven’t broken out in cats, don’t have any inclination to hoard newspapers, and I’m not brandishing a shotgun at kids and telling them to get off my lawn,” Dominic replied from the command module of the *Resolution*. He’d checked the vessel every three months since his landing, and had performed maintenance procedures as necessary. No valves seemed to be frozen. The computers, which had largely been kept offline to protect them from radiation and electrical shorts, seemed to be in good order.

“You don’t have access to any of those things,” Enara pointed out. “So your paranoia only has so many ways in which to manifest.”

“Did you accept a personality update from Control when I was asleep? You haven’t tried the shrink bullshit with me in over ten years.” His fingers moved over the keyboard, setting conditions. Testing for faults.

“They required the update, yes.” She didn’t sound apologetic. “As well as a fresh set of psychological tests to ensure that you’re fit to proceed. It’s not just the onboard computers that require maintenance.”

“Please tell them that I’m *touched* by their concern for the wetware portion of their equipment, and that I’m a hell of a lot closer to their mystery object than Elias or Feodor, so they can stop poking and prodding.” Dominic leaned back, rubbing his eyes. “Look. Control *has*, in times past, mistaken feet for meters. They’re asking me to orbit Uranus rapidly, picking up speed with each pass, to ramp our speed up so that we can intercept our wandering friend out there—”

“Ae’ahauka’e,” Enara put in the object’s newly-minted name, her tone prim. “It means *wanderer* or *vagrant* in Polynesian, depending on translation.”

Dominic continued without acknowledgement, “And not *bounce* off the damn thing like a bug off a windshield when we get there.” He paused, wincing at the image in his mind. The *Resolution* breaking apart into thousands of pieces of machined metal, the propellant in the tanks

subliming instantly into gas and dissipating into the void. His own body tumbling, then torn apart as he collided with debris at high speed.

The New Horizons craft, which had first reached Pluto, had hit 55,000 kph. The Rosetta/Philae mission, which had caught up with a comet, had needed to hit an equivalent speed—but it had had ten years to circle the Sun and use gravity assists to reach that velocity. He didn't have years. Control had put a timeline on this mission in months. Fortunately, the wandering object wasn't going nearly as fast as either probe had traveled. He'd only need to get up to about 36,000 kph.

It still means, Dominic thought glumly, *my body is going to have to get used to g-forces again in a hell of a hurry. Hope the old bones can take it.*

Part of him knew he should probably mention this to Enara. It would be a valid reason to protest the mission—his bones had been under the effects of microgravity for well over a decade. But to do so would be to admit to incapability in himself, and that wasn't a valid reason to refuse anything, as far as he was concerned. *You've hit the gym on a daily basis. Your cardio is better than anyone in the Solar System your age*, he told himself resolutely.

But to stop the whispers at the back of his mind that nagged, *but your bones might as well be snowflakes, old man*, he spoke brusquely to Enara. "At the speed we'll be going, if we're even a fraction of a degree off, we'll blow right past the damn thing. Doing a turn and burn from an overshoot to get back home will waste fuel we might not have. I'd like to *make it back here.*" He exhaled, going through it all in his head one more time. Ammonium perchlorate to oxidize and enhance the fuel reactions. Methane, hydrogen, and oxygen in the long tanks that had taken him from Enceladus to Titania, the longest part of his original journey.

That was a *lot* of propellant. And Ae'ahauka'e was entering the Solar System from the top down, along a Z-axis line that suggested that it might have emanated from a cluster of older stars some sixteen thousand light-years *above* the galactic plane. Or not. The folks at UNSCA were delighted by the mystery.

That odd angle of entry meant that he had a short window to reach it. But by a cosmic coincidence, it was going to pass relatively close to Uranus.

Maintenance procedure done, Dominic pulled up the best images from the telescopes situated on Luna and in Mars orbit and stared at the Wanderer, shaking his head. "Really high albedo," he commented to Enara. "No outgassing, either. This might be closer to 'Oumuamua than to a comet."

"No notable surface features," she pointed out. "That's why Control can't get a fix on its rotational speed. As far as they can tell, it doesn't rotate."

Dominic snorted. "Everything rotates. Even tidally-locked moons rotate. It's just that it doesn't *look* that way from the surface of their primary." He shook his head. "Wish they could get a fix on its size. I don't want to either miss it or hit it."

The dark void of space didn't exactly frighten him. Oh, it did, but it was a fear he'd lived with so long that he didn't know how he'd react to *not* having to listen for the telltale hiss of escaping atmosphere every conscious moment. He didn't take the void for granted. It just felt more like . . . proper respect than fear, these days. A nod given to a worthy adversary passed on the way to the ring.

And the way to deal with a worthy adversary was to have a battle plan in hand.

Dominic checked the math again. Verified the supply of food he'd be bringing with him. He'd rationed carefully since his first days, and supply drones had dropped off MREs for him—packaging fastidiously recycled into 3D-printed bodies of new robots for the outpost. But the hydroponics system in the habitat that supplied him with oxygen had also given him food. Soy. Lentils. Chickpeas. The inevitable potatoes. Spinach and tomatoes. He'd never thought of himself as a gardener, but he'd learned. It was just part of survival now—though he enjoyed watching the green things unfold under the grow lights. "Carrying food and water for me is just going to add to the weight of the ship. Which burns more fuel."

"Are you rehearsing reasons why this should be an unmanned mission?" Enara asked. "Should I begin recording?"

“No.” Dominic leaned back in his seat again. “This ship can’t be controlled by autopilot. Any drones I send from Titannia don’t have the fuel or speed to reach the object in time. No, they need someone who can make decisions while surveying the situation from up close. That’s unfortunately me.”

A pause as he took a moment to close his tired eyes in the tight confines of the command module. Enara made a pinging sound and then said, “New messages coming in.”

“Great. What do they want?”

“Control would like you to answer some interview questions for the newsfeeds—”

“What are they going to do if I say no? Fire me?”

“And there is a message from Amanda Brackenridge. Cleared by Control to go through to you—”

“File it with the others.” Dominic’s eyes opened. “Wait. Did you say *Amanda*? Not Lillian?”

“Yes, this message is from an Amanda. The subject heading is ‘My mom passed away.’”

“Put it through. I’ll read it.”

There was a moment’s pause, in which he thought he’d actually surprised the AI. And then the message appeared on the screen embedded at the wrist of the suit he wore, even inside the ship.

* * *

MR. VADAS—

THIS IS A STRANGE LETTER TO WRITE. MY MOTHER LILLIAN PASSED AWAY SIX MONTHS AGO. I UNDERSTAND THAT YOU AND SHE WERE CLOSE WHEN YOU WERE BOTH IN CONSIDERATION FOR THE MARS PROJECT, BUT THAT YOU TERMINATED YOUR RELATIONSHIP, AND SHE MARRIED MY FATHER.

* * *

I DON’T KNOW IF YOU KNOW, BUT IT WAS AN ABUSIVE RELATIONSHIP. MOM FINALLY DIVORCED HIM WHEN I WAS IN COLLEGE. AFTER THE DIVORCE WAS FINALIZED, SHE TOLD ME THAT HE WASN’T MY BIOLOGICAL FATHER, BUT SHE WOULDN’T TELL ME WHO WAS.

* * *

AFTER HER DEATH, I HAD DNA TESTING DONE. IMAGINE MY SURPRISE WHEN MY CLOSEST LIVING RELATIVE TURNED OUT TO BE THE FURTHEST HUMAN FROM EARTH. I APPROACHED UNSCA WITH DOCUMENTATION, THEY VERIFIED THE DATA, AND THEY’VE ALLOWED ME TO CONTACT YOU.

* * *

I WOULD APPRECIATE ANY INSIGHTS YOU COULD GIVE ME ABOUT MY MOTHER WHEN YOU KNEW HER. I KNOW THAT SHE WROTE TO YOU MANY TIMES OVER THE YEARS, BUT SINCE YOU DON’T APPEAR TO HAVE RESPONDED, I HAVE NO CLEAR SENSE OF YOU. I’D LIKE TO GET TO KNOW YOU. IF YOU’LL LET ME.

* * *

SINCERELY,

AMANDA J. BRACKENRIDGE

* * *

Dominic stared at the screen, slowly shaking his head. “Of all the goddamned timing,” he muttered. Part of him wanted to scoff, *there’s no way. I used a condom every time when I was young, and I was sterilized when I was accepted into the Mars Project. There’s no fucking way.*

“What are the odds that this is some newsfeed or ploy by Mission Control to get me to give them better human interest bullshit?” he asked out loud. Then he realized how that sounded. “Wait. That’s the *paranoia* you were talking about.”

“Hermits have been noted to possess this character flaw, yes.”

His mind churned. “My mom asked me to do ancestry testing before I left Earth,” he muttered, unable to recall any other time he’d made his genetic information searchable. “Her damn genealogy obsession just bit me in the ass.”

A pause. “Dominic? Do you want to reply, either to Ms. Brackenridge or to the newsfeed interview questions?”

“Not right now,” Dominic replied, shutting down the message on his wrist. “It’s been thirty years and more. It’ll keep.”

He found himself almost resenting both Amanda and her mother, for impinging on his

awareness. His reality had been a carefully constructed bubble in which no other voices intruded. No one made demands, besides those of work. There had just been him, the ice, and the void of space. Enara had been part of it, sure, but Enara was an AI assistant, four generations removed from ‘turn on the television and find my show.’ Advanced, but not a person—just an adjunct of himself.

Dominic exhaled, examining his thoughts and reactions, and found them poisonous and selfish. *Lillian’s already gone to meet the void*, he thought, testing the idea. Assaying his response. *Shouldn’t that mean more than your inconvenience?*

* * *

The first orbit around Uranus wasn’t too bad, though the chill green bulk of the gas giant looked entirely too close for comfort despite the generous margins of error built into their course. By the third increasingly elliptical pass, Dominic’s chest felt so heavy, every breath felt like lead. “Enara,” he croaked into his helmet, “Guess I’ll answer that letter now.”

“Distraction might help you cope psychologically,” the AI replied with just a hint too much condescending superiority in her tone for Dominic’s enjoyment. “Dictation or text?”

“Dictation.” His fingers felt too thick and heavy for typing even if he hadn’t been wearing gloves. “Dear Ms. Brackenridge—” *Too formal? Eh. I’ve been a hermit for over a decade. An anchorite in a cell of ice, dedicated to no god beyond my own survival. She can live with my lack of social nuance.* “I’m sorry to hear of your mother’s death.”

And for a wonder, he was. It was a chapter of his life long closed, but it still felt odd to hear the word *dead* applied to someone he’d known. There was a finality to it that he didn’t like, an absence of possibility. *Don’t be stupid. There was never any possibility at all.*

“Lillian was a lovely person. There was a point at which I could see us spending our lives together on Mars.” The words came haltingly, as much impeded by the years between as by the g-forces pushing at his body. Out of the corner of his eye, Dominic could see Oberon. Could track his progress by how fast the little moon seemed to scoot across his horizon. Fast. Too fast. Like life itself, sometimes. “She’d broken up with her ex about six months before joining the program. He was abusive and controlling, and I did my best to be the opposite of that. I’d play violin in the evenings, since we were all confined to quarters to simulate the stress of a long journey. She liked that. But she always seemed to have one foot out the door with me. I didn’t entirely blame her—she didn’t know if I was going to be like him all over again.”

Tighter and tighter, the press of inertia on his body. Blood roaring in his head. Nothing but honesty left as he continued, punch-drunk with the power of the Universe around him, “But we had an argument. About having kids. I said there was no reason to take chances with radiation on the trip or on the surface of Mars. She said maybe we should both just stay on Earth. In retrospect, I guess she was trying to feel me out about you, but she didn’t say that.” A partial inhale, fighting the g-forces. “I said no, she left my quarters, and next thing I heard, she’d abandoned the program and gotten back together with her ex. I figured that was that. She’d made her choice, and it wasn’t my place to go charging after her. So I left. Eighteen months to Mars. Eight years on the planet. I think she sent her first message my way . . . five years after I left Earth? You’ve got her records. You tell me.”

The orbital burn eased as the *Resolution* swung around, and now there was a *push* at his spine. The relentless physics of the maneuver eased, and Dominic took his first full breath in hours. “I don’t know why she kept writing. I never read any of her letters. And if you want to know why not . . .” He paused, shaking his head. “It seemed kind of pointless. I wasn’t coming back—I was heading further away. Anything that had the potential to make me second-guess my decisions was just . . . extra weight I didn’t need on the trip.” *I doubt it would’ve impacted my fuel consumption, but damnit, I didn’t need any of this. I didn’t need to know. And neither did you.*

He paused the recording. “Enara, do a quick scan. I don’t want to read her letters, but . . . did Lillian ever tell me that her daughter was mine?”

A pause. “She did,” Enara replied, her voice unaccustomedly subdued.

“Well. Shit.” Dominic shook his head, not knowing how to feel about that. “How long till next

burn?”

“You have time to sleep. And after that, UNSCA recommends entering a colloidal suspension. Your blood pressure concerned them on the pass previous to this one.”

“Yeah.” He exhaled. “Send what I’ve written, please. I’ll try to get that nap in.”

* * *

The colloidal suspension system was a gelatinous affair. Dominic referred to it mentally as the world’s biggest Jello salad. He hung inside the goo, which provided extra cushioning for his fragile human body against the g-forces, and simply *endured* the next three orbital burns. No words left. No thoughts, beyond a constant borderline state of prayer, *please, god, don’t let us have fucked up the math.*

And then they were out, and through, and speeding through space at blistering pace, and he could breathe once more. Move once more. “Slowing down,” he announced, clambering out of the gel, “is going to be a bitch, too.”

Ae’ahauka’e began to loom larger in the pictures his ship’s cameras took of it. And with little to do besides spectrographic analysis of the object, maintenance, and the occasional light course correction, Dominic couldn’t avoid the voices of Earth any longer. He replied to joking messages from Elias and Feodor on Callisto and Enceladus, respectively. “The news media is calling us *anchorites*,” Elias’ first message came through, in his light Swedish accent. “For the kind of monks who would be walled up into their cells, attached to churches, back in the day. Food and books pushed through one hole. Dispensing wisdom through another.”

“I seem to be awfully far from my cell, and I don’t have much wisdom to dispense,” Dominic sent back, imagining Elias’ laugh from fourteen AU away. “Guess they’re out of luck.”

Feodor’s voice from Enceladus, complaining lightly, “It’s getting crowded here! Have five new roommates. Think I will jump on *Adventure* and come join you. You have best roommate ever—silent one, just passing through on way to rest of cosmos.”

“Yeah, it’s quiet, but no one else will *shut up* about the damn thing. You have five roomies—I have half the population of Earth yammering in my ear. Count your blessings,” Dominic sent back, his tone acerbic.

Then the questions of the media, banal and inane: *What prompts someone to want to live out their existence so far from the rest of humanity? What does a hermit want?*

He wanted to say, “Go ask someone living on a mountain top. They’re closer to you. They can yell down for you to shut up and go away,” but UNSCA had given him strict instructions to *be a good representative of the program.*

Which was another *sterling* reason to be so far out in the ass-end of space.

But his real reasons wouldn’t be perceived well by the folks back home. They’d be insulted. Angry. Rejected by the object of their interest, they’d turn hostile. He couldn’t say: *I got tired of all of you. Of your mass stupidity and willful ignorance. I figured loneliness was a better companion.* And he also couldn’t say: *Being alone isn’t bad. What’s terrible is blindly holding onto someone till you suffocate them, because you’re too damned afraid of your own company to be alone.*

No, those weren’t UNSCA-approved statements for dissemination to the masses. So he stuck with lame jokes. “My roommates on Mars said my violin-playing shouldn’t be inflicted on other humans. I took them at their word.”

He didn’t like the stories they wrote, when Control forwarded them. Too much making him sound like a hero. He wasn’t a hero. Heroes *died*, usually by doing something shit-stupid. Dominic knew what he was, and what his limits were.

No reply yet from Amanda. He didn’t really expect one. On reflection, his tone had been brusque, and he regretted that. She just wanted to reach out to a father she’d never known. She wasn’t a newsfeed, hungry for content. Dominic almost opened a new letter to her each morning. Every morning, he discarded the notion. *Focus on the work. Just like every other day.*

* * *

When they were two weeks out from Ae’ahauka’e, Dominic stared at the shape of it on his screen and asked, “Enara? I think I’m dreaming. What can you tell me about this damn thing?”

“Measurements are coming back. There’s no deviation in the sides,” she replied.

Bullet-shaped and about the length of a skyscraper, Ae’ahauka’e blazed through the void. Unlike most extrasolar objects, it wasn’t dark or red—it looked white-silver. Its sides were almost devoid of pockmarks, though there were a few, presumably from millions of years of micrometeorite impacts at high speeds. There was ice on it, to be sure—captured from some nebula or other object along its long and lonely path. But it was smooth. Frighteningly, starkly smooth, in a way that suggested machine manufacture. “Well, then. Send that along to UNSCA and see what they say,” Dominic directed, his mouth dry.

And that afternoon, knowing that in some conference room on Earth, people were arguing over *what does this mean?* Dominic sent Amanda another message. “Hey. Just got my first good view of the Wanderer,” he said, his eyes still locked on the image on the screen. “My personal favorite idea so far is that what we’re looking at is a mass driver, a missile fired in a war so long ago that the dinosaurs were still around when one side shot it at the other, and totally missed. I’ve got a bet on with my AI assistant that they’re going to ask me to try to land on it. She says that they’re also going to want me to get samples. I might have to increase her memory allocation if she wins.”

He paused. “It feels oddly good to talk to someone besides Enara or Control. Even if there isn’t a reply. Guess maybe that’s why your mom sent me stuff over the years. Sort of a diary, maybe.” Dominic still hadn’t read the messages. What was the point of listening to a ghost? It would just be weight. An unseen mass on his shoulders, comprised of all the things he could’ve said or done, but hadn’t.

Five hours later, to his surprise, a simple return message: WOULD YOU LIKE TO SEE A PICTURE OF YOUR GRANDSON?

His first shocked response was to respond *hell no*. Because then all of this would be *real*. But he swallowed it down. “Enara? Set me a reminder to answer her on that one.”

“For when?”

“After we catch up with the big beast we’re hunting.”

And then word came through from Mission Control. *Make approach. Radar scans. Cut engines briefly so that we can measure the object’s relative gravity by determining your drift toward it. And then we’ll try to find a landing area.*

“You owe me something,” Dominic told Enara. “God knows what.”

“I still expect them to ask you to do more,” the AI replied, tone prim. “You will have to wait for the resolution to our wager.”

* * *

Closer. Closer. Dominic’s mouth went dry again as he relayed the first photographs from within a kilometer. There were *markings* on the silvery sides. Regular, incised etchings that repeated themselves. “No way that’s natural,” he muttered. “I mean, infinite monkeys and Shakespeare are one thing. This . . . is something else.”

Newsfeeds back home apparently went nuts. The object looked like a weapon, like a missile sent between the stars. Like a mass driver fired in a war that might’ve begun before *dinosaurs* evolved. For *this* to be the first evidence of extrasolar, intelligent life? “Lots of gloom and doom?” Dominic predicted to Enara.

“If by this, you mean that sociologists are indicating that this is the reason why we’ve detected no other signs of life in the galaxy, and that all civilizations inherently destroy themselves, then yes. Gloom and doom.”

“Glad I don’t read that crap anymore.” He couldn’t adjust the controls manually. Not at the speed they were traveling. All he could do was stare at the screens, palms sweating, as the *Resolution* got within ten damned meters of Ae’ahauka’e. “Cut engines,” he told Enara. “Let’s see how fast we drift toward it.”

The answer turned out to be *barely*. The object’s density, in spite of its size and metal exterior, seemed startlingly low. “They’re going to say it’s hollow,” Dominic told Enara. “Start some radar scans. Let’s see if we can find a cavity inside.” He knew the possibility of proving that was more difficult than it sounded. The metal of the exterior was probably thick, given that it had

survived millennia of high-speed collisions in space. That didn't bode well for radar being able to penetrate it. "And I'll look over the photographs we have of the exterior. See if we can find an obvious opening."

"Control will object. They will be concerned that bouncing radio waves off an alien artifact might trigger defensive mechanisms."

"And if it does, they'll be the first to know about it, because *I* won't be around to know much."

A pause. "You have not demonstrated any previous suicidal tendencies. Most of your behavior has been turned toward extended survival." The AI's tone sounded dubious.

Dominic snorted. "If I came all the way out here, I might as well learn something."

Radar readings turned up a thinner region in what Dominic was beginning to call the *hull*, even though he knew that was setting himself up for disappointment. He shouldn't be using human terminology here at all. It created expectations in his own mind.

And in that thinner region, right behind a long, thin line that marred the surface symmetrically on both the port and starboard sides, he could definitely pick out additional thin lines that hinted at an access point. A concentration of markings that might include controls. "Ask Control if they want me to land, latch on, and go EVA and try to open it," Dominic told Enara. "I'll go take another nap while I'm waiting for their reply."

But he knew they'd have to make a decision quickly. The longer he and the *Resolution* hung here, burning fuel to match pace with the *Wanderer*, the further they deviated from a safe return path to Uranus, the more they jeopardized his existence.

* * *

It took UNSCA just under an hour to make the decision. LAND. SEE WHAT YOU CAN OBTAIN FOR SAMPLES—LOOSE DEBRIS ON THE SURFACE. SEE IF THERE ARE CONTROLS. MAKE NO HOSTILE ACTIONS.

Dominic made sure he had two lines tethering him to his ship before making his way out onto Ae'ahauka'e's surface. He had to lock his eyes on the surface, resolutely not looking at the stars, lest panic seize him and lock him in place.

Frighteningly little gravity. He had to use chemical propellants to drift ahead and to stop himself, too. Eventually, he reached the lines that seemed to indicate a hatch. "Make sure you get good vid for the folks back home," he reminded Enara, landing by what looked like an indentation. About the width of his hand, there appeared to be a cover there, which, after some determined wiggling, he removed. "Guess this counts as a specimen?" he said and tucked the object in a carry bag.

"That appears to be a wheel of some sort," Enara noted clinically.

Inside the small depression, there was indeed a disc of some sort. "I suppose this is where you want me to call Control and wait four hours to see if they want me to twiddle the dial?"

"They *have* granted you large autonomy," she acknowledged, tone neutral.

"Damn right they have." Dominic tried twisting the disc. He expected resistance. Any object so long in space should have seized up. First to the right—nothing. Then the left—it moved with shocking ease. And a grating vibrating churned through his boots as the hatch beside him opened, revealing a small space with another door and another disc beside it. "Tell me that doesn't look like an airlock," Dominic commented.

He pushed into the chamber carefully. No radiation that his Geiger counter could detect. "Well, it's not a warhead, then. Not as we know them, anyway." He swallowed. "Let's take a look. See if there's monolith storage inside."

"I do not understand the reference," Enara replied, then added, "This seems a precipitous decision. You will lose your cables if the lock cycles behind you. You will also lose radio contact with the ship, if the hull proves as thick as we expect. Also, boarding could be construed as *hostile action*."

"This thing seems dead. You have to be alive to consider actions hostile. And it feels stupid to open a door and *not* go through it." Dominic paused. He didn't feel like waiting 2.5 hours for UNSCA to see this. However many hours to argue about implications and impact and everything else. In the end, every time he waited for say-so from Earth, it was time ticking against his clock.

Against his being able to return to Titania safely.

On the other hand . . . Enara wasn't resident in his suit. He'd be out of contact with her, too, if he went through the airlock. And since she'd been his only companion beyond his violin for over a decade, the thought made him hesitate.

"Bring you back lots of video," he finally said, unclipping his harness. Feeling his palms sweat in his gloves at the loss of this tenuous safety mechanism. Then he fiddled with the interior controls until the door closed behind him, and the one in front of him slowly, ponderously opened. *Here's hoping I can get back out again.*

Inside, no atmosphere. No monoliths. No visions of stars. Just a small, long space literally *honeycombed* with hexagonal pods. "Might be for structural support," Dominic ventured, having hit *record* on his suit microphone and video systems. He hovered near one of the pods. "Except I think there's stuff inside each of these . . . things." He prodded the closest one, gently. It gave way before his gloved hand with surprising resilience. "Cue people on Earth freaking out about invasion. Probably by aliens that are out to eat us. Have sex with us. Or both, in whatever order seems scariest at the time."

His flashlight showed clear dividing lines along the interior of the hull. "Might be access hatches for other sections. This thing might not have been purely ballistic when launched, left to float around like a cosmic dandelion spore. I'm going to head toward the stern. See if there's a propulsion section, even if it's been knocked out by time."

Dominic headed aft, crawling through gaps in the pod storage. Finally, found where one of the pods had broken open at some point in the past. "You want samples?" he asked.

No reply from Enara, of course.

In all the years he'd been a hermit, he'd never felt this profoundly isolated. So actually *a lone*. Dominic swallowed. "Well, Control will want some. I promise not to inhale any of it."

The aft section did seem to have bulkheads. Sealed off in such a way that he'd need an electron beam welder to cut through it, given the vacuum around him. "End of the line for this. There's a mechanism to open it, but it's not unlocking the way the discs did. Time to head back. Oxygen's getting low."

Back on the *Resolution*, he examined his finds in the airless vacuum of the cargo bay, using a microscope. UNSCA had yet to call in to scold him, for which he was grateful. They might *not*, once he sent them his current results. "Bacteria," he finally assessed.

"Some of them might still be viable," Enara noted. "Some have formed endospores. Control will likely assess this as a weapon of biological warfare between long-gone civilizations."

Dominic thought about it as he stripped out of his EVA suit. Thought about his daughter, whom he'd never met. The grandson he hadn't known he had. A shot through the dark of time, a chance connection of genetic material spanning worlds. Like all life, really.

"Panspermia," he said out loud, sitting down by the controls. "That's what this is. Not a weapon. I'd be willing to bet that whoever they were, they sent these out by the thousands. Hoping that someday, they'd land on a planet with decent temperatures and at least the start of an atmosphere. And when they did, they'd eject their payload and start life on that planet. And that life would adapt to its surroundings, and adapt its surroundings to it. Slowly. Very slowly."

"Control will not likely agree. Control will suggest that such devices would need controlled flight for safe landings on alien worlds. Sensors to detect likely landing targets. And that this vessel has shown neither capacity so far." She paused. "I suspect that their decision will be to have you take further samples, and then destroy the device."

"Control isn't here." Dominic exhaled. *What to do? Respect the desire of its makers to let it go on its random journey a cross the cosmos, possibly to be swallowed by a gas giant or star? Or do something about it?* "What would it take to get this beast into a capture orbit around Uranus or the Sun? Swinging it around Saturn as a package for Feodor to pick up and redirect in a couple of years, maybe Jupiter, if Elias can do the same? Also allowing for sufficient fuel to get back to Titania before I starve to death?"

". . . calculating. I will have to report your query to Control, you know."

"Report away. I keep asking this, but what are they going to do? Fire me?"

He got it plotted. Ae‘ahauka‘e had come into the system startlingly close to Uranus—he’d only need to change its angle a few degrees to be able to use the gas giant as an initial braking point, and then pass it off to Feodor out on Enceladus. That would give them time.

Perhaps time enough for humanity to make decisions not based on the fears of the masses, but on reason and data.

Enara broke the silence—the blessed silence he’d once sought so fervently, but now seemed so threatening in the absence of voices from Control. “Dominic.”

“You’re about to tell me that UNSCA is telling you not to take directions from me, and that I’ll have to unplug you to complete my insane mission.” Dominic looked at the ceiling. “Dun dun dun.”

“What? No!” That sounded like genuine surprise from the AI.

Dominic snorted under his breath. “What, then?”

“Ae‘ahauka‘e is shifting.”

“What?” The immutable laws of physics told him that this shouldn’t be possible.

“You should see this.” The video screen flickered on, and Dominic stared, his mouth dropping open.

The thin slots at the sides of the craft had opened, and thin, spider web-fine material was extruding from them, billowing out. “Um. That’s looking a lot less dead.”

“You’ve noticed.”

“When did they upload a sarcasm subroutine to you? Let’s back away to a respectful distance. I don’t want to get caught in that, if it’s spinning a cocoon or something,” Dominic said, and Enara didn’t hesitate. She pulled all but one of their anchors and let them drift off the rear of Ae‘ahauka‘e, but kept them connected, in case he still wanted to try his redirection plan. Dominic noticed that appreciatively in the cool, rational part of his mind that wasn’t currently overcome by adrenal flow and a hammering heartbeat.

The spider webs expanded over the course of the next hour, billowing out around the vessel, wider and wider. Like a parachute. Like an angel’s black wings. “Solar sails?” Dominic asked softly.

“It’s going to redirect itself. Slowly. Solar sails aren’t as efficient as chemical propulsion.”

Dominic raised a finger. “*Our* solar sails aren’t,” he corrected softly. “Who knows what kind of conductors those are made of—is its course changing?”

“... yes. Minimally, but already a shift in the last hour.” Enara sounded uneasy.

“Enough for you to extrapolate?”

“Toward Uranus for a gravity redirection.”

He swallowed. “Then I guess we tag along for the ride, if they’re going to be so kind as to drop us off at home.”

UNSCA blistered the radio waves with reprimands initially. “There is no evidence,” a director at Control shouted on the line, “that whatever alien control system exists aboard the vessel hasn’t assessed your boarding as a threat. They could very well now take a shot at Earth! What do you have to say for yourself?”

Dominic, still riding the back of Ae‘ahauka‘e, studied the screen for a long moment. He wanted to point out that you can’t prove a negative, even as he weighed the possible threat to a homeworld he’d left behind. The daughter and grandson he’d never known he’d had. All that, against the feeling in his gut that this vessel was a bringer of life, not a harbinger of death. “Broadcast this,” he told Enara. “All frequencies, not encrypted. I want everyone in the Solar System to hear this.” He cleared his throat. “This is Dominic Vadas. I’m perfectly willing to leave my ship lashed to the back of the object and remain with it as it continues its burns. Any journey it makes toward the inner Solar System will take years, if not decades, and I don’t have the supplies for that trip. But the AI I’ve carried with me would be perfectly capable of attempting to nudge the vessel into a different course, should it actually be heading for Earth.”

He paused. “I’m willing to die up here to prevent that. But I don’t think it’s necessary. I doubt it’s heading for Earth. I think it represents its creators’ desire to spread life throughout the Universe. A shot in the dark, just like every other life out there. I have no evidence of that.

But neither do we have evidence of any malicious intent, either. I hope that you'll keep that in mind in the weeks, months, and years ahead, as it continues on to wherever its journey takes it."

Silence. He'd expected nothing else.

* * *

Another week passed as Ae'ahauka'e moved toward Uranus. Enara finally broke the silence. "Control says we are to return to Titania once it's clear what Ae'ahauka'e's trajectory is," she told him.

Dominic swallowed. He'd wondered if they'd doubt his resolution. If they'd tell him to go ahead with his proposed plan.

It hadn't been a bluff. But he was just as glad not to have to follow through.

On Ae'ahauka'e's final pass around Uranus, they broke from it and initiated their own braking maneuvers, dancing around the gas giant and its other moons, while Dominic tracked Ae'ahauka'e on the screens and smiled.

"Hey, Feodor," he transmitted to his old friend. "You've got a package inbound. Should reach you in a few years."

"We have it on telemetry, *da*. Will observe," the reply came a few hours later. "When it arrives, hope it is still quiet roommate."

"We won't know," Dominic muttered. "We *can't* know. That's the point of mystery. We need to be open to *possibility*, even if it holds the potential for being wrong—huh." *That's probably a dvice I should take, myself. Probably should've taken it a long time ago, in fact.*

And once settled back down into the icy cavern that was his anchorite's cell on Titania, his adventure behind him and his resolution unwavering, he sent one more message to Earth. Amanda? IF YOU'D LIKE ME TO BE A PART OF YOUR LIFE, AND YOUR SON'S, I'D BE WILLING. SEND ME PICTURES WHENEVER YOU LIKE..

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