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PAUL COOK

author of 'Fortress on the Sun'

THE
ENGINES
of
DAWN

PAUL COOK

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—FOR TOM SMITH

*For the best years of our lives at
Northern Arizona University
1968-1972*

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“Solitudinum factunt et pacem appellant”

—TACITUS

speaking through a British chieftain regarding the Pax Romana

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TWENTY-SEVEN-YEAR-OLD Benjamin Bennett rolled over in his dormitory bed in the middle of the interstellar night thoroughly disgusted with himself. His Bombardier friends had often taunted him about his relationships with various members of the female population at Eos University. “One-Minute Bennett,” they called him. No relationship he had ever seemed to last long enough to be memorable, let alone meaningful. Maybe they were right.

“It’s not you,” Ben told his date, throwing his left arm across his eyes, sunken in despair. “At least I don’t *think* it’s you. Ix! Who knows what it is?”

“Well, it’s something,” his date, Jeannie Borland, said.

Ms. Borland was a twenty-five-year-old, platinum blond graduate student in atmospheric chemistry whom Ben had met about a month earlier when Eos University had made its last planet-fall. He and his dorm mates—Eos dropouts called the Bombardiers—had gone kiting in the incredibly blue skies of Ala Tule 4 while the other students of the space-going university went about their various field trips down on the planet’s surface. Ben had met Ms. Borland when he and the Bombardiers rested their wings in the AtChem gondola, lofting in the thermals of a placid mountain range. Ben thought he’d pursue her more aggressively when the university returned to its circuit through the known stars of the Sagittarius Alley.

And *this* was what happened.

Young men might reach their sexual peak at the age of nineteen or so, but it rarely tapered off so quickly. Moreover, Ben was in the best physical condition he had ever known. Though only five feet, ten inches tall, he was broad-shouldered and muscled enough to

have won several wrestling scholarships when he was an undergraduate back on Earth. He worked out almost daily and theoretically *should* have been able to rise to the task.

In the semidarkness of the room, Jeannie Borland's illicit cigarette glowed dully. Her unaugmented breasts had that still-youthful pear shape to them, and her deliciously long legs should have inspired him to do *something*. But they didn't.

He sat up, sweeping his long black hair back into a ponytail, which he banded swiftly.

"Maybe it's the Ennui," Borland said, blowing a ghost of smoke to the ceiling.

"I think they put saltpeter in the food," Ben said.

Borland tapped an ash to the ashtray on Ben's nightstand. "Saltpeter? What's that?"

"Something they used to put in food to keep horny young boys from...getting frisky. Back in the old days."

"I don't believe it," Borland said. "That's barbaric. No one would do that here. Not on Eos."

"The Grays would," Ben remarked. "And they've got the Ainge behind them. After all, we can't have Mom and Dad worrying that Sally and Suzie will come home pregnant."

"No chance of that," Borland said listlessly, the tobacco calming her.

Ben eased out of bed, stepping into the gelatinous puddle his clothing made on the floor. Its response circuits activated at the familiar signature of his feet and his rugby jersey and shorts began flowing up his legs. When they found themselves back in their default configurations, they solidified. Ben's jersey said: RUGBY PLAYERS EAT THEIR DEAD. But only, Ben thought, if their testosterone levels were high. He moved his uncooperative "boys" around to help his underwear settle in.

"Look, this is the first time this has happened to me," Ben said. "You've got to believe me."

"Mmm," Borland said, tugging at her cigarette.

Actually, it had already happened—two weeks ago, with Christine Jensen, a biology student, and two days later, with Lisa Holdaway, an urban-dynamics sociology major who had been a student in one of the science classes he taught.

"It's the Ennui," Ms. Borland said with certainty.

She sat up and crushed out her cigarette. Sensing that the heat had gone out of the cigarette, the nightstand swallowed the ashtray. The room, meanwhile, quickly cleared the air.

Ben thought about the so-called Ennui, said to plague the spread of humanity across the stars. “That’s a fairy tale. It’s natural for civilization to slow down as it moves out among the stars. The Alley’s a big place and we’ve only been traveling it for two hundred years.”

“The pace of life in the Alley *has* slowed down,” Borland said, stepping away from the bed. “They’ve got statistics and actuarial charts that prove it.”

Ben refused to believe that the fabled Ennui was responsible for anything, let alone the apparent lack of technological advancements in the last two hundred years. It most certainly was *not* responsible for his temporary impotence. If, indeed, that’s what it was.

Ms. Borland stepped into her clothing puddle and Ben watched as her panties and bra slithered to their default configurations. He swallowed hopelessly.

When humans left the confines of the Sol system, in 2098 C.E., to colonize nearby star systems, the sky seemed to be the proverbial limit for scientific advancements of all kinds. Peace had been secured on Earth; the Human Community formed. Faster-than-light technology was around the corner, and there was even the real possibility of medical science extending the life of the average human indefinitely. But sometime early in the twenty-third century, either just before or just after the Enamorati appeared, technological and cultural advancements seemed to lose steam; there seemed to be fewer of them.

But then the Enamorati appeared, and savants everywhere forgot about the Ennui.

Humans had known that alien civilizations had existed since the early twenty-first century, when undecipherable signals came from a civilization in the Magellanic Clouds. These were quite accidental transmissions from a culture, now probably extinct, that was more than 200,000 light-years away. A few years later, a series of small, very intense gamma-ray explosions near Beta Lyra were picked up. Some were patterned, intense, and directional, as if weapons were being used. This was the so-called Beta Lyra Space War, but at 12,000 light-years the H.C. was a mere bystander. When the Enamorati arrived, humans suddenly found themselves involved in very real space travel with very real alien allies.

The Enamorati were a space-going culture from a world located 2,300 light-years toward the galactic center of the Milky Way Galaxy, deep inside the Sagittarius Alley. The Enamorati were missionaries from a culture whose planet had been destroyed in an unimaginable ecological disaster. The name “Enamorati” was the Italian equivalent of the attitude the aliens doctrinally shared toward all beings, sentient or otherwise, whom they happened to meet in their travels. The Enamorati had no interference clause, no Prime Directive that kept them out of planetary affairs not their own. Theirs was a mission of a religious bent, obliging them to offer the Human Community two things that it needed desperately: the location of habitable worlds *and* the transportation it took to get them there in a reasonable amount of time.

If the Enamorati had something like a Prime Directive, it came in the form of their staunch refusal to give humans the technical details of their giant Onesci Engines. The mathematics that led to the development of their FTL technology had been given to them ten thousand years ago by their greatest Avatar, a physicist named Onesci Lorii. Humans could use the Onesci Engines as freely as they wished, but they had to allow the Enamorati to handle the technology. This was a matter of deep seriousness for the Enamorati, and humans had to respect it if they wanted to ply the spaces between the stars.

Ben checked the time. “It isn’t even fourteen hundred yet. Want to see what’s going on in the student commons? Catch an Experience? They’re showing *Mayberry Agonistes* tonight. Andy and Barney against the aliens?”

The romantic mood, however, had dissipated along with Ms. Borland’s cigarette smoke.

“I don’t think so, Ben,” Jeannie Borland said, adjusting the chevrons of her collar. “Maybe some other time.”

“They say it’s the greatest science-fiction movie ever made,” Ben said. “Wild Bill Kelso and George Reeves as Superman?”

“Sorry, Ben,” Borland said.

At that moment, a gentle knocking came at the door to Ben’s room.

“Are you expecting someone?” Borland asked, checking to see if her clothing had cohered properly.

For a moment Ben thought that his room’s AI circuits had smelled Jeannie Borland’s cigarettes and subsequently tattled to campus security. Tobacco was making a comeback on some of the

worlds of the H.C., particularly among young people eager to leave their youth behind and to experience the world of mature grown-ups. Someone unaligned with the Grays—the university administration—or the Ainge religious faction on board the ship had apparently smuggled several different brands of cigarettes onto Eos a few planet stops ago and was now selling them to just about anyone who would buy them. They weren't quite illegal, but their use was definitely frowned upon.

"Not really," Ben said. "Stand back. Open," he then commanded the door.

"Oh!" Jeannie Borland said, gasping.

Standing in the doorway was an Enamorati. He stood there in his gray-green environment suit and had a sad expression on his face—routine for an Enamorati.

This Enamorati was different, however, for cradled in his frail, birdlike arms was the body of a little white polar bear.

"Please forgive me," the being said in slightly inflected English from inside his mist-filled helmet. "I found your pet. It was right here before your door. I am so sorry."

This just wasn't Ben's day.

TWO

Eos University had a contingent of about a hundred Enamorati—all castes, their mates and progeny included. But beyond the often-seen Kuulo Kuumottoomaa—*kuulo* meant "steward" in their language—the other Enamorati usually remained in their chambers at the aft end of the four-thousand-foot-long ship, where they tended their enormous Engine. The lone Enamorati who stood before Ben's door, however, was not of the Kuulo caste. He was an Avatka, an engineer. And this engineer had a dead bear in his arms.

"It's not mine," Ben said to the Avatka. "I don't have a pet. Sorry."

The Avatka seemed puzzled, but there was no direct way to confirm this from the being's expressionless face. "Forgive me. I assumed that it was yours. It was lying before your door."

Ben looked off to his right. The hall was otherwise empty. "I don't think anyone on this floor has a pet. At least not a polar bear."

Jeannie Borland hovered behind Ben. "I've seen it before. It belongs to a girl in Cowden Hall."

“What’s it doing here?” Ben asked.

Jeannie Borland shrugged.

Enamorati generally were no taller than five feet. But bolstered by their environment suits and with servomechanisms amplifying their shoulders and hips, they often seemed bigger than they actually were, and far more intimidating. The Enamorati were aware of this impression on human beings, and they often sought to avoid making it. This Enamorati seemed all too conscious of his sudden impact upon the young humans and tried to modulate his voice.

“I apologize for the disruption then. Could you help me return it to that person?” he asked of Ms. Borland.

She backed away. “I don’t really know who owns it. Ben will help you though.” She turned quickly to Ben. “Find me at the Museum Club at twenty-one hundred hours tonight, if . . . things change.”

She edged past Ben, pulling a specter of tobacco behind her. She fairly raced to the nearest transit portal. A second later, she was gone.

The alien, oblivious to the nuances of human speech and social intercourse, hadn’t a clue as to what had just passed between Ben and his erstwhile date. Instead, he gave the small animal to Ben. “If you could do this for me, I would be deeply in your debt,” the alien said. “I do not wish to be of further discomfort.”

Ben gently took the little bear from the alien’s spindly arms, brushing the e-suit as he did. Ben thought he could detect a goblin of the air the Avatka breathed, but this, he knew, was impossible. A leak in the alien’s e-suit would mean suffocation for the alien and severe nausea, perhaps even death, for any human nearby.

Though the little bear was definitely dead, there were no signs of blood on the animal’s pelt. Moreover, no bones seemed crushed or broken. Strangulation did not seem the cause of the animal’s passing, either.

For a fleeting moment Ben thought that the Avatka might have been responsible for killing the little bear, but that, too, seemed unlikely. The Enamorati claimed to have ended their species-wide violent stage about ten thousand years ago. They did not kill; they did not steal; they did not even lie. They lived entirely in the shadow of the religious vision of Onesci Lorii and had been doing so for thousands of years.

A yellowish mist swirled inside the alien’s helmet. Pale and desiccated, the Enamorati looked like a race of mummified corpses with very sad eyes.

“Okay,” Ben told the alien. “I’ll do what I can.”

“Thank you,” the being said. “And should the animal’s owner wish to speak with me about this, they may summon me at any time. I am the Avatka Viroo. Summon me directly or consult the *kuulo* first. I am at your disposal.”

The frail being walked down the hallway, passing the transmission portal that Jeannie Borland had taken, and stepped into the connecting passageway. The being apparently wanted to walk back to the Enamorati compound rather than be teleported directly. Some Enamorati were odd that way.

Ben looked around. It was 2:00 P.M. on a Friday afternoon and most of Babbitt Hall was deserted—the students elsewhere in the ship. Most would be either in the field house or at the cinemas or in the Museum Club, starting their weekend early. The students who came from deeply religious Ainge families were probably still in their dorms studying. The polygamous Ainge, descendants from a splinter Mormon colony on the Isle of Ainge on Tau Ceti 4, still kept to clean, drug- and stimulant-free living. With any luck, Ben thought, the young woman who owned the bear would be a daughter of the Ainge and would be in her dorm studying with her suite mates before Friday-night services.

Ben stepped over to the wall. He pressed it with his hand and a luminescent menu for the ship’s directory appeared. Any wall in any part of the ship had this feature. Ben tapped the wall menu command for FIND. But find who?

He tapped out the letters for the word PETS, then pressed ENTER. Pets were certainly allowed among the students, support staff, and faculty. But they were also registered with the university.

The word PETS appeared with a listing of two dozen kinds of animals as pets kept on board Eos University.

“A horse?” he said. “Someone has *horse* on the ship?” He would have to look up CYNTHIA JENEY later, just to satisfy his curiosity.

But someone did have a bear, so Ben pressed the glowing word BEAR.

The name that appeared on the wall register read: JULIA WAXWING—COWDEN HALL—ROOM 220. Cowden Hall was the exclusively female dorm in Eos University and it was in the next wing over.

Ben toggled the com/pager at his belt and spoke into the pin at his collar. “ShipCom, open. Ben Bennett paging Julia Waxwing, please,” he said. As he recalled, the nearby wing of Cowden Hall

was filled with young women mostly studying the physical sciences. Whether Julia Waxwing was an undergraduate or a graduate, he didn't know and the wall menu didn't say.

The automated voice from ShipCom's computer said, "*Sorry. There is no response. There is no forward paging. Do you wish to leave a message?*"

"No," he said. "Com, close."

At that time of the afternoon, Julia Waxwing could be just about anywhere on the ship. University classes were never held on Fridays, but the labs were open, as was the library. Some professors even held office hours on Fridays.

On the other hand, the fact that there was no forward paging meant that regardless of where she was, Julia Waxwing didn't want to be disturbed.

"Now what?" he wondered aloud. He could just leave the bear in front of her dorm room, where she would find it whenever she got back from wherever she was. But that wouldn't do. Just because he'd had a dismal day didn't mean that he had to make it dismal for someone else.

But he *had* to do something.

To Ben's left, just a few yards away, the transit portal suddenly came alive with bluish light. Almost instantly, two figures fell from the portal's assembly ring and came crashing to the floor, sputtering with laughter.

These were friends of his, students he'd bonded with when they met at the beginning of the university's tour three years ago. One was George Clock, a gregarious ash-blond young man who used to be a geography major, specializing in satellite mapping techniques. The other boy was Jim Vees. Vees, a black American, had been an astronomy student until the Ennui—or something—got to him and he dropped out of his studies. He slept a lot, now. These were the Bombardiers. Only Tommy Rosales was missing at the moment.

Since George and Jim had bombed out of their programs, all they seemed to do was play as much as possible. Transit-hopping was one such form of recreation on the ship. Students often transit-hopped in an attempt to get high off the strange euphoric tingle that occurred when a person's molecules were stripped for transport over the ship's network of optical cables, then reassembled again. That's what these two had been doing. Hopping.

Ben stood above the two laughing Bombardiers with the dead bear in his arms. Clock pointed to the animal. "I'll bet this comes

with a real *good* story,” he said. He hadn’t yet seen that the animal was lifeless.

“Believe it or not,” Ben said, “an Avatka gave this to me a few moments ago. He found it right here, in front of my door.”

“An Avatka? Here in Babbitt Hall?” Clock asked, climbing to his feet.

“Say, that animal looks dead,” Jim Veas said. He was slower getting to his feet.

“It is dead,” Ben said.

“Did the Avatka kill it?” Veas asked.

“I don’t know,” Ben said. “He said it was dead when he found it.”

“Whose animal is it?” Veas asked, softly caressing its fur.

“It belongs to someone named Julia Waxwing, over in Cowden Hall. She’s not answering her com and she’s blocked all forward paging. Ever hear of her?”

The two dropouts shrugged and shook their heads.

Clock then said, “You know, she could be in the student commons, in the student media lounge with everybody else.”

“Let’s transit there,” Veas said, always looking for an excuse to transit.

“What’s going on at the commons?” Ben asked.

Veas smirked. “President Porter is going to release the contents of the last data bullet we snagged, the one we got right before we jumped into trans-space a couple of weeks ago.”

“What’s so important about that bullet?” Ben asked.

“Inside sources say that another ship exploded,” Clock said. “A really big one this time. The bullet has all the information on it, but the administration’s been debating whether to share the fully decompressed data with the rest of us. Maybe they think we’ll riot if we get the whole story.”

“What ship was it?” Ben asked.

“The *Annette Haven*, outward bound to Ross 154,” Clock said. “At least that’s the rumor. It’s got the Grays worried.”

Ben wasn’t familiar with the *Annette Haven*. There were so many Engine-driven ships now in service that it was impossible to keep track of them all—freighters, people carriers, cargo vessels of all shapes and sizes, to say nothing of H.C. exploratory craft looking for new worlds to add to the Alley.

However, space travel had always been hazardous and ships every now and then still succumbed to systems failures, or even the

unseen microparticle that would core a spaceship in a heartbeat. Disasters in space happened to humans and Enamorati alike.

“Someone at the student newspaper checked the H.C. manifest of ships in our data banks,” Clock went on. “The *Haven* was a passenger liner. Big. It could transport at least nine hundred humans at a time. It had an Enamorati crew of twenty. If the Engine blew, there’d be nothing left but a trans-space ripple.”

Both the Ainge and the Enamorati happened to believe that trans-space was the actual body of God, and that their duty was to lead pilgrims through it. Most of the H.C. didn’t see it that way, but used the Engine-run ships anyway. Trans-space, however, did act like the Old Testament Jehovah and saw fit to remind humans and Enamorati alike of the dangers of space travel. Fiction had made space travel seem effortless, even safe. But the truth was that faster-than-light travel was just as hazardous as slower-than-light travel, and many thousands of lives had been lost in the last two and a half centuries of space travel. Many more would be lost in the future.

“How many Ainge Auditors were on the ship?” Ben asked.

Clock laughed. “The *Haven* probably didn’t have more than one or two. It was just a liner.”

“Darn the luck,” Jim Vees said soberly, his transit high having worn off. “Our Auditors should be so lucky.”

There was no love lost between Jim Vees and the Ainge. Though Jim had come from Earth, part of his family had converted to the Ainge religion and had spent much of their efforts trying to get the rest of the family to join. The Ainge, because of their relationship to the Enamorati, represented the fastest-growing religion in the *H.C.* But fifty million followers of Ixion Smith were not enough reason for Jim Vees to check his brain at the door.

“But get this,” George Clock continued. “The student newspaper says that one of our archaeology professors had a clone-son on the *Annette Haven*. Somebody famous, but they won’t say who. Maybe Porter is going to tell us.”

“An archaeology professor?” Ben asked.

“That’s what they’re saying,” Clock affirmed.

Ben stepped back to the wall and called up the student directory once again. He came up with JULIA WAXWING, then asked for any kind of declared MAJOR.

On the screen appeared the word ARCHAEOLOGY.

“Figures,” Ben said.

CONFIRMATION of the space death of the *Annette Haven* spread quickly through the halls of Eos University. There were no specifics. The data bullet had to travel light—the lighter, the faster. Undoubtedly, when Eos arrived at their next port of call, specifics regarding the passenger manifest and details of the cause of the ship's destruction would be much better known.

To Albert Holcombe, Regents Professor and chair of the archaeology department, the news was particularly devastating. As he had already shared with his colleagues, the clone of his second son, Joshua, a boy named Seth, had been on the *Annette Haven*.

Not that progeny mattered much to Albert Holcombe. The human race now numbered around ten billion, and a billion of those were clones, or the clones of clones. But Seth, at least as Holcombe remembered him, seemed to be the only Holcombe to have any life left in him, any *esprit, joie de vivre*. Even when Seth was a youngster on Tau Ceti 4, he would run circles around the fuddy-duddies of the Holcombe camp. It was no surprise to Holcombe when the boy became a StratoCaster, one of the BronzeAngel sky-runners, in fact. Holcombe always glowed with pride, thinking that a member of his family had pursued a disreputable career and actually made something of himself. But now the boy was dead—nothing more than blasted atoms in the indescribable vacuities of trans-space.

Unfortunately, Eos University was more than one hundred light-years from the Sol system at its farthest point on its four-year Alley tour. Holcombe didn't imagine that either Alex Cleddman—Eos's pilot—or any of the Grays would turn the university around just to accommodate his grief. In fact, the first thing that Captain Cleddman had announced at the hastily convened University Council meeting was that the ship would be continuing on its course to its next port of call. Holcombe merely nodded, accepting the grim ways of fate.

Cleddman, sometimes called the Cloudman by the students, was a stocky tree stump of a human being with massive arms, muscular legs, and no neck. He had played Australian-rules football in college, and the rough and tumble of the game had seemingly driven his head into his shoulders by several inches. He stood five feet five, compact and solid like a BennettCorp data bullet.

Cleddman placed a hand on Holcombe's shoulder, meaning to be sympathetic. "I never thought the *Haven* would go up. I've ridden her myself. I thought she was invincible."

"We all think we're invincible every now and then."

"I'll make sure you get the full report on the accident as soon as it's decompressed at the next port," the Cloudman said.

"I appreciate it," Holcombe said. "Thanks."

A junior member of the mathematics department in the back of the Council hall stood up and looked around. "Excuse me, Captain. Shouldn't one of the Auditors be present at this meeting? It's written in the faculty bylaws. It's part of our charter."

"I notified them," Cleddman said, turning. "But they're preparing for Friday-night services."

"Then perhaps we can wait until tomorrow or Monday," said the faculty member. Like the Ainge priests and the university administration personnel, this young man wore a gray tunic. Holcombe despised gray...

Captain Cleddman cut off the faculty member with a slight gesture. "I understand your concern, Dr. DeGroot, but we are letting the Kuulo stand in for High Auditor Nethercott. Will you allow that?"

Off to the left of the podium stood a hologram projection stage. A 3D image hovered there, that of the ranking Enamorati, the Kuulo Kuumottoomaa. The Kuulo was actually somewhere deep inside the Enamorati compound at the far end of the giant ship. It was easier for him to be present this way and to speak without being locked in his e-suit.

The alien looked in the direction of Dr. DeGroot. His Standard English was flawless as he spoke. "I will advise Mr. Nethercott on the content of the meeting as soon as he is available. Our Ainge brothers will be fully informed."

"That's acceptable," Dr. DeGroot said.

Holcombe thought he could detect a note of disappointment in DeGroot's acquiescence. Everybody knew there were factions on the ship that were itching to catch their pilot, who was not of the Ainge religion, in a lapse of protocol. But Cleddman would never give them the chance. Hooray for Cleddman.

The alien's next words, surprisingly, were for him. "Albert Holcombe, we, too, share your loss. Many of our own perished on the HCSV *Annette Haven*. The loss is no less meaningful to us. I can

assure you that our engineers will do what they can to make certain that a similar accident doesn't happen to us."

The pilot cleared his throat. "That's why I called this meeting. This is as good a time as any to bring the matter up, but in light of what's just happened to the *Haven*, I think it's time we took up the proposal Physics and Mechanical Engineering made last year when the *Aurora Lee* was lost in transit to Beta Draconis 5."

The Council hall fell absolutely silent. Even Holcombe hadn't expected something like this.

"No offense, Kuulo," the Cloudman said, "but humans feel better if they're working on their own problems instead of waiting around for someone else to deal with them."

"What are you saying, Mr. Cleddman?" someone asked in the rear.

"Physics and Engineering have three different stardrive systems in development that could rival the capacities of an Onesci Engine. The math is there and I've seen the schematics. I think we should consider shifting all of our technical resources over to Physics and Engineering to see if we can get one of the stardrive systems up and running. For real."

The forty-member Council started rumbling and shifting about in their seats. Holcombe noticed that the 3D image of the Kuulo Kuumottoomaa remained impassive.

"You're thinking about going your own way, aren't you," someone else said.

"*Our way*," the Cloudman responded. "I have made it clear many, many times that I don't like my fate being in the hands of. . . others. Sorry, Kuulo. This is the best opportunity humankind has had in two hundred years. We've got to try sometime. I think now is the time."

Dr. DeGroot stood up once again. "I can see why you didn't want the Ainge here, Mr. Cleddman," he said heatedly. "Without the Engines, the Ainge would have no authority on a human vessel, now, would they?"

"Dr. DeGroot, this isn't about the Ainge," Cleddman said firmly. "This is about powering our own vessels with our own engines, doing our own technical checks to see that all systems are working the way they should be working—and if they *do* blow up in trans-space, then we can examine the engines themselves, if anything's left, to see for ourselves what went wrong."

Holcombe though he could hear a page of history turning over a massive leaf. Cleddman had suggested nothing less than an act of absolute liberation, an act many human beings—billions of them, in fact—might not want. Those people, members of the vast Ainge Church, would have the most to lose, at least in terms of political influence.

The Enamorati Compact was signed on Tau Ceti 4 in 2205 C.E. by Ixion Smith, president of the Ainge, acting on behalf of the Human Community. It formally bound humans to respect the religious aspects of the Onesci Engines. No ship using Onesci Engines could engage in war; acts of piracy or unprovoked violence were forbidden. But along with the Enamorati engineers, several humans, high priests of the Ainge religion called Auditors, would always accompany the Enamorati. Their relationship to the Enamorati was special and inviolate. Cleddman had just suggested an end to all that.

Humans *did* have a form of trans-light travel, but it was limited, employing molecular compression based on nearly ancient fractal mathematics. So-called bullets of compressed matter, the biggest a millimeter in diameter, could be shot through trans-space to allow for a decent system of real-time communications between worlds light-years apart. The mysteries of trans-space, let alone Engines efficient enough to move people through it, still eluded the best minds of the Human Community.

The Kuulo Kuumottoomaa held up his hand, pleading. “Mr. Cleddman, we believe that our Engines are the best that can be made, especially for a ship this size. And I hope you understand that we have no desire to die in space, either. When we know more of what happened to the *Annette Haven*, we will do everything we can to make certain this great ship will not suffer the same fate.”

“I’m sure you will,” Cleddman said. “But I would much rather have a greater say over how I live and die than I have now. If the problem *is* with the Engines, then I want to know exactly why. But you’re never going to share that information with us, and that we can no longer tolerate.”

“Speak for yourself, Alex,” said Dr. DeGroot.

“I’m speaking for myself and every human being who has died in-transit in the last hundred years. I’m also speaking for you, too. I’m an equal-opportunity pilot. I fly anybody. I just want to arrive in one piece.”

“The odds of perishing in-transit are still ten million to one,” Dr. DeGroot said. “And I trust the Enamorati *and* their Engines.”

A female faculty member from Biochemistry stood up. “Captain, you can’t possibly do this without the approval of the university administration and faculty. We’re a university first, a spaceship second.”

“The Eos University charter allows me to take control of the ship if or when the *vessel* is threatened. I’m not invoking that charter now. But, I *will* if I have to. And if I have to, I want to be ready. This shouldn’t disturb the functions of the university. And, yes, I will consult the administration if or when the time comes for us to break away.”

“Are we close?” a voice asked from the rear.

“Not yet,” Cleddman admitted.

“Then isn’t this a little hasty?” someone else asked. “We don’t know what happened to the *Annette Haven*. It may have had nothing to do with its Engine.”

“This has been brewing for quite some time now,” Cleddman told them. “I’m not the only pilot in the H.C. who feels this way.

But as far as I know, we’re the only ones in a position to test the advances we’ve made so far. And, I might add, if we pull this off, Eos University will be unsurpassed in excellence and fame.”

“You’re doing this because you don’t like the Enamorati,” Professor DeGroot said.

“No, I’m doing this because I don’t like to be blown up,” Cleddman said. “And I don’t think you do, either. In any event, when the time comes I will run this through all the proper channels and nobody on the Council will be left out of the debate. But as I said earlier, it’s my job to maintain our safety. This is definitely *not* a political matter.”

“Not yet, it isn’t,” grumbled Professor DeGroot.

With that, the 3D image of the Kuulo winked out. Evidently, the Kuulo had heard all he wanted to hear; so had a number of others.

The impromptu meeting seemed to be at an end.

FOUR

IN the oval arena of Eos University’s ShipCom center, Cutter Rausch shook his head at the information on the large monitor screen in front of his subordinates. Rausch was a slender, quiet man in his mid-thirties, and calmness had served him well over the years. Cha-

os and confusion could be everywhere around him, but rarely was the communications chief moved by outside calamities. However, the news of the *Annette Haven's* demise had unsettled him deeply. His staff wasn't taking it well either.

Their computer, the greatest in the H.C., had massive databases; every book, every journal known to humankind was in storage, and this included all current information on businesses and corporations that was in the public domain. Rausch had found the most up-to-date crew manifest for the *Haven*.

"Look at that, Cutter," observed his second-in-command, Lisa Benn, a fortyish blonde who was frowning at the screen. "The crew all have Ainge names. Turley, Romney, Mullin..."

Rausch's third-in-command, dark-haired Maree Zolezzi, saw something else important. "I don't see any known members of the KMA on the crew. If it's all Ainge, somebody's bound to think the KMA blew the ship up."

Rausch rubbed his chin as he pondered the list of the ill-fated ship's crew. "Maybe," he said. "Maybe not. There are other political factions in the H.C."

"But none are as outspoken as the KMA," Benn said.

Rausch shook his head. "Even the most radical factions of the KMA would never be this brutal. Even if Jack Killian were still alive, he would never have sanctioned something like this, no matter how many Enamorati might have been on board. He'd lose most of his supporters, including me. We're just going to have to wait until the final reports come in. In the meantime, let's just hope the Police Council doesn't go on a witch-hunt."

Maree Zolezzi steepled her fingers before her as she thought at her console. "A ship is going down now about once a year. It just *can't* be mechanical."

Rausch nodded. "Unfortunately, the energies of trans-space absorb unprotected matter, so there's no way to know."

The other members of Rausch's crew included three junior officers and an intern from the university. This intern, Clare Kronmeyer, looked more worried than usual. She said, "If the crew and the passengers were entirely Ainge, don't you think heads are going to roll? I mean, the High Councilor is Ainge and so is most of the H.C. Council. Anybody in the ship corps who isn't Ainge could be out of work."

"Children," Rausch said. "If Mason Hildebrandt and the High Council want to fire us, they can come all the way out here and get

us. The one thing I know for sure is that Alex Cleddman isn't going to hand the ship over to anybody for any reason."

A small row of yellow warning lights appeared along the bottom of one of the monitors on the giant wall before them.

"Good," Cutter said, almost relieved. "Something to take our minds off politics for a while."

"Unless the ship's about to blow up," Lisa Benn muttered.

"Wouldn't *that* be interesting," Rausch said.

They set about determining the source for the yellow warning lights.

✕

Ben Bennett walked the halls of Eos University with a dead bear in his arms and trouble on his mind. Friday afternoon and the place seemed unusually quiet. Perhaps there *was* something to the Ennui. Perhaps it was spreading. Perhaps the little bear in his arms had gotten tired and somehow decided to stop living.

So what *was* an Avatka doing in Babbitt Hall?

Ben went door-to-door through Cowden Hall trying to find this Julia Waxwing person. He did come across several of her friends who recognized Jingle Bear and were sad to see that he had died. But they didn't know where Julia was. Jingles, Ben learned, was a polar bear from Earth that had been growth-locked in its infancy and gene-engineered to passivity, and had become a pleasant fixture in the dorm. The girls were deeply saddened.

Ben also learned that the bear was only three years old, so it clearly did not die of old age.

"Now what?" he muttered, alone at the end of the hallway, having run out of Cowden Hall rooms in which to look for Ms. Waxwing. She was probably on a date, having dinner in the student commons perhaps

His com/pager chimed out just then. "Go ahead," he said to the receiver in his collar chevron.

"Ben, this is Eve Silbarton. How far from a transit portal are you?"

"About ten feet," he said, bear in arms. "Why?"

"Get to Physics as soon as you can!"

Hugging poor Jingle Bear, Ben walked to the end of the corridor and entered the transit portal. "Physics, alpha lab," he said aloud to the portal's computer.

"Access to Physics, alpha lab, is denied," the voice said. *"May I reroute you to nearest portal that has access to the Physics lab?"*

“Sure,” Ben said, wondering why regular access was blocked. “Why the hell not?”

An energy tornado swallowed him. He and the dead bear were routed instantly, via fractal compaction, to a transit portal nearest the Physics main lobby and reception desk, a quarter of a mile from Cowden Hall and the other student dorms.

Ben’s area of expertise, which he had studied at the University of Fresno-by-the-Sea and finished on board Eos, was in the field of data-bullet fractal compaction technology. In fact, he had come up with entirely new mathematics for fractal compression which made it easier to compress data to nanometer widths, increasing their lightness and speed. This same technology was also used in the operation of transit portals, making them much more efficient. One unexpected by-product of the new system was a very strange and as yet unexplainable euphoria.

This rush of the portal’s energies was the first sensation of pleasure Ben had had all day.

The portal delivered him and the bear to the main reception area of the physics department. However, when the portal’s sensational energies dissipated, he was met by harsh fire alarms and spinning red and yellow emergency lights.

Still carrying the bear, Ben raced through the reception area, stepping into an opposite hallway that led to the various physics labs.

He practically collided with Eve Silbarton and two of her research assistants as they were rushing out.

“*Whoa!*” Ben said, backing off.

Dr. Evelyn Silbarton stood five feet one and wore her black hair pulled behind her head in a girlish ponytail. She was sixty-one, but looked thirteen, a product of fierce anti-aging programs in her youth.

“Get back!” she shouted, pushing him out of the hallway.

The two research assistants—Brad Navarro and Peg Thiering—were in retreat right beside her. They were Dr. Silbarton’s top grad students, and all three were frightened at what they had left behind them in one of the labs.

Shouting above the fire alarms, Dr. Silbarton said, “It’s a disassembler! Someone turned loose a disassembler in the alpha lab when we weren’t looking! It’s spreading fast!”

“What?” Ben asked, not sure if he had heard correctly.

“Campus security’s on their way, and so are the fire department and people from the physical plant!” she shouted.

“It’s that bad?”

“It’s *that* bad!” she said.

Disassemblers were the rarest of weapons and historically one of the most feared. To Ben’s knowledge, the only known molecular disassemblers were supposed to be stashed in an arsenal of forbidden weapons somewhere deep inside an icy Pluto vault back in the Sol system. What was one doing here?

Several campus-security individuals quickly appeared at the opposite end of the hallway, having taken a different transit portal to the physics wing.

Because of the portals, there wasn’t a place in the ship that could not be reached in less than four seconds. But four seconds in the life of a disassembler was a virtual lifetime of gorging and doing all sorts of damage to anything in its way.

The alpha lab, where the physics department did most of its grant work for the H.C. Science Council—multimillion-dollar grants were the mainstay of most universities—was presently dissolving in a cloud of sparkling gray mist. Ben watched as the mist stuck a deadly tentacle into the outer hallway, and Eve pulled him and his bear back. Molecules hissed and disappeared in nuclear fury. Structural supports in the floor and the ceiling began vaporizing as the cloud grew and grew.

At the opposite end of the corridor, a transit portal spouted several fire personnel who carried both compressed water packs and chemical foam packs. They saw instantly that there was little in their arsenal that could stop what they saw growing before them. Tiny iridescent sparkles danced in the air of the corridor, looking for something to destroy.

“*Evacuate the floor!*” shouted the fire chief. “*There’s nothing you can do here!*”

The mist emerging from the wall of the alpha lab wasn’t so thick that Ben couldn’t see through it. Beyond it, very little remained of the lab—floor, ceiling, everything was gone.

Ben tried to recall how far the physics department was from Eos’s outer hull. A hull breach in regular space would be bad enough. A breach while they were in trans-space would cause them to end up like the *Annette Haven*.

“How did this happen?” Ben asked.

Peg Thiering responded. "We don't know. We were in the beta lab when the alarm went off. Brad opened the door and almost walked right into it!"

"Was anybody in the lab when it happened?" Ben asked.

"No," Thiering said. "The place was deserted. Even the secretaries had gone home."

Ben watched. The police and fire crew at the other end of the hallway watched. There was nothing they could do *but* watch.

Some of the other fire crew had gone to the levels immediately above and immediately below the physics department to evacuate them. But the rest watched the coiling, roiling, voracious gas eat away at all it encountered.

To their relief, however, the deadly mist seemed to expend itself, easing back its ravenous advance. Moments later, it had ceased growing entirely and had begun to dissipate.

No one approached the area for a good five minutes, waiting for the crackling of disassembled molecules to die down completely. When this happened, everybody crept in for a closer look.

The mist had taken an enormous, completely spherical bite out of the alpha lab, taking with it part of the floor above and the floor below it.

"Wow," Brad Navarro said. "That's a *real* nasty weapon."

Clusters of pipes, bundles of wires, and packed optical fibers that were once hidden in the floors were now exposed and neatly severed. Water gushed, electricity sparkled, and gases bound for the chemistry labs on the floor below hissed into the air uncontrollably.

On the floor below in the chemistry department, several people were gazing up, just as startled as their colleagues in the physics department.

On the floor above them, only one person had witnessed the event. She was a slender, attractive young woman with commanding brown eyes quite unlike anything Benjamin had ever seen before.

The young woman looked directly at Ben from up above. She pointed to the animal in Ben's arms. "Is that my bear?"

Ben could only read her lips, since the fire alarms were still clamoring about them, but he understood.

He had just located the elusive Julia Waxwing.

JULIA Waxwing, a mixed descendant of Apache and Zuni Indians from distant Earth, had almost vanished. She had almost been swept into the arms of Death—like a titmouse taken in the claws of an Arizona sparrowhawk.

The twenty-three-year-old archaeology student had escaped that fate. But the incident with the disassembler did remind her how her grandfather, Stan Chasing, had once described the death of a human being: a fading from human memory, with nothing to show that he or she had ever walked the Earth.

Julia understood the manifold perils of space. Ships blew up, colonies died out, explorers soared into the abject blackness of the unexplored Alley, never to be seen or heard of again. But a *man-made* catastrophe was something no one should have to put up with. That was just bad manners, totally unbecoming of the dignity of *Homo interstellaris*.

However, the strange silver fog that took out nearly all of the physics department below as well as part of the archaeology department above was no longer of interest to her. Her little bear, a going-away present from her family, had been her only link to that familiar world. Now that link had been destroyed.

As the ship's crisis-control people surveyed the damage done by the weapon's bite, interviewing those who had witnessed the event, Julia descended into grief. She hugged the body of Jingle Bear where she sat next to the corridor wall in the physics department.

The young man who had brought the bear to her stood by, as if not knowing what else to do.

"Listen, I'm sorry about your bear," the young man said to her.

His back to the wall, he slid down beside her. "I tried looking for you in your dorm, but your pager was switched off and nobody knew where to find you."

An intentionally disengaged com/pager was, theoretically, a university misdemeanor. The com/pagers in the chevrons on the collars of everyone's tunic were *supposed* to be turned on at all times. This was for cases of emergency where university officials might need to know where their three thousand wards were.

But Julia honored her American background by defying authorities in minor, but annoying ways, and she had taken some of that with her when she came to Eos University two years ago in order to study with the famous Albert Holcombe. This was to be Professor

Holcombe's last Alley circuit and Julia couldn't pass up the professional opportunity of studying under so famous a scholar. The death of Jingle Bear, however, had taken some of the wind out of her sails, leaving her demoralized.

"My name's Ben," the boy with the ponytail said. "I teach in the physics department. Or what's left of it, anyway."

"I'm Julia," she said softly, cradling her bear. She did like his smile. And his eyes. They hinted of intelligence and the possibilities of great mischief. He seemed more like a jock than a physics teacher.

"I'm a lecturer," he said, as if feeling the need to qualify his last remark. Or perhaps just to make conversation.

"I'm just a research assistant," she said. "It pays my way."

Ben nodded.

People kept arriving to assess the damage, the Grays of the administration as well as campus security, some of whom were armed with the ship's only weapons—crowd-control stunners.

Off to their right, a transit portal glowed and a major Gray appeared in the iridescent ring. Julia recognized the head of campus security, Lieutenant Theodore Fontenot. He sported a black mustache of military smartness, and his snappy gray tunic had nary a wrinkle or crease. He was accompanied by an assistant with a shouldercam already sweeping the area. The story was that Lieutenant Fontenot was a lineal descendant of Ixion Smith himself— Smith and his eleventh wife. Mom and Dad often sent their kids to Eos University *because* of Mr. Fontenot's pedigree. They knew Bobby and Suzie would be safe in his care.

"This should be interesting," Ben whispered, also seeing the lieutenant appear on the scene.

"Why?" she whispered back.

"That woman there?"

"Yes?"

"That's Eve Silbarton," Ben said. "She was my advisor on my dissertation."

"So?"

Ben looked at her. "So, Fontenot is supposed to have had a 'thing' with Dr. Silbarton some time ago. She hates him now."

They watched Mr. Fontenot survey the damage. Eve Silbarton stood beside him, arms crossed.

"Do you have any idea what happened here?" Mr. Fontenot asked.

Silbarton gave her account, mentioning specifically how the work seemed to be that of an outlawed disassembler. Her two graduate students then gave their account of what happened. Meanwhile, Fontenot's assistant with the shouldercam diligently took everything in. The camera, to Julia, looked like a parrot on the shoulder of a pirate.

Fontenot then glanced down at Julia and Ben on the floor. He pointed to the bear in Julia's arms.

"Is that animal dead or alive?" the lieutenant asked.

"He's dead," Julia told him.

Fontenot indicated the spherical cavity that used to be the physics alpha lab. "Did he die in this accident?"

"I found him dead in my dormitory," Ben said. "I was bringing it to her. Actually, that's not entirely true. Eve called me and—"

"What is your name?"

"Benjamin Bennett," Ben said. "I'm a—"

"And what's your business here?" Fontenot said, interrupting.

Ben rose to his feet with surprising agility: he *was* a jock. "What do you mean 'what's my business here'? I *work* here."

Fontenot seemed unimpressed. He stared down at Julia. "And who are you? What are you doing here?"

Ben moved closer to Fontenot. "Hey, man, what the hell kind of question is that?"

"Ben—" Eve Silbarton said, rushing over.

Julia watched and said nothing.

"She's in the archaeology department. Up there," Ben said heatedly, indicating the offices of the archaeology department visible through the eight-foot hole in the ceiling.

Lieutenant Fontenot glared at Ben. "Sit down and cool off, son. I'm just asking questions."

Ben relaxed, then sat back down beside Julia.

Fontenot again addressed Dr. Silbarton. "You said you thought this was the work of a disassembler. What made you think that?"

"I've worked with them before," Eve Silbarton said.

"Really?" Fontenot seemed truly surprised.

"Yes," Silbarton said. "I was a research technician at Europa DuPont for three years."

"They gave a common *tech* security clearance to work with disassemblers?" Fontenot asked.

"Stranger things have happened, Ted," Silbarton responded.

"Hmm," he said, deep in thought. "Was someone working on a matter disassembler in the lab?"

"If they were," Eve said, "they would have been breaking about twelve laws, all of which are felonies."

"They're probably dead, too," Ben added.

"There's that," Eve acknowledged.

"We're in the process of doing a head count now through the computers," Fontenot told them. "Did the lab contain any kind of project or experiment that could have *resembled* a matter disassembler?"

Dr. Silbarton shook her head. "We have nothing in any of our five labs that even comes close. Dr. Harlin wouldn't sign on with a project that could cause this much damage, or any damage for that matter."

"Tell me again what *you* were doing when this happened," Fontenot queried.

"My students and I were in the beta lab checking the results of some of the work we did yesterday on our Casimir field separator.

We had prepped the separator, but its energy levels were well below the start-up phase. Then the alarms went off."

"This 'Casimir field separator,'" the lieutenant said. "Could it have done this?" He waved a hand at the damaged lab.

Eve Silbarton scowled at the lieutenant. "Only if someone turned loose a disassembler while we were operating it."

"Are you absolutely sure?"

"Look, Ted," Silbarton went on. "The energy created in a Casimir vacuum would be sucked back into trans-space if it ever got out of control. It's the cleanest form of energy we know. And it *can't* blow up."

"What is your separator for?" Fontenot asked.

"It's to power the stardrive I'm working on in the gamma lab," she said.

"Whose projects were being tested in the alpha lab?"

"Gan Brenholdt and his students have exclusive use of the alpha lab," Eve said. "He was apparently at Friday-night services. He's on his way here now."

"What was he working on?"

"A stardrive system based on modified Alcubierre equations."

"Which is...?"

Eve said, "You'll have to ask him, Ted. He can explain his work better than I can."

“What you’re saying is that you don’t think I could understand it,” Fontenot said.

“No, I don’t. But maybe Dr. Brenholdt can explain it to you, who knows?”

The security chief did not seem particularly perturbed by Dr. Silbarton’s manner. He then asked, “How many of these star drives are you people working on?”

Silbarton said, “Mine, Gan Brenholdt’s, and one by Dr. Ossam Hamdeen, but his is still in its design phase. He’s at evening prayer, but he will be here shortly, too.”

Julia and Ben watched as the adults pondered the extent of the damage and wondered who or what had caused it.

After a long pause, Eve Silbarton voiced a question they were all thinking, including Julia. “So who would have done such a thing? Who would even *want* to?”

“Well,” Fontenot said, looking at her. “*You* might.”

Several onlookers gasped at the remark.

Eve Silbarton glowered blackly at the man. “The men and women who work here are *colleagues*, Ted, and I wouldn’t think of sabotaging their work anymore than they would think of sabotaging mine. So get that stupid notion out of your head right now.”

“Let me ask you this,” Fontenot said. “How important would you rate your project over those of your colleagues?”

“Fuck you, Ted,” Eve responded. “I’m not going to answer any more of your dipshit questions.”

Lieutenant Fontenot surveyed all that was before him—the technicians going over the crime scene, the various witnesses to the event being interviewed at the far end of the hallway—then nodded as if agreeing to his own thoughts. “Of course, if this was a *political* act, it might look very bad for someone who has publicly expressed sympathies for the policies of the KMA.”

“*What?*” Eve Silbarton stammered. “What are you implying?”

Fontenot’s assistant switched off his shouldercam, taking a signal from the lieutenant’s wink.

Dr. Silbarton saw this. “Turn that damn thing back on! I want a record of this!”

Fontenot said, “We have to consider all possible motives here. And we all know where the KMA comes out on the Enamorati Compact *and* the Ainge, don’t we?”

“Hell, Ted, you just got here!” Eve said. “You haven’t even *begun* your investigation. Who knows who did this or why? Forget Jack

Killian's Mobile Army or his Mad Assassins or whatever the hell they're called. We've got a situation right here, right now. This thing might have eaten through a bulkhead, and if that had happened, you wouldn't be standing here right now looking like an idiot."

"You think I look like an idiot?" he asked.

Eve Silbarton put her hands on her hips and gave Fontenot the evil eye. Two of them, in fact. "You *are* an idiot, Ted," she finally said. "Get used to it."

Fontenot turned to his crew of investigators. "Gentlemen, escort our witnesses to security detention so we can get their stories in a more comfortable setting."

"Lay a hand on me, Ted," Dr. Silbarton snarled, "and I'll break all eight of your legs."

"Are you resisting arrest?" Fontenot asked.

Eve Silbarton's eyes went wide. "You're *arresting* me? What the hell for?"

"For resisting arrest," Fontenot said. "Among other things. Conspiracy would be another."

Dr. Silbarton said, "You can't arrest anybody for resisting arrest if you haven't *arrested* them yet, you worthless sack of shit. And nobody is conspiring against you!"

"We can start, though," Ben said, surprising even Julia. "If that'll make you feel better."

Julia punched Ben as hard as she could, but the boy with the ponytail and the mischievous grin merely smiled up at the security chief.

Julia had read Ben's character correctly from the start.

And Fontenot took them all to jail, Jingle Bear included.

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