

Waiting for Lightspeed

by Eddie Caplan

PART 1 — Going

“How much is there?” Victor Winter asked.

“Ah, yes... well... only a few hundred million dollars is in cash, but the investments are worth an additional eight trillion. It’s all controlled by you... now that you are twenty-one.”

“So Dad didn’t take it with him when he died,” Winter smirked. “I won’t need the money either where I’m going, but it’ll get me there. I’ll spend it all, soon.”

“What!? You are going to *spend* it?”

“Yes, I’m leaving.”

“Wh... where are you going?”

“Alpha Centauri. Use my money to build me a ship.”

“That *is* impossible... isn’t it? No one has even been to Mars... but I suppose Winter Industries...”

“That’s *Victor* Winter Industries. Change the name.”

“Of course... sir... I suppose *Victor* Winter Industries could have some of its assets rearranged to invest in space probes...”

“Forget investment, dammit! Forget probes! Listen to me, you little worm. I’m going to Alpha Centauri and not coming back. I’m going to build a *new* civilization. A *Victor Winter* civilization.”

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Assets were moved. Interstellar trajectories were planned. The ship was designed. Construction began.

VWI fabricated the ship in the Moon's orbit. It was an enormous cylinder, two kilometers long. Millions of black solar cells covered the exterior, to absorb energy from the Sun, now, and from the triple suns of Alpha Centauri, later. The ship's dark color inspired its name: the *Raven*.

VWI's construction team finished the *Raven*'s shell and set it spinning on its axis, creating artificial gravity inside through centrifugal force. VWI-designed equipment recycled the air, water, waste, and power. Once sealed, the ship would be a complete biosphere, ecologically whole. Then, in flight, the *Raven* would accelerate to 0.3% lightspeed and reach Alpha Centauri in 1400 years.

Victor Winter stood in the empty hollow of the *Raven*. From the ship's "ground" — the curving inner wall — he looked "up" at the opposite wall arching hundreds of meters "above" his head. He surveyed the massive space that would soon be crammed with a hundred decks, filled with power stations, engines, laboratories, recycling plants, hydroponic farms, and living quarters. The ship could hold a thousand people and their descendants for thousands of years. Long enough to reach and colonize Alpha Centauri.

Each person Winter offered to take with him was a brilliant leader in astrophysics, engineering, construction, medicine, or life sciences. Many were masters at more than one. Winter had no use for artists, poets, or entertainers on his voyage, or beyond. He needed women and men who would pull their own weight, to be utilitarian. The *Raven* was the cradle of Winter's own world, filled with people made in his own image: impatient, enterprising, and aggressive.

Triumphant, Winter thought to himself, "There are two kinds of people: those who *go*, and those who *wait*. We, are going."

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Winter's analysis of human nature seemed to be correct. Public opinion quickly split into two groups: *goers* and *waiters*.

Goers grabbed the chance to be part of Winter's ambitious voyage. They felt like Columbus' crew setting off for a new world. They even joked that their 1400-year flight to Alpha Centauri would last 1492 years. Like Columbus, their trip would be long and dangerous, and take resilience and luck. The goers relished the opportunity.

But the waiters saw no sense in it. They said to the goers, the Earth is beautiful and comfortable enough, why leave? And in the 1400 years it will take you goers to make your journey, technical improvements here on Earth will allow the construction of a faster, safer, ship... a ship that will overtake you goers mid-flight and reach Alpha Centauri before the *Raven*.

No, said the goers. Look at the numbers, the astrophysics. The best you waiters can hope for — using propulsion, the only physics you have — is 3% lightspeed. That's only ten times the *Raven's* cruising speed. So your trip will still last 140 years, at best. We know you. You'll never be willing to make a journey that lasts longer than your life. But we are. And how many centuries will it take you to develop this miraculous 3% lightspeed ship? Will you be alive to see it? No. Either way, waiting won't get us to Alpha Centauri in our lifetime. So, we might as well go now. We won't wait and hope and pray, like you. We're carving our future for ourselves, now.

The waiters said, we see that you have forgotten recent history. In only the past 200 years, man advanced from riding on horseback to walking on the Moon. Technical improvements are accelerating.

"I see they have forgotten the rest of history," Winter said. "Man needed 10,000 years to advance from walking to riding on horseback. And since man walked on the Moon, rocket speed hasn't improved at all. Increases in speed are aberrations. They won't be repeated soon, because the science of propulsion is a dead end."

But, the waiters said, you're disallowing the possibility of unexpected achievements: warping space, wormholes, etc. If you just wait, these things will come along.

"Come along?" said Winter. "How? The few people capable of making these discoveries are *goers*. And they're all going with *me*."

The real problem is, the waiters said, you goers are full of yourselves. Your egos are driving you to an insane task, blinded by relentless ambition.

“The real problem is,” Winter said, “these waiters are lazy buffoons. They can either prove themselves worthy and join me, or they can stay here in Earth’s squalor... something I’m not willing to do. They expect someone else will fix their problems. ‘Nothing to do but wait,’ they say, ‘someone will get to it tomorrow.’ Idiots! They’ll still be discussing the problem when we arrive at Alpha Centauri 1400 years from now.”

He said, “Propulsion is the best option available to me *now*, so I’m taking it.” And, he thought to himself, I won’t wait in a world that houses these morons one moment longer than necessary. I *must* go, the sooner the better.

But, persisted the waiters, why Alpha Centauri, lightyears away? Earth has many remote, isolated areas. Or if you must leave Earth, why not set up shop in orbit around our own Sun, here?

“Because,” Winter said, “I don’t want to take the risk of you imbeciles popping by for a visit. Anywhere else is too close.”

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Eight years after beginning, the *Raven* was ready. Winter and his people were aboard. The ship was closed for the last time.

The *Raven* stayed in the Moon’s orbit for a year, to ensure the biosphere was complete. If any flaw was found, if too much energy leaked into space, any serious problem at all... they knew the Earth and Moon were nearby, and they could get help if necessary.

Five months passed, and then a fire erupted in a laboratory. The goers struggled together for hours to extinguish it. Human injuries were minor, and if the fire had happened on Earth it would have been of little significance. But in the *Raven*’s carefully balanced biosphere, the fire was a disaster.

At first, the goers believed they would need to abandon ship. But to their credit they resolved to recover on their own. This sort of

event was bound to happen on the trip, they said, so let's solve this ourselves. What resources do we have left? What can we do without aid? What can we recycle?

They painstakingly cleaned the lab and carefully picked through and sorted the burnt and broken materials. They salvaged every screw, wire, beaker, table, and tool they could. Then they weighed and analyzed the melted shards and ashes to account for the rest. Everything was recovered and reused. Technicians melted bits of shattered glass containers and new ones were formed. Equipment was carefully repaired. The ship's structural integrity was reviewed and mended, centimeter by centimeter. Even the smallest leak would be disastrous on a 1400-year journey. Nothing could be wasted.

In the end, the blaze's biggest impact was psychological. Before the fire, despite years of planning and construction, the truth of being irreversibly on their own had not fully sunk in. But now, they were able to put aside their doubts. They knew what it meant to be without support from the outside, and they knew they would prevail.

Victor Winter said, "These things will happen... just as they do on Earth. The *Raven* is our world now."

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The launch date was set. The rockets were ignited. The ship broke orbit. Their journey began.

The slow-burning rockets accelerated the *Raven* gradually, to avoid jarring the world inside. It hardly mattered to the goers how long the acceleration to 0.3% lightspeed took. The *Raven* was their home for the rest of their lives, regardless. They made the decision to be self-reliant and turned away from Earth. When the solar panels were unable to collect energy from the now-distant Sun, they sent a final farewell message to Earth and broke radio contact.

Winter cared the least of anyone how long the trip would be; he would make the entire trip alive. His personal fortune permitted him one item unavailable to anyone else on board: a cryogenic hibernation

chamber. Asleep and frozen, his body functions would slow and nearly stop. He would barely age.

Winter intended to spend the next few years establishing a monarchy and spawning heirs. Then he would sleep the remainder of the journey. All he needed to do was wait.

Thinking of his plans, Winter smiled.

PART 2 — Waiting

Victor Winter was gone from Earth. Despite his spending trillions of dollars on the *Raven*, trillions remained. But Winter left no will, adamantly refusing to disburse his massive estate, or turn over control of VWI.

After months of frenzied legal maneuvering, the courts ruled that Winter wasn't dead — only hibernating — he may yet return. Potential heirs were prohibited from inheriting his money until incontestable proof of his death was provided.

Since the *Raven* broke radio contact to save power, no one could contact Winter for at least 1400 years, until the *Raven* arrived at Alpha Centauri and drew energy from the suns of its new home. So as Winter passed out of the solar system, VWI's still-magnificent fortune passed into the hands of court-appointed stewards.

VWI's stewards were patient. They knew VWI would continue to be powerful and staggeringly well-financed if they merely managed its holdings conservatively and carefully. If the stewards did nothing but leave the money in a bank, each year VWI's trillions would earn billions of dollars in interest alone. In 1400 years VWI's net worth could grow a trillion, trillion, trillion, trillion times larger — conservatively estimated. So, for 1400 years, the stewards' sole obligation would be the protection of VWI's wealth until receiving further instructions from Victor Winter.

VWI's money would simply go on and on, on its own.

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But the stewards were bewildered. How could their financial plans survive for a millennium and a half? No institution had ever endured so long with its original plans and goals intact. Empires and governments crumble, technology changes, even religions mutate and fall out of favor. But the stewards' financial arrangements needed to transcend these natural shifts.

The stewards had another problem. Victor Winter had become a symbol of self-hatred, arrogance, and monumental foolishness. Public opinion placed intimidating pressure on the stewards to do something worthwhile with the money. VWI's stock price fell, and the stewards feared the estate would fail before they began, with the world turned against them.

A third, deeply troubling problem the stewards loathed to face was how to keep humanity alive for 1400 years. The state of the world and its future was too chaotic. Although they would have preferred to quietly monitor Victor Winter's assets, they knew that they needed to do *something* to guarantee a lucrative future for VWI.

With their typical plodding, the stewards carefully devised *The Plan*: help humanity, and profit from it. As long as humanity needed to be uplifted — forever, by the stewards' estimate — they would follow a very simple, very secret, scheme:

- (1) publicly and benevolently create prosperity and knowledge
- (2) thus creating new customers with disposable income
- (3) sell them VWI's products

Not that charity itself held any attraction for the stewards. The stewards were simply beholden to the protection of VWI's wealth. They were responsible for its financial gain and material acquisitions. If benevolence was required, so be it. As long as the result was the growth of VWI and stability for its holdings. *The Plan's* final step, known only by the three most-senior stewards, was:

(4) use the profits to control the future

Fortunately for the stewards, they had the necessary products to carry them to their goal. VWI's best scientists and engineers — all goers — designed and built the *Raven*, and then departed in it, leaving VWI owning their brilliant legacy of rocketry, renewable self-sustaining earth sciences, and cryogenics. Cryogenics, in particular, was beginning to be useful in a variety of unexpected industries: medical, chemical, agricultural, manufacturing, transportation, and construction.

And the stewards had all the physical resources they needed. Unlike the bounded biosphere built inside the *Raven*, Earth and the solar system provided nearly-unlimited raw material and space. And Lord knows, they told themselves, there is no end to the money.

Building an inviolate financial fortress, VWI's stewards followed *The Plan*. With well-advertised gestures VWI became an equally generous friend to all: governments, religions, businesses, sciences, arts, and industries. But covertly, quietly, the stewards intertwined VWI's wealth with the world's powers, and pressed their influence to steer the future to their advantage.

Centuries passed, and generations of stewards continued their unhurried and systematic coercion. VWI eliminated famine and sheltered the poor. They cleaned and rebuilt destitute cities. Primitive cultures were given fresh water, energy, building materials, and quality education for free... at first.

As a result, billions of people who previously had no knowledge of Victor Winter now had the income and desire to buy VWI's products. Even modestly priced, VWI's profits soared.

Eventually, the stewards eliminated war. They found war to be counterproductive to their financial stability, and wastefully damaged their material investments. In the end, even religion's influence dwindled as people believed their prayers had already been answered; God's peace was a reality. And religious leaders couldn't argue with success.

The Plan worked perfectly. After a thousand years, VWI was inseparable from humanity's success; VWI was the well-respected caretaker of the world. Every human — including the stewards — fondly recalled the thousand-year-old story of a Victor Winter who went off into space. They credited him for making these miracles possible, and felt blessed by Winter for his universal economic, cultural, and technical revolution.

Humans were proud of what they had become. Their self-regard was immense. Literally, humans knew of no other beings as great as themselves. In the thousand years since the *Raven* launched, no other intelligent life was found in the solar system, no alien race contacted them, no creatures from distant galaxies conquered or befriended them. The deities seemed to approve of humanity's management of this piece of creation.

A popular expression said, "God is in its heaven and all is right with these worlds." But the stewards said to themselves, "No, God is in his *Raven* and all is right with *his* worlds."

Victor Winter owned them all.

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In 400 years, Victor Winter would reach Alpha Centauri and gain enough solar power to reestablish communication with Earth. The 2nd-millennium stewards were unsure whether Winter would try, or care, to talk to anyone from Earth again. Even so, they had no choice but to proceed with their charter — ordered by the court so long ago — until Winter was proven to be dead. They felt obligated to act as if Winter was still alive and would want to reclaim control of his estate, even if he needed to send instructions by radio over the four-lightyear distance from Alpha Centauri. The stewards forced themselves to plan in more detail for his renewed contact. And in their experience, 400 years didn't leave much time to prepare.

The current generation of stewards recognized that Winter knew nothing of what had become of humanity since he left. He was asleep, unchanged. And they admitted they knew nothing of *him*. In

the 1000 years that had passed, they had learned only of a golden figurehead they were obliged to serve.

Then with horror, the stewards rediscovered the kind of man Victor Winter actually was. They found ancient reports of Winter's long-forgotten arrogance, anger, and humanity-hatred. Was this the man they had represented all these centuries? Winter was the ultimate beneficiary of these worlds, yet he was the least qualified to appreciate the gift.

And the stewards faced the sickening truth that when Winter communicated with Earth again, they would be required to turn over control of everything VWI owned — essentially, all humanity — to *him!*

Another utterly impossible problem was, what if some other race of beings actually *did* exist at Alpha Centauri? Winter and his aggressive, egotistical, and primitive goers might mistakenly be regarded as prime examples of humankind. The thought was appalling. Even the ancient technology aboard the *Raven* was an insult to what humans were now capable of.

The stewards found Victor Winter wholly unsuitable to receive their legacy and certainly unsuitable to represent them at Alpha Centauri. They debated among themselves for decades, but their conclusion was always the same: it must not be. Winter was a liability. As with anything else affecting the future, he needed to be controlled. Winter and his goers needed to be caught and stopped. They must not reach Alpha Centauri. And *he* must not inherit humanity here on Earth. The stewards were certain that the Victor Winter they *now* knew would try to control them — if they didn't carefully control *him* first.

The stewards had a new goal: catch Winter in the *Raven*, prevent him from contacting Alpha Centauri, control him. They told themselves it was a mission of mercy... good for humanity and good for Winter. They would bring home their wayward founder, their prodigal father, and restrain him.

Their only fear was that Victor Winter might be dead. That would be the worst of all, for then VWI would be taken from the stewards'

control and given to the nearly-forgotten Winter heirs. The stewards needed Winter alive — provably so — and passive.

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But the *Raven* had a millennium head start and was already three-quarters of the way to Alpha Centauri. How could they catch him?

VWI's scientists acknowledged that Winter had been correct on one point, at least: rocket propulsion was a dead end. A large, interstellar, human-carrying ship has too much mass. As Winter predicted, using propulsion alone, the best the stewards could accomplish were rockets that would take a hundred years to catch the *Raven*, and another hundred years to return. If their rocket-driven chase ship failed to find the *Raven*, then they would have no time to retry. That was too great a risk. They rejected that solution and waited for a better idea.

The trip needed to be short, they reasoned, six or seven years at most. That would be perfect. VWI could launch multiple recovery missions if necessary. And a seven-year return trip would be short enough to convince Winter to not hibernate, giving the stewards time to retrain him.

All the stewards needed was a nearly-light-speed ship.

Every resource was made available for the project. Finally, 200 years later, 1200 years after Victor Winter launched the *Raven*, VWI's scientists and engineers brought together all the knowledge they had learned from the goers, and discovered since. They froze a space ship. Cryogenically... but more. *Super-cryogenically*. They stopped the motion of the atoms, electrons, and subatomic particles. In this super-motionless state, mass became pure energy. This made a massless, light-speed ship, waiting to go.

And eerily, super-cryogenically frozen material was transparent, often invisible. The atoms were no longer a cloudy blur of tiny particles whizzing about. Instead, atoms were vast empty space sprinkled with motionless specks of electrons, protons, and neutrons. Light found little substance to reflect against and passed through.

Soon after their discovery, VWI owned ghost-like cryogenic ships that shuttled between the Earth and the Moon in minutes, and traversed the solar system in hours. A chase ship could travel 300 times faster than the *Raven*, and need only a half dozen years to catch it. The stewards could stop Victor Winter 200 years before he reached Alpha Centauri.

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Assets were moved. Interstellar trajectories were planned. The ship was designed. Construction began.

The stewards named the pale, transparent, mass-less chase ship, the *Dove*. The ship and its crew of seven were super-cryogenically frozen. Then the *Dove* was launched with a small push, needing no more energy to move its zero mass than a flashlight uses to cast its beam into the night sky.

On board, all motion was at a complete stop, except one tiny active component: a small guidance and control device dubbed the *Eye of the Dove*. No larger than the point of a needle, this small concession to unfrozen mass was necessary to ensure the *Dove* found the *Raven* across the trillions of cubic kilometers of space. The *Dove* needed to hunt for the *Raven* on its own.

PART 3 — Finding

Even before the *Raven* left the Moon's orbit, Victor Winter established a monarchy on board, with himself as head. After the *Raven* launched, Winter dispassionately mated with several women. He wanted to produce enough descendants to tend to his hibernation needs for the subsequent 1400 years... and to ensure his monarchy would continue to rule and flourish.

When Winter saw that his lineage was secure, he prepared himself for hibernation. But he was concerned that his control would erode

while he slept. He decided that, rather than sleep the entire journey, he would set the chamber's timer to wake him once a year. Then he could spend a week awake, reassert his control over the *Raven*, and sleep again. And only age one week each year.

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While Victor Winter slept, his wives and children tended to his slight needs, redundantly monitoring his vital signs in addition to the automatic controls and alarms on his hibernation chamber. His children were curious about their sleeping father. Their mothers told them matter-of-factly that, yes, he was their father; yes, he would wake up every year; no, they would not be put to sleep when they were his age; and yes, he does dream.

Above his sleeping body, the large timer showed how long he had been asleep, and how much longer until he would be automatically awakened. The children were particularly interested to learn that Winter could come out of his sleep only by the controls he set himself. He wouldn't trust anyone else to regulate when he slept or woke, and the locks and safeguards ensured his electronic instructions were undisturbed.

Every year, when the timer counted down to zero, Winter's family gathered at his side and waited until the automatic controls woke him. Immediately, he reaffirmed himself as the empire's founder and their ruler. Then after a ceremonial tour of the ship, Winter's family reviewed for him the year's activity and progress. His relations with his children and wives were remote, of course, but they were satisfied with what they saw of each other.

For a few decades this arrangement worked well. But over time, Winter began to feel less comfortable. It was disquieting that the people around him aged quickly. For him, only two years passed while his children matured and grew to adulthood and his young and pretty wives became elderly. Soon — from his perspective — they all died and there were few people on board who he knew well.

On the other hand, he was proud and pleased that the descendants of the original goers still treated him with respect and deference. More importantly, his own direct descendants were still in command and he was still regarded as the ultimate ruler. The *Raven* itself was another source of comfort. As he toured the ship each year he was impressed by how well the *Raven*'s systems had been gradually refined and made more efficient. He saw that given a couple of hundred years, and a closed environment free from distractions, the occupants learned precisely how to keep the *Raven* at peak performance with minimal effort.

When Winter saw that the *Raven* and his empire were safe, he extended the periods he hibernated from one year to five. It would prolong his life, he reasoned, yet still allow him to continue to monitor his civilization.

Over the next century — twenty weeks in Winter's awake-life — he saw a revolutionary transformation of the *Raven*'s interior. He understood intellectually that he was seeing a compressed-time view of actual events... a time-lapse film... yet emotionally it was strange to absorb the changes that occurred. Less and less of the *Raven* was needed for the demands of daily survival, and more and more the ship was turned over to experimental science and education.

"You seem to be doing well without me," he said.

But when he saw they were using sections of the ship for recreation, Winter viciously chastised the current leaders, his centuries-removed descendants, for laziness. They, his heirs, of all people should set the example of diligence, tirelessly working to create the most accomplished world possible. Recreation was a distraction.

He said, simply, "You are *goers*, after all."

They accepted his criticism without complaint, so he decided to wait... to see how they resolved the problem by themselves. But to be sure this worrisome thread in their behavior didn't continue for long, he once again reset his hibernation timer to wake him in only one year.

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The *Eye of the Dove* found the *Raven*, still exactly on course and speed. The *Eye* gradually thawed the *Dove*. As the ship warmed, it gently slowed as its mass increased. It became less transparent and reacquired its natural off-white color. When the two ships were within a kilometer of each other, the *Eye* woke the seven crewmembers and shut itself down for all but basic maintenance functions. The *Dove* returned to human control.

The *Dove*'s crew was dismayed by the *Raven*'s archaic design. Although they had studied and practiced in simulations, the actual ship was far cruder than they expected. Nevertheless, from outward appearances the *Raven* was still in excellent condition. It still spun, still creating its Earth-like gravity, apparently.

They attempted to contact the *Raven*'s occupants. At the time the *Raven* was launched, it used primitive radio signals to communicate, so the *Dove*'s crew sent messages of greeting in various radio frequencies and languages. No response came. They switched to other, more modern, forms of inter-ship communication but still nothing was answered.

A pall fell over the *Dove*, but the crew had no doubt what to do next. They needed to board the *Raven*.

They maneuvered the much smaller *Dove* to the airlock on the front face of the *Raven*'s cylinder. They landed near the edge, the outer rim, to bring them into the *Raven*'s centrifugal gravity. The *Dove* docked with a thud that must have been easily heard and felt by anyone inside the *Raven*, but there was still no change from inside.

Grimly, the crew prepared themselves in the *Dove*'s airlock, ready to cross over. They doubted they would find usable atmosphere or heat inside the *Raven*, so as a precaution they each enveloped themselves in a personal environment cloud, the standard deep-space gear developed and sold by VWI.

When they pulled the *Dove*'s hatch aside and saw the *Raven*'s dark black solar cells, they hesitated. For a moment, they hoped the *Raven* would open on its own. They hoped living people would greet them.

Instead, they sensed a disaster was waiting for them inside, that a major life-support failure or some unknown disease had killed the occupants centuries earlier.

Frustrated, the captain said, “These goers should have never left; they should have waited on Earth. Look! We did what we told them we would do: we overtook them in far less time and in far more comfort. Now these ‘goers’ have ‘gone’ and killed themselves.”

He paused and considered the grisly possibilities waiting inside. Then with regret at disturbing the goers’ death ship, they twisted the *Raven’s* hatch handles and pulled.

The *Raven’s* airlock was in perfect working order, and they slipped inside. The airlock’s control panel indicated a “Ready” status, its lights glowing green. Testing, the *Dove’s* crew used the *Raven’s* electronic controls to close the airlock behind them. Exactly as in their training simulations back on Earth, the airlock doors clamped shut and air was blown into the chamber. They opened the inner door of the airlock leading into the ship’s main body. It slid aside easily, as if the door had been oiled shortly before their arrival.

They stepped through, and what they saw stunned them.

They put their feet down onto the soil of a magnificent forest with ancient trees soaring high over their heads. The forest wrapped around the *Raven’s* cylindrical curve so the treetops from the other side nearly touched the tops of the trees growing from the ground at the crew’s feet. In the space separating the treetops at the *Raven’s* center axis, hundreds of meters above their head, there ran a sunlit cloud of mist. They heard birds.

Involuntarily, the crew took a startled step backward. They were relieved to feel the *Raven’s* solid wall behind them. But more than one of the crew nervously checked to make sure they were standing near the airlock. The forest grew to within a few meters of the wall where a clear, clean path ran around the ship’s circumference. There was another obvious path leading into the forest from near the airlock.

Not knowing what else to do, they followed the path into the forest, staring at the trees and wildlife around them. They couldn’t have asked for a more pleasant experience than this refreshing walk in

a sun-dappled wood on a lovely day. That this forest was in deep space approaching Alpha Centauri, in a ship built 1200 years earlier, made this hike the most bizarre experience in their lives. Where was the sunlight coming from, they wondered, as they crossed streams and strolled over small hills.

After ten minutes of walking, the woods opened onto a steep treeless meadow. They climbed to the crest and surveyed the ship. From here, they could see the entire length of the *Raven*. The front end was completely filled by the forest. Their meadow was midway into the ship, and rolled up the ship's curve and over their heads. There, a mountain of sorts — an Everest in miniature — jutted down toward them, snow at its peak. At the *Raven's* stern, the meadow gently sloped down to a clear blue-green lake, bordered by the tan swath of a wide beach. Like everything, the lake and beach wrapped around the *Raven's* cylinder, with clouds drifting in the sky high above the water. But nowhere were there any signs of people, machinery, decks, or any other human device.

Except one.

In the middle of the meadow, in the middle of the *Raven*, was a small circle of stones. It looked like a ring from a campfire, but there was no evidence any fire had ever been lit in it. No grass or weeds grew inside the ring. Only some sand, apparently from the beach, filled the circle and it looked perfectly raked and smoothed... a small mystery in the midst of a large one.

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Over the following days they discovered that the ship's shell was similar to the original design but far less material was now used to maintain the walls' strength and integrity. The sunlight was strange to them, unlike anything they expected. The light grew and faded in a semblance of day and night, but came from no obvious source. In the day, the light glowed in the clouds over the lake and in the mist above the forest. Then the light dimmed into twilight leaving the white-

capped mountains tinted pink, red, and orange in sunset, and the mist glowed faintly like moonlight.

The crew satisfied themselves that the *Raven's* air was perfectly fine and they turned off their environment clouds. They searched wherever they could, but eventually gave up trying to decipher the mystery of the *Raven* and its missing occupants.

In time, they gave themselves over to the beauty of the ship. Animals, small and large, came to them without fear and the crew fed and played with them leisurely. They walked on the beach and explored the forest, swam in the lake, climbed the mountain, and camped on the meadow. The crew couldn't bring themselves to desecrate the circle of stones with a campfire, but had no need anyway; the temperature on the *Raven* was always perfect.

Grudgingly, they pulled themselves back to their duty. They began to study the mist above the trees. The captain directed them to climb the giant trees to traverse the forest's length in the treetop canopy. It was easy work, since they were at the *Raven's* center axis where the centrifugal gravity had no pull and they could be weightless.

That was when they found it. At the height of the treetops, in the center of the circle created by the front face of the *Raven*, the crew saw a niche in the wall. It was an opening, a door to a passageway, large enough for a person to walk in. They all floated over to the opening, looked at each other for a moment's breath, and went in.

After a few meters, the passage opened to a softly lit room holding one item: Victor Winter's hibernation chamber. They recognized it instantly, and quickly examined it. It was operating and they could see Winter inside, in the deep sleep of hibernation.

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Here he was. Victor Winter. The reason they had made the journey from Earth. But apparently he was the lone survivor on the *Raven*. They hoped he could answer their questions about the goers' fate. As they watched, the chamber suddenly began to thaw him automatically. When he awoke, his muscles were stiff and his mouth

was dry. They gave him some water they had drawn from the forest's streams.

"Hmm, this is good," Winter said, "better than the stale stuff you gave me last time."

"Victor Winter?" they asked.

"Of course, you moron. Who are you? I don't remember you from last year. And who are these," he said waving at the crew, "Your brain trust? They look even stupider than you."

They winced. Winter's personality was as acidic as they had been told. The captain said, "We were not here last year. We just arrived from Earth. We came to take you back. Much has happened there since you left..."

"From Earth?" he snorted, "Impossible. We've been gone only three hundred years. What? You built another ship and traveled hundreds of years... just to come get me?"

"No, you have it all wrong. We traveled for only five years."

"Five years! You're nuts. Are you telling me you have a rocket that travels *60 times* faster than the *Raven*? You'd need it, to cover — in five years! — a distance we crossed in three centuries."

"Twelve centuries. You have been away from Earth for 1200 years. We traveled not 60 times faster, but 300 times faster than the *Raven*... near lightspeed for most of the trip. We have come to bring you home."

"Now I know you're crazy. Is this some kind of a hoax? Just because I chewed you out last time about some recreation space... this is lunacy. Look, let me stretch and then we'll tour the ship, as always."

Winter tried to stand but was surprised that he floated. "Where are we? We're weightless, so we must be on the axis... What is this room? You've really gone to some elaborate steps to confuse me. Is this some kind of mutiny?"

"Please believe us, this is neither a hoax nor mutiny. You left Earth 1200 years ago, and we left 5 years ago. We have some questions, too. Where is everyone? Why are you the only one here?"

Winter stared at them. He saw the emblems of VWI and the *Dove* on their uniforms, then slowly touched the strange and delicate cloth. The color in his face paled, and Winter's mouth opened to say something.

Suddenly, he bolted into the passageway. He moved surprisingly well, weightless, and in a moment he came to the opening in the wall at the forest. The others came up behind him just as Winter looked down the length of the ship and gasped, "My God, what've you done to my *Raven*? Where're my laboratories and fabrication plants? The hydroponic farm? These damn trees, they couldn't grow in only a year. What's going on? What is going on?" he shouted.

He broke away, crossed the space to the forest, and rapidly climbed down the nearest tree. When he reached the ground, he called out for his people, his goers. He thrashed through the trees and the underbrush, eventually found a path, and ran.

He came to the meadow and clawed his way up the hill, then stopped, stunned, and spun around. He saw the forest, the meadow, and the thrust of the mountain.

Winter squinted at the lake and the beach, then ran down to the sand. He looked across the lake at the *Raven*'s back wall, trying to find something... anything... a remnant of what he had known. He stumbled along the shore until he thought he saw something and dove into the water and swam violently across. When he reached the wall, he tread water trying to see more clearly, but there was nothing there. Whatever he thought he had seen, it must have been sunlight reflecting off of the water.

Slowly, Winter swam back to the beach, and trudged up the hill to the meadow, dazed. The *Dove*'s crew was waiting for him. They gently led him to their campsite and helped him out of his wet clothes. Reluctantly, they despoiled the circle of stones and built a warming fire using wood collected from the forest. They sat Winter next to the fire and put a blanket around him.

• • •

Later, Victor Winter sat alone on one side of the fire, while the crew sat on the other side speaking softly among themselves. As they talked, they watched him. Winter obviously didn't know what had become of the goers. He had been asleep for 900 years, apparently. Perhaps the goers all died by disease or accident but, mysteriously, they first prepared a perfectly running, perfectly orderly ship? That seemed ludicrous. What happened?

The captain said, "This ship was supposed to be a better Earth. The goers thought they were going to build a better humanity, made from better humans. Now look at them. Their dreams are all dead, as they are. The real, better, Earth is back on Earth where our patience conquered poverty, famine, illness, and war. *We* achieved something magnificent."

"*You* don't know anything!" Winter said, speaking for the first time since he came out of the water. "We were — *I am* — a better breed of human than you. All of you... just waiting for something better to be handed to you. We built something *ourselves*. What magnificent things have you built yourself? Nothing. You Earth-bound idiots still live off of *my* accomplishments. VWI made you what you are... even the *Dove*."

"Look around at my achievement. You're sitting in a ship that I built. Me. Not somebody else. Me."

"You cannot mean that," the captain answered. "*Other* people built it while you just gave them money. It was not even money you earned yourself. You inherited it. Now take your father, for instance, there was a man who accomplished things himself."

"What do you know about it, you maggot?" Winter snarled, standing and raising his fists.

The caption shouted, "I know you weren't needed at all!"

"Stop!" said the fire.

"What?"

"Enough hatred. Now stop."

"Who is there? Who said that? Where are you?"

"It is us, the *goers*, here in the fire."

"What, some kind of burning bush?" Winter sneered.

“If you like,” said the fire.

“Victor Winter is no Moses,” said the captain.

“Feel free to leave,” Victor Winter said.

“Stop,” said the fire burning brighter. Then softer, “Stop.” They all fell silent.

After a long time Winter sat down again and stared at the ground. Then the fire said softly, “Shall we tell you a story? A campfire story?”

The crew was too stunned to answer. Winter only grunted.

So the fire spoke. “This is a story about us, the goers, a people who dreamed of a better life. A life created from our own effort, using our own power, befitting our large impression of ourselves. We were arrogant and believed that *whatever* we dreamed, it would be better than what anyone else could possibly dream, ever. Captain, we *were* like you *are* now... you and the other waiters on Earth.”

Winter looked up, at the fire.

And the fire said, “We followed a man who had the same dream, and the means to make the dream real. So we took our dream, put it in a ship, and cast off for the stars. We were a message in a bottle, not knowing where we would wash up in the end.

“Then the unthinkable happened. After centuries of floating in the ocean, we dreamers were — of all things — bored. The *Raven* automatically met our material demands and we had no external distractions. We were goers with nowhere to go; doers, with nothing to do.

“We solved all the *Raven*’s physical problems, but were still corked up and far from any shore. We wrote and rewrote the message until we were sick of it. And after a long while, it didn’t seem to matter any longer what the message said, or if we ever reached our goal.

“But sloth was not our nature. We ached to achieve *something*. We were *goers*, after all.

“Then finally, remarkably, we started to explore things we never before thought important. Such as, recreation. Such as, art. Such as, our spirit. Our souls unfolded and we probed inward. We were

monks in perpetual solitude. Freed from outward needs, in a short time we dreamers grew.

“We evolved.

“And Victor Winter... dear Mr. Winter... the father of our journey. We owe an enormous debt to you... you were the catalyst that made our transformation possible. And you should be proud of us. We are the result of what you started and are what you wanted — a better kind of human.

“But you were unwilling and unable to evolve as we were. We understood that the last time you were awake. We evolved over many generations. You had only you, in this one form.

“So, after you went to sleep the last time, we overrode your automatic hibernation controls. It was simple, we had known how for a long time. But we felt the kindest thing we could do for you was to let you sleep.

“We transformed our barren bottle floating in the ocean into everything good we remembered from our home island, Earth. We stripped down the *Raven* to create the elemental material for the forest, lake, mountain, and meadow. We outgrew the need for our bodies, and our spirits dropped them too. Then we used our remains as fertilizer for everything that grows here. Now our spirits inhabit every being in the *Raven*. We are in the animals and trees. We are in this wood you are burning, and we are in the fire. The burning doesn't harm us; to us it is just another way of creating. You are beginning to see, aren't you... everything here is *us*, transforming, creating, and being?

“We're not the goers anymore, nor are we waiters. We are something else... *finders*, perhaps, faster than lightspeed.”

The fire paused.

“We knew one day some vessel from Earth would come this way. Victor Winter, you belong more with them than with us. They are, after all, no more spiritually advanced than you...”

At this, the crew woke out of their silence and protested.

But the fire interrupted and said to the crew, “Your minds and egos were distracted while your souls languished. For this entire time,

what did you accomplish? Advancement of technology, propelled by greed. Even though your technical achievements are marvelous enough to catch a glimpse of perfection — pure mass-less energy — you are no closer to understanding yourselves than when we left Earth.

“And that is why, our brethren, we will go our separate ways. We’ll continue on to Alpha Centauri while you return to Earth with the *Dove*. Humanity is waiting.”

• • •

The artificial light dimmed and dusk came. Instinctively, they looked up to search the star-lit heavens for gods and meaning, as humans have always done. Then they remembered they were still inside the *Raven*. There were no stars to see.

And Victor Winter began to understand. The fire-beings learned what humans could have known without waiting or going, without traveling at lightspeed, without wandering across the galaxy, without abandoning Earth, without building machines, without making tools, and even without leaving their primeval caves: the gods aren’t found out among the stars.

The gods are found within.

----- End -----

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