



Orphans of the Helix (v1.1)

Dan Simmons, 1999

The great spinship translated down from Hawking space into the red-and-white double light of a close binary. While the 684,300 people of the Amoiete Spectrum Helix dreamt on in deep cryogenic sleep, the five AIs in charge of the ship conferred. They had encountered an unusual phenomenon and while four of the five had agreed it important enough to bring the huge spinship out of C-plus Hawking space, there was a lively debate -- continuing for several microseconds -- about what to do next.

The spinship itself looked beautiful in the distant light of the two stars, white and red light bathing its kilometer-long skin, the starlight flashing on the three thousand environmental deep-sleep pods, the groups of thirty pods on each of the one hundred spin hubs spinning past so quickly that the swing arms were like the blur of great, overlapping fan blades, while the three thousand pods themselves appeared to be a single, flashing gem blazing with red and white light. The Aeneans had adapted the ship so that the hubs of the spinwheels along the long, central shaft of the ship were slanted -- the first thirty spin arms angled back, the second hub angling its longer thirty-pod arms forward, so that the deep-sleep pods themselves passed between each other with only microseconds of separation, coalescing into a solid blur that made the ship under full spin resemble exactly what its name implied -- *Helix*. An observer watching from some hundreds of kilometers away would see what looked to be a rotating human double DNA helix catching the light from the paired suns.

All five of the AIs decided that it would be best to call in the spin pods. First the great hubs changed their orientation until the gleaming helix became a series of three thousand slowing carbon-carbon spin arms, each with an ovoid pod visible at its tip through the slowing blur of speed. Then the pod arms stopped and retracted against the long ship, each deep-sleep pod fitting into a concave nesting cusp in the hull like an egg being set carefully into a container.

The *Helix*, no longer resembling its name now so much as a long, slender arrow with command centers at the bulbous, triangular head, and the Hawking drive and larger fusion engines bulking at the stern, morphed eight layers of covering over the nested spin arms and pods. All of the AIs voted to decelerate toward the G8 white star under a conservative four hundred gravities and to extend the containment field to class twenty. There was no visible threat in either system of the binary, but the red giant in the more distant system was -- as it should be -- expelling vast amounts of dust and stellar debris. The AI who took the greatest pride in its navigational skills and caution warned that the entry trajectory toward the G8 star should steer very clear of the L₁ Roche lobe point because of the massive heliosphere shock waves there, and all five AIs began charting a deceleration course into the G8 system that would avoid the worst of



the heliosphere turmoil. The radiation shock waves there could be dealt with easily using even a class-three containment field, but with 684,300 human souls aboard and under their care, none of the AIs would take the slightest chance.

Their next decision was unanimous and inevitable. Given the reason for the deviation and deceleration into the G8 system, they would have to awaken humans. Saigyô, AI in charge of personnel lists, duty rosters, psychology profiles, and who had made it its business to meet and know each of the 684,300 men, women, and children, took several seconds to review the list before deciding on the nine people to awaken.

Dem Lia awoke with none of the dull hangover feel of the old-fashioned cryogenic fugue units. She felt rested and fit as she sat up in her deep-sleep creche, the unit arm offering her the traditional glass of orange juice.

"Emergency?" she said, her voice no more thick or dull than it would have been after a good night's sleep.

"Nothing threatening the ship or the mission," said Saigyô, the AI. "An anomaly of interest. An old radio transmission from a system which may be a possible source of resupply. There are no problems whatsoever with ship function or life support. Everyone is well. The ship is in no danger."

"How far are we from the last system we checked?" said Dem Lia, finishing her orange juice and donning her shipsuit with its emerald green stripe on the left arm and turban. Her people had traditionally worn desert robes, each robe the color of the Amoiète Spectrum that the different families had chosen to honor, but robes were impractical for spinship travel where zero g was a frequent environment.

"Six thousand three hundred light-years," said Saigyô.

Dem Lia stopped herself from blinking. "How many years since last awakening?" she said softly. "How many years' total voyage ship time? How many years' total voyage time-debt?"

"Nine ship years and one hundred two time-debt years since last awakening," said Saigyô. "Total voyage ship time, thirty-six years. Total voyage time-debt relative to human space, four hundred and one years, three months, one week, five days."

Dem Lia rubbed her neck. "How many of us are you awakening?"

"Nine."

Dem Lia nodded, quit wasting time chatting with the AI, glanced around only once at the two-hundred-some sealed sarcophagi where her family and friends continued sleeping, and took the main shipline people mover to the command deck, where the other eight would be gathering.

The Aeneans had followed the Amoiète Spectrum Helix people's request to construct the command deck like the bridge of an ancient torchship or some Old Earth, pre-Hegira seagoing vessel. The deck was oriented one direction to down and Dem Lia was pleased to notice on the ride to the command deck that the



ship's containment field held at a steady one gee. The bridge itself was about twenty-five meters across and held command-nexus stations for the various specialists, as well as a central table -- round, of course -- where the awakened were gathering, sipping coffee and making the usual soft jokes about cryogenic deep-sleep dreams. All around the great hemisphere of the command deck, broad windows opened onto space: Dem Lia stood a minute looking at the strange arrangement of the stars, the view back along the seemingly infinite length of the *Helix* itself where heavy filters dimmed the brilliance of the fusion-flame tail that now reached back eight kilometers toward their destination -- and the binary system itself, one small white star and one red giant, both clearly visible. The windows were not actual windows, of course; their holo pickups could be changed and zoomed or opaqued in an instant, but for now the illusion was perfect.

Dem Lia turned her attention to the eight people at the table. She had met all of them during the two years of ship training with the Aeneans, but knew none of these individuals well. All had been in the select group of fewer than a thousand chosen for possible awakening during transit. She checked their color-band stripes as they made introductions over coffee.

Four men, five women. One of the other women was also an emerald green, which meant that Dem Lia did not know if command would fall to her or the younger woman. Of course, consensus would determine that at any rate, but since the emerald green band of the Amoiete Spectrum *Helix* poem and society stood for resonance with nature, ability to command, comfort with technology, and the preservation of endangered life-forms -- and all 684,300 of the Amoiete refugees could be considered endangered life-forms this far from human space -- it was assumed that in unusual awakenings the greens would be voted into overall command.

In addition to the other green -- a young, redheaded woman named Res Sandre -- there was: a red-band male, Patek Georg Dem Mio; a young, white-band female named Den Soa whom Dem Lia knew from the diplomacy simulations; an ebony-band male named Jon Mikail Dem Alem; an older yellow-band woman named Oam Rai whom Dem Lia remembered as having excelled at ship system's operations; a white-haired blue-band male named Peter Delen Dem Tae whose primary training would be in psychology; an attractive female violet-band -- almost surely chosen for astronomy -- named Kem Loi; and an orange male -- their medic, whom Dem Lia had spoken to on several occasions -- Samel Ria Kem AH, known to everyone as Dr. Sam.

After introductions there was a silence. The group looked out the windows at the binary system, the G8 white star almost lost in the glare of the *Helix's*, formidable fusion tail.

Finally the red, Patek Georg, said, "All right, ship. Explain."

Saigyô's calm voice came over the omnipresent speakers. "We were nearing time to begin a search for earthlike worlds when sensors and astronomy became interested in this system."

"A *binary* system?" said Kem Loi, the violet. "Certainly not in the red giant



system?" The Amoiete Spectrum Helix people had been very specific about the world they wanted their ship to find for them -- G2 sun, earthlike world at least a 9 on the old Solmev Scale, blue oceans, pleasant temperatures -- paradise, in other words. They had tens of thousands of light-years and thousands of years to hunt. They fully expected to find it.

"There are no worlds left in the red-giant system," agreed Saigyô the AI affably enough. "We estimate that the system was a G2 yellow-white dwarf star ... "

"Sol," muttered Peter Delen, the blue, sitting at Dem Lia's right.

"Yes," said Saigyô. "Much like the Old Earth's sun. We estimate that it became unstable on the main sequence hydrogen-burning stage about three and one half million standard years ago and then expanded to its red giant phase and swallowed any planets that had been in system."

"How many AU's out does the giant extend?" asked Res Sandre, the other green.

"Approximately one-point-three," said the AI.

"And no outer planets?" asked Kem Loi. Violets in the *Helix* were dedicated to complex structures, chess, the love of the more complex aspects of human relationships, and astronomy. "It would seem that there would be some gas giants or rocky worlds left if it only expanded a bit beyond what would have been Old Earth's or Hyperion's orbit."

"Maybe the outer worlds were very small planetoids driven away by the constant outgassing of heavy particles," said Patek Georg, the red-band pragmatist.

"Perhaps no worlds formed here," said Den Soa, the white-band diplomat. Her voice was sad. "At least in that case no life was destroyed when the sun went red giant."

"Saigyô," said Dem Lia, "why are we decelerating in toward this white star? May we see the specs on it, please?"

Images, trajectories, and data columns appeared over the table.

"What is that?" said the older yellow-band woman, Oam Rai.

"An Ouster forest ring," said Jon Mikail Dem Alem. "All this way. All these years. And some ancient Ouster Hegira seedship beat us to it."

"Beat us to what?" asked Res Sandre, the other green. "There are no planets in this system are there, Saigyô?"

"No, ma'am," said the AI.

"Were you thinking of restocking on their forest ring?" said Dem Lia. The plan had been to avoid any Aenean, Pax, or Ouster worlds or strongholds found along their long voyage away from human space.

"This orbital forest ring is exceptionally bountiful," said Saigyô the AI, "but our real reason for awakening you and beginning the in-system deceleration is that



someone living on or near the ring is transmitting a distress signal on an early Hegemony code band. It is very weak, but we have been picking it up for two hundred and twenty-eight light-years."

This gave them all pause. The *Helix* had been launched some eighty years after the Aenean Shared Moment, that pivotal event in human history which had marked the beginning of a new era for most of the human race. Previous to the Shared Moment, the Church-manipulated Pax society had ruled human space for three hundred years. These Ousters would have missed all of Pax history and probably most of the thousand years of Hegemony history that preceded the Pax. In addition to that, the *Helix's* time-debt added more than four hundred years of travel. If these Ousters had been part of the original Hegira from Old Earth or from the Old Neighborhood Systems in the earliest days of the Hegemony, they may well have been out of touch with the rest of the human race for fifteen hundred standard years or more.

"Interesting," said Peter Delen Dem Tae, whose blue-band training included profound immersion in psychology and anthropology.

"Saigyô, play the distress signal, please," said Dem Lia.

There came a series of static hisses, pops, and whistles with what might have been two words electronically filtered out. The accent was early Hegemony Web English.

"What does it say?" said Dem Lia. "I can't quite make it out."

"Help us," said Saigyô. The AI's voice was tinted with an Asian accent and usually sounded slightly amused, but his tone was flat and serious now.

The nine around the table looked at one another again in silence. Their goal had been to leave human and posthuman Aenean space far behind them, allowing their people, the Amoiete Spectrum Helix culture, to pursue their own goals, to find their own destiny free of Aenean intervention. But Ousters were just another branch of human stock, attempting to determine their own evolutionary path by adapting to space, their Templar allies traveling with them, using their genetic secrets to grow orbital forest rings and even spherical startrees completely surrounding their suns.

"How many Ousters do you estimate live on the orbital forest ring?" asked Den Soa, who with her white training would probably be their diplomat if and when they made contact.

"Seven hundred million on the thirty-degree arc we can resolve on this side of the sun," said the AI. "If they have migrated to all or most of the ring, obviously we can estimate a population of several billion."

"Any sign of Akerataeli or the zeplens?" asked Patek Georg. All of the great forest rings and startree spheres had been collaborative efforts with these two alien races, which had joined forces with the Ousters and Templars during the Fall of the Hegemony.

"None," said Saigyô "But you might notice this remote view of the ring itself in



the center window. We are still sixty-three AU's out from the ring ... this is amplified ten thousand times."

They all turned to look at the front window where the forest ring seemed only thousands of kilometers away, its green leaves and yellow and brown branches and braided main trunk curving away out of sight, the G8 star blazing beyond.

"It looks wrong," said Dem Lia.

"This is the anomaly that added to the urgency of the distress signal and decided us to bring you out of deep sleep," said Saigyô, his voice sounding slightly bemused again. "This orbital forest ring is not of Ouster or Templar bioconstruction."

Doctor Samel Ria Kem Ali whistled softly. "An alien-built forest ring. But with human-descended Ousters living on it."

"And there is something else we have found since entering the system," said Saigyô. Suddenly the left window was filled with a view of a machine -- a spacecraft -- so huge and ungainly that it almost defied description. An image of the *Helix* was superimposed at the bottom of the screen to give scale. The *Helix* was a kilometer long. The base of this other spacecraft was at least a thousand times as long. The monster was huge and broad, bulbous and ugly, carbon black and insectoidal, bearing the worst features of both organic evolution and industrial manufacture. Centered in the front of it was what appeared to be a steel-toothed maw, a rough opening lined with a seemingly endless series of mandibles and shredding blades and razor-sharp rotors.

"It looks like God's razor," said Patek Georg Dem Mio, the cool irony undercut slightly by a just-perceptible quaver in his voice.

"God's razor my ass," said Jon Mikail Dem Alem softly. As an ebony, life support was one of his specialties, and he had grown up tending the huge farms on Vitus-Gray-Balianus B. "That's a threshing machine from hell."

"Where is it?" Dem Lia started to ask, but already Saigyô had thrown the plot on the holo showing their deceleration trajectory in toward the forest ring. The obscene machine-ship was coming in from above the ecliptic, was some twenty-eight AU's ahead of them, was decelerating rapidly but not nearly as aggressively as the *Helix*, and was headed directly for the Ouster forest ring. The trajectory plot was clear -- at its current rate of deceleration, the machine would directly intercept the ring in nine standard days.

"This may be the cause of their distress signal," the other green, Res Sandre, said dryly.

"If it were coming at me or my world, I'd scream so loudly that you'd hear me two hundred and twenty-eight light-years away without a radio," said the young white-band, Den Soa.

"If we started picking up this weak signal some two hundred twenty-eight light-years ago," said Patek Georg, "it means that either that thing has been decelerating in-system *very* slowly, or ... "



"It's been here before," said Dem Lia. She ordered the AI to opaque the windows and to dismiss itself from their company. "Shall we assign roles, duties, priorities, and make initial decisions?" she said softly.

The other eight around the table nodded soberly.

To a stranger, to someone outside the Spectrum Helix culture, the next five minutes would have been very hard to follow. Total consensus was reached within the first two minutes, but only a small part of the discussion was through talk. The combination of hand gestures, body language, shorthand phrases, and silent nods that had evolved through four centuries of a culture determined to make decisions through consensus worked well here. These people's parents and grandparents knew the necessity of command structure and discipline -- half a million of their people had died in the short but nasty war with the Pax remnant on Vitus-Gray-Balianus B, and then another hundred thousand when the fleeing Pax vandals came looting through their system some thirty years later. But they were determined to elect command through consensus and thereafter make as many decisions as possible through the same means.

In the first two minutes, assignments were settled and the subtleties around the duties dealt with.

Dem Lia was to be in command. Her single vote could override consensus when necessary. The other green, Res Sandre, preferred to monitor propulsion and engineering, working with the reticent AI named Basho to use this time out of Hawking space to good advantage in taking stock.

The red-band male, Patek Georg, to no one's surprise, accepted the position of chief security officer -- both for the ship's formidable defenses and during any contact with the Ousters. Only Dem Lia could override his decisions on use of ship weaponry.

The young white-band woman, Den Soa, was to be in charge of communications and diplomacy, but she requested and Peter Delen Dem Tae agreed to share the responsibility with her. Peter's training in psychology had included theoretical exobiopsychology.

Dr. Sam would monitor the health of everyone aboard and study the evolutionary biology of the Ousters and Templars if it came to contact.

Their ebony-band male, Jon Mikail Dem Alem, assumed command of life support -- both in reviewing and controlling systems in the *Helix* along with the appropriate AI, but also arranging for necessary environments if they met with the Ousters aboard ship.

Oam Rai, the oldest of the nine and the ship's chess master, agreed to coordinate general ship systems and to be Dem Lia's principal advisor as events unfolded.

Kem Loi, the astronomer, accepted responsibility for all long-range sensing, but was obviously eager to use her spare time to study the binary system. "Did anyone notice what old friend our white star ahead resembles?" she asked.



"Tau Ceti," said Res Sandre without hesitation.

Kem Loi nodded. "And we saw the anomaly in the placing of the forest ring."

Everyone had. The Ousters preferred G2-type stars, where they could grow their orbital forests at about one AU from the sun. This ring circled its star at only 0.36 AUs.

"Almost the same distance as Tau Ceti Center from its sun," mused Patek Georg. TC², as it had been known for more than a thousand years, had once been the central world and capital of the Hegemony. Then it had become a backwater world under the Pax until a Church cardinal on that world attempted a coup against the beleaguered pope during the final days of the Pax. Most of the rebuilt cities had been leveled then. When the *Helix* had left human space eighty years after that war, the Aeneans were repopulating and repopularizing the ancient capital, rebuilding beautiful, classical structures on broad estates and essentially turning the lance-lashed ruins into an Arcadia. For Aeneans.

Assignments given and accepted, the group discussed the option of awakening their immediate family members from cryogenic sleep. Since Spectrum Helix families consisted of triune marriages -- either one male and two females or vice versa -- and since most had children aboard, this was a complicated subject. Jon Mikail discussed the life-support considerations -- which were minor -- but everyone agreed that it would complicate decision-making with family awake only as passengers. It was agreed to leave them in deep sleep, with the one exception of Den Soa's husband and wife. The young white-band diplomat admitted that she would feel insecure without her two loved ones with her, and the group allowed this exception to their decision with the gentle suggestion that the reawakened mates would stay off the command deck unless there was compelling reason for them to be there. Den Soa agreed at once. Saigyô was summoned and immediately began awakening Den Soa's bond pair. They had no children.

Then the most central issue was discussed.

"Are we actually going to decelerate to this ring and involve ourselves in these Ousters' problems?" asked Patek Georg. "Assuming that their distress signal is still relevant."

"They're still broadcasting on the old bandwidths," said Den Soa, who had jacksensed into the ship's communications system. The young woman with blond hair looked at something in her virtual vision. "And that monster machine is still headed their way."

"But we have to remember," said the red-band male, "that our goal was to avoid contact with possibly troublesome human outposts on our way out of known space."

Res Sandre, the green now in charge of engineering, smiled. "I believe that we made that general plan about avoiding Pax or Ouster or Aenean elements without considering that we would meet up with humans -- or former humans -- some eight thousand light-years outside the known sphere of human space."



"It could still mean trouble for everyone," said Patek Georg.

They all understood the real meaning of the red-band security chief's statement. Reds in the Spectrum Helix devoted themselves to physical courage, political convictions, and passion for art, but they also were deeply trained in compassion for other living things. The other eight understood that when he said the contact might mean trouble for "everyone," he meant not only the 684,291 sleeping souls aboard the ship, but also the Ousters and Templars themselves. These orphans of Old Earth, this band of self-evolving human stock, had been beyond history and the human pale for at least a millennium, perhaps much longer. Even the briefest contact could cause problems for the Ouster culture as well.

"We're going to go in and see if we can help ... and replenish fresh provisions at the same time, if that's possible," said Dem Lia, her tone friendly but final. "Saigyô, at our greatest deceleration figure consistent with not stressing the internal containment fields, how long will it take us to a rendezvous point about five thousand clicks from the forest ring?"

"Thirty-seven hours," said the AI.

"Which gets us there seven days and a bit before that ugly machine," said Oam Rai.

"Hell," said Dr. Sam, "that machine could be something the Ousters built to ferry themselves through the heliosphere shock fields to the red-giant system. A sort of ugly trolley."

"I don't think so," said young Den Soa, missing the older man's irony.

"Well, the Ousters have noticed us," said Patek Georg, who was jacksensed into his system's nexus. "Saigyô, bring up the windows again, please. Same magnification as before."

Suddenly the room was filled with starlight and sunlight and the reflected light from the braided orbital forest ring that looked like nothing so much as Jack and the Giant's beanstalk, curving out of sight around the bright, white star. Only now something else had been added to the picture.

"This is real time?" whispered Dem Lia.

"Yes," said Saigyô. "The Ousters have obviously been watching our fusion tail as we've entered the system. Now they're coming out to greet us."

Thousands -- tens of thousands -- of fluttering bands of light had left the forest ring and were moving like brilliant fireflies or radiant gossamers away from the braid of huge leaves, bark, and atmosphere. The thousands of motes of light were headed out-system, toward the *Helix*.

"Could you please amplify that image a bit more?" said Dem Lia. She had been speaking to Saigyô, but it was Kem Loi, who was already wired into the ship's optic net, who acted.

Butterflies of light. Wings a hundred, two hundred, five hundred kilometers



across catching the solar wind and riding the magnetic-field lines pouring out of the small, bright star. But not just tens of thousands of winged angels or demons of light, hundreds of thousands. At the very minimum, hundreds of thousands. "Let's hope they're friendly," said Patek Georg. "Let's hope we can still communicate with them," whispered young Den Soa. "I mean ... they could have forced their own evolution any direction in the last fifteen hundred years."

Dem Lia set her hand softly on the table, but hard enough to be heard. "I suggest that we quit speculating and hoping for the moment and get ready for this rendezvous in ..." She paused.

"Twenty-seven hours eight minutes if the Ousters continue sailing out-system to meet us," said Saigyô on cue.

"Res Sandre," Dem Lia said softly, "why don't you and your propulsion AI begin work now on making sure that our last bit of deceleration is mild enough that it isn't going to fry a few tens of thousands of these Ousters coming to greet us. That would be a bad overture to diplomatic contact."

"If they *are* coming out with hostile intent," said Patek Georg, "the fusion drive would be one of our most potent weapons against ..."

Dem Lia interrupted. Her voice was soft but brooked no argument. "No discussion of war with this Ouster civilization until their motives become clear. Patek, you can review all ship defensive systems, but let us have no further group discussion of offensive action until you and I talk about it privately."

Patek Georg bowed his head.

"Are there any other questions or comments?" asked Dem Lia. There were none.

The nine people rose from the table and went about their business.

A largely sleepless twenty-four-plus hours later, Dem Lia stood alone and god-sized in the white star's system, the G8 blazing away only a few yards from her shoulder. The braided worldtree was so close that she could have reached out and touched it, wrapped her god-sized hand around it, while at the level of her chest the hundreds of thousands of shimmering wings of light converged on the *Helix*, whose deceleration fusion tail had dwindled to nothing. Dem Lia stood on nothing, her feet planted steadily on black space, the alien forest ring roughly at her belt line, the stars a huge sphere of constellations and foggy galactic scatterings far above, around, and beyond her.

Suddenly Saigyô joined her. The tenth-century monk assumed his usual virreal pose: cross-legged, floating easily just above the plane of the ecliptic a few respectful yards from Dem Lia. He was shirtless and barefoot, and his round belly added to the sense of good feeling that emanated from the round face, squinted eyes, and ruddy cheeks.

"The Ousters fly the solar winds so beautifully," muttered Dem Lia.



Saigyô nodded. "You notice, though, that they're really surfing the shock waves riding out along the magnetic-field lines. That gives them those astounding bursts of speed."

"I've been told that, but not seen it," said Dem Lia. "Could you ... "

Instantly the solar system in which they stood became a maze of magnetic-field lines pouring from the G8 white star, curving at first and then becoming as straight and evenly spaced as a barrage of laser lances. The display showed this elaborate pattern of magnetic-field lines in red. Blue lines showed the uncountable paths of cosmic rays flowing into the system from all over the galaxy, aligning themselves with the magnetic-field lines and trying to corkscrew their way up the field lines like swirling salmon fighting their way upstream to spawn in the belly of the star. Dem Lia noticed that magnetic-field lines pouring from both the north and south poles of the sun were kinked and folded around themselves, thus deflecting even more cosmic waves that should otherwise have had an easy trip up smooth polar-field lines. Dem Lia changed metaphors, thinking of sperm fighting their way toward a blazing egg, and being cast aside by vicious solar winds and surges of magnetic waves, blasted away by shock waves that whipped out along the field lines as if someone had forcefully shaken a wire or snapped a bullwhip.

"It's stormy," said Dem Lia, seeing the flight path of so many of the Ousters now rolling and sliding and surging along these shock fronts of ions, magnetic fields, and cosmic rays, holding their positions with wings of glowing forcefield energy as the solar wind propagated first forward and then backward along the magnetic-field lines, and finally surfing the shock waves forward again as speedier bursts of solar winds crashed into more sluggish waves ahead of them, creating temporary tsunami that rolled out-system and then flowed backward like a heavy surf rolling back in toward the blazing beach of the G8 sun.

The Ousters handled this confusion of geometries, red lines of magnetic-field lines, yellow lines of ions, blue lines of cosmic rays, and rolling spectra of crashing shock fronts with seeming ease. Dem Lia glanced once out to where the surging heliosphere of the red giant met the seething heliosphere of this bright G8 star and the storm of light and colors there reminded her of a multihued, phosphorescent ocean crashing against the cliffs of an equally colorful and powerful continent of broiling energy. A rough place.

"Let's return to the regular display," said Dem Lia, and instantly the stars and forest ring and fluttering Ousters and slowing *Helix* were back -- the last two items quite out of scale to show them clearly.

"Saigyô," said Dem Lia, "please invite all of the other AIs here now."

The smiling monk raised thin eyebrows. "All of them here at once?"

"Yes."

They appeared soon, but not instantly, one figure solidifying into virtual presence a second or two before the next.

First came Lady Murasaki, shorter even than the diminutive Dem Lia, the style



of her three-thousand-year-old robe and kimono taking the acting commander's breath away. *What beauty Old Earth had taken for granted*, thought Dem Lia. Lady Murasaki bowed politely and slid her small hands in the sleeves of her robe. Her face was painted almost white, her lips and eyes were heavily outlined, and her long, black hair was done up so elaborately that Dem Lia -- who had worn short hair most of her life -- could not even imagine the work of pinning, clasping, combing, braiding, shaping and washing such a mass.

Ikkyû stepped confidently across the empty space on the other side of the virtual *Helix* a second later. This AI had chosen the older persona of the long-dead Zen Poet: Ikkyû looked to be about seventy, taller than most Japanese, quite bald, with wrinkles of concern on his forehead and lines of laughter around his bright eyes. Before the flight had begun, Dem Lia had used the ship's history banks to read about the fifteenth-century monk, poet, musician, and calligrapher: it seemed that when the historical, living Ikkyû had turned seventy, he had fallen in love with a blind singer just forty years his junior and scandalized the younger monks when he moved his love into the temple to live with him. Dem Lia liked Ikkyû.

Basho appeared next. The great *haiku* expert chose to appear as a gangly seventeenth-century Japanese farmer, wearing the coned hat and clog shoes of his profession. His fingernails always had some soil under them.

Ryôkan stepped gracefully into the circle. He was wearing beautiful robes of an astounding blue with gold trim. His hair was long and tied in a queue.

"I've asked you all here at once because of the complicated nature of this rendezvous with the Ousters," Dem Lia said firmly. "I understand from the log that one of you was opposed to translating down from Hawking space to respond to this distress call."

"I was," said Basho, his speech in modern post-Pax English but his voice gravel-rough and as guttural as a Samurai's grunt.

"Why?" said Dem Lia.

Basho made a gesture with his gangly hand. "The programming priorities to which we agreed did not cover this specific event. I felt it offered too great a potential for danger and too little benefit in our true goal of finding a colony world."

Dem Lia gestured toward the swarms of Ousters closing on the ship. They were only a few thousand kilometers away now. They had been broadcasting their peaceful intentions across the old radio band-widths for more than a standard day. "Do you still feel that it's too risky?" she asked the tall AI.

"Yes," said Basho.

Dem Lia nodded, frowning slightly. It was always disturbing when the AIs disagreed on an important issue, but that was why the Aeneans had left them Autonomous after the breakup of the TechnoCore. And that was why there were five to vote.



"The rest of you obviously saw the risk as acceptable?"

Lady Murasaki answered in her low, demure voice, almost a whisper. "We saw it as an excellent possibility to restock new foodstuffs and water, while the cultural implications were more for you to ponder and act on than for us to decide. Of course, we had not detected the huge spacecraft in the system before we translated out of Hawking space. It might have affected our decision."

"This is a human-Ouster culture, almost certainly with a sizable Templar population, that may not have had contact with the outside human universe since the earliest Hegemony days, if then," said Ikkyû with great enthusiasm. "They may well be the farthest-flung outpost of the ancient Hegira. Of all humankind. A wonderful learning opportunity."

Dem Lia nodded impatiently. "We close to rendezvous within a few hours. You've heard their radio contact -- they say they wish to greet us and talk, and we've been polite in return. Our dialects are not so diverse that the translator beads can't handle them in face-to-face conversations. But how can we know if they actually come in peace?"

Ryôkan cleared his throat. "It should be remembered that for more than a thousand years, the so-called Wars with the Ousters were provoked -- first by the Hegemony and then by the Pax. The original Ouster deep-space settlements were peaceful places and this most-distant colony would have experienced none of the conflict."

Saigyô chuckled from his comfortable perch on nothing. "It should also be remembered that during the actual Pax wars with the Ousters, to defend themselves, these peaceful, space-adapted humans learned to build and use torchships, modified Hawking drive warships, plasma weapons, and even some captured Pax Gideon drive weapons." He waved his bare arm. "We've scanned every one of these advancing Ousters, and none carry a weapon -- not so much as a wooden spear."

Dem Lia nodded. "Kern Loi has shown me astronomical evidence which suggests that their moored seedship was torn away from the ring at an early date -- possibly only years or months after they arrived. This system is devoid of asteroids, and the Oort cloud has been scattered far beyond their reach. It is conceivable that they have neither metal nor an industrial capacity."

"Ma'am," said Basho, his countenance concerned, "how can we know that? Ousters have modified their bodies sufficiently to generate forcefield wings that can extend for hundreds of kilometers. If they approach the ship closely enough, they could theoretically use the combined plasma effect of those wings to attempt to breach the containment fields and attack the ship."

"Beaten to death by angels' wings," Dem Lia mused softly. "An ironic way to die."

The AI's said nothing.

"Who is working most directly with Patek Georg Dem Mio on defense strategies?" Dem Lia asked into the silence.



"I am," said Ryôkan.

Dem Lia had known that, but she still thought, *Thank God it's not Basho*. Patek Georg was paranoid enough for the AI-human interface team on this specialty.

"What are Patek's recommendations going to be when we humans meet in a few minutes?" Dem Lia bluntly demanded from Ryôkan.

The AI hesitated only the slightest of perceptible instants. AI's understood both discretion and loyalty to the human working with them in their specialty, but they also understood the imperatives of the elected commander's role on the ship.

"Patek Georg is going to recommend a hundred-kilometer extension of the class-twenty external containment field," said Ryôkan softly. "With all energy weapons on standby and pre-targeted on the three hundred nine thousand, two hundred and five approaching Ousters."

Dem Lia's eyebrows rose a trifle. "And how long would it take our systems to lance more than three hundred thousand such targets?" she asked softly.

"Two-point-six seconds," said Ryôkan.

Dem Lia shook her head. "Ryôkan, please tell Patek Georg that you and I have spoken and that I want the containment field not at a hundred-klick distance, but maintained at a steady one kilometer from the ship. It may remain a class-twenty field -- the Ousters can actually see the strength of it, and that's good. But the ship's weapons systems will not target the Ousters at this time. Presumably, they can see our targeting scans as well. Ryôkan, you and Patek Georg can run as many simulations of the combat encounter as you need to feel secure, but divert no power to the energy weapons and allow no targeting until I give the command."

Ryôkan bowed. Basho shuffled his virtual clogs but said nothing.

Lady Murasaki fluttered a fan half in front of her face. "You trust," she said softly.

Dem Lia did not smile. "Not totally. Never totally. Ryôkan, I want you and Patek Georg to work out the containment-field system so that if even one Ouster attempts to breach the containment field with focused plasma from his or her solar wings, the containment field should go to emergency class thirty-five and instantly expand to five hundred klicks."

Ryôkan nodded. Ikkyû smiled slightly and said, "That will be one very quick ride for a great mass of Ousters, Ma'am. Their personal energy systems might not be up to containing their own life support under that much of a shock, and it's certain that they wouldn't decelerate for half an AU or more."

Dem Lia nodded. "That's their problem. I don't think it will come to that. Thank you all for talking to me."

All six human figures winked out of existence.



Rendezvous was peaceful and efficient.

The first question the Ousters had radioed the *Helix* twenty hours earlier was, "Are you Pax?"

This had startled Dem Lia and the others at first. Their assumption was that these people had been out of touch with human space since long before the rise of the Pax. Then the ebony, Jon Mikail Dem Alem, said, "The Shared Moment. It has to have been the Shared Moment."

The nine looked at each other in silence at this. Everyone understood that Aenea's "Shared Moment" during her torture and murder by the Pax and TechnoCore had been shared by every human being in human space -- a gestalt resonance along the Void Which Binds that had transmitted the dying young woman's thoughts and memories and knowledge along those threads in the quantum fabric of the universe which existed to resonate empathy, briefly uniting everyone originating from Old Earth human stock. But out here? So many thousands of light-years away?

Dem Lia suddenly realized how silly that thought was. Aenea's Shared Moment of almost five centuries ago must have propagated everywhere in the universe along the quantum fabric of the Void Which Binds, touching alien races and cultures so distant as to be unreachable by any technology of human travel or communication while adding the first self-aware human voice to the empathic conversation that had been going on between sentient and sensitive species for almost twelve billion years. Most of those species had long since become extinct or evolved beyond their original form, the Aeneans had told Dem Lia, but their empathic memories still resonated in the Void Which Binds.

Of course the Ousters had experienced the Shared Moment five hundred years ago.

"No, we are not Pax," the *Helix* had radioed back to the three-hundred-some thousand approaching Ousters. "The Pax was essentially destroyed four hundred standard years ago."

"Do you have followers of Aenea aboard?" came the next Ouster message.

Dem Lia and the others had sighed. Perhaps these Ousters had been desperately waiting for an Aenean messenger, a prophet, someone to bring the sacrament of Aenea's DNA to them so that they could also become Aeneans.

"No," the *Helix* had radioed back. "No followers of Aenea." They then tried to explain the Amoiete Spectrum Helix and how the Aeneans had helped them build and adapt this ship for their long voyage.

After some silence, the Ousters had radioed, "Is there anyone aboard who has met Aenea or her beloved, Raul Endymion?"

Again the nine had looked blankly at each other. Saigyô, who had been sitting cross-legged on the floor some distance from the conference table, spoke up. "No one on board met Aenea," he said softly. "Of the Spectrum family who hid and



helped Raul Endymion when he was ill on Vitus-Gray-Balianus B, two of the marriage partners were killed in the war with the Pax there -- one of the mothers, Dem Ria, and the biological father, Alem Mikail Dem Alem. Their son by that triune -- a boy named Bin Ria Dem Loa Alem -- was also killed in the Pax bombing. Alem Mikail's daughter by a previous triune marriage was missing and presumed dead. The surviving female of the triune, Dem Loa, took the sacrament and became an Aenean not many weeks after the Shared Moment. She farcast away from Vitus-Gray-Balianus B and never returned."

Dem Lia and the others waited, knowing that the AI wouldn't have gone on at such length if there were not more to the story.

Saigyô nodded. "It turns out that the teenage daughter, Ces Ambre, presumed killed in the Pax Base Bombasine massacre of Spectrum Helix civilians, had actually been shipped offworld with more than a thousand other children and young adults. They were to be raised on the final Pax stronghold world of St. Theresa as born-again Pax Christians. Ces Ambre received the cruciform and was overseen by a cadre of religious guards there for nine years before that world was liberated by the Aeneans and Dem Loa learned that her daughter was still alive."

"Did they reunite?" asked young Den Soa, the attractive diplomat. There were tears in her eyes. "Did Ces Ambre free herself of the cruciform?"

"There was a reunion," said Saigyô. "Dem Loa freecast there as soon as she learned that her daughter was alive. Ces Ambre chose to have the Aeneans remove the cruciform, but she reported that she did not accept Aenea's DNA sacrament from her triune stepmother to become Aenean herself. Her dossier says that she wanted to return to Vitus-Gray-Balianus B to see the remnants of the culture from which she had been kidnapped. She continued living and working there as a teacher for almost sixty standard years. She adopted her former family's band of blue."

"She suffered the cruciform but chose not to become Aenean," muttered Kem Loi, the astronomer, as if it were impossible to believe.

Dem Lia said, "She's aboard in deep sleep."

"Yes," said Saigyô.

"How old was she when we embarked?" asked Patek Georg.

"Ninety-five standard years," said the AI. He smiled. "But as with all of us, she had the benefit of Aenean medicine in the years before departure. Her physical appearance and mental capabilities are of a woman in her early sixties."

Dem Lia rubbed her cheek. "Saigyô, please awaken Citizen Ces Ambre. Den Soa, could you be there when she awakens and explain the situation to her before the Ousters join us? They seem more interested in someone who knew Aenea's husband than in learning about the Spectrum Helix."

"Future husband at that point in time," corrected the ebony, Jon Mikail, who was a bit of a pedant. "Raul Endymion was not yet married to Aenea at the time of his short stay on Vitus-Gray-Balianus B."



"I'd feel privileged to stay with Ces Ambre until we meet the Ousters," said Den Soa with a bright smile.

While the great mass of Ousters kept their distance -- five hundred clicks -- the three ambassadors were brought aboard. It had been worked out by radio that the three could take one-tenth normal gravity without discomfort, so the lovely solarium bubble just aft and above the command deck had its containment field set at that level and the proper chairs and lighting adapted. All of the *Helix* people thought it would be easier conversing with at least some sense of up and down. Den Soa added that the Ousters might feel at home amongst all the greenery there. The ship easily morphed an airlock onto the top of the great solarium bubble, and those waiting watched the slow approach of two winged Ousters and one smaller form being towed in a transparent spacesuit. The Ousters who breathed air on the ring, breathed 100 percent oxygen so the ship had taken care to accommodate them in the solarium. Dem Lia realized that she felt slightly euphoric as the Ouster guests entered and were shown to their specially tailored chairs, and she wondered if it was the pure O₂ or just the novelty of the circumstances.

Once settled in their chairs, the Ousters seemed to be studying their five Spectrum *Helix* counterparts -- Dem Lia, Den Soa, Patek Georg, the psychologist Peter Delen Dem Tae, and Ces Ambre, an attractive woman with short, white hair, her hands now folded neatly on her lap. The former teacher had insisted on dressing in her full robe and cowl of blue, but a few tabs of stiktite sewn at strategic places kept the garment from billowing at each movement or ballooning up off the floor.

The Ouster delegation was an interesting assortment of types. On the left, in the most elaborately constructed low-g chair, was a true space-adapted Ouster. Introduced as Far Rider, he was almost four meters tall -- making Dem Lia feel even shorter than she was, the Spectrum *Helix* people always having been generally short and stocky, not through centuries on high-g planets, just because of the genetics of their founders -- and the space-adapted Ouster looked far from human in many other ways. Arms and legs were mere long, spidery attachments to the thin torso. The man's fingers must have been twenty centimeters long. Every square centimeter of his body -- appearing almost naked under the skintight sweat-coolant, compression layer -- was covered with a self-generated forcefield, actually an enhancement of the usual human body aura, which kept him alive in hard vacuum. The ridges above and beneath his shoulders were permanent arrays for extending his forcefield wings to catch the solar wind and magnetic fields. Far Rider's face had been genetically altered far from basic human stock: the eyes were black slits behind bulbous, nictitating membranes; he had no ears but a gridwork on the side of his head that suggested the radio receiver; his mouth was the narrowest of slits, lipless -- he communicated through radio-transmitting glands in his neck.

The Spectrum *Helix* delegation had been aware of this Ouster adaptation and each was wearing a subtle hearplug, which, in addition to picking up Far Rider's radio transmissions, allowed them to communicate with their AI's on a secure



tightband.

The second Ouster was partially adapted to space, but clearly more human. Three meters tall, he was thin and spidery, but the permanent field of forcefield ectoplasmic skin was missing, his eyes and face were thin and boldly structured, he had no hair -- and he spoke early Web English with very little accent. He was introduced as Chief Branchman and historian Keel Redt, and it was obvious that he was the chosen speaker for the group, if not its actual leader.

To the Chief Branchman's left was a Templar -- a young woman with the hairless skull, fine bone structure, vaguely Asian features, and large eyes common to Templars everywhere -- wearing the traditional brown robe and hood. She introduced herself as the True Voice of the Tree Reta Kasteen, and her voice was soft and strangely musical.

When the Helix Spectrum contingent had introduced themselves, Dem Lia noticed the two Ousters and the Templar staring at Ces Ambre, who smiled back pleasantly.

"How is it that you have come so far in such a ship?" asked Chief Branchman Keel Redt.

Dem Lia explained their decision to start a new colony of the Amoiete Spectrum Helix far from Aenean and human space. There was the inevitable question about the origins of the Amoiete Spectrum Helix culture, and Dem Lia told the story as succinctly as possible.

"So if I understand you correctly," said True Voice of the Tree Reta Kasteen, the Templar, "your entire social structure is based upon an opera -- a work of entertainment -- that was performed only once, more than six hundred standard years ago."

"Not the *entire* social structure," Den Soa responded to her Templar counterpart. "Cultures grow and adapt themselves to changing conditions and imperatives, of course. But the basic philosophical bedrock and structure of our culture was contained in that one performance by the philosopher-composer-poet-holistic artist, Halpul Amoiete."

"And what did this ... poet ... think of a society being built around his single multimedia opera?" asked the Chief Branchman.

It was a delicate question, but Dem Lia just smiled and said, "We'll never know. Citizen Amoiete died in a mountain-climbing accident just a month after the opera was performed. The first Spectrum Helix communities did not appear for another twenty standard years."

"Do you worship this man?" asked Chief Branchman Keel Redt.

Ces Ambre answered. "No. None of the Spectrum Helix people have ever deified Halpul Amoiete, even though we have taken his name as part of our society's. We do, however, respect and try to live up to the values and goals for human potential which he communicated in his art through that single, extraordinary Spectrum Helix performance."



The Chief Branchman nodded as if satisfied.

Saigyô's soft voice whispered in Dem Lia's ear. "They are broadcasting both visual and audio on a very tight coherent band which is being picked up by the Ousters outside and being rebroadcast to the forest ring."

Dem Lia looked at the three sitting across from her, finally resting her gaze on Far Rider, the completely space-adapted Ouster. His human eyes were essentially invisible behind the gogglelike, polarized, and nictitating membranes that made him look almost insectoid. Saigyô had tracked Dem Lia's gaze, and his voice whispered in her ear again. "Yes. He is the one broadcasting."

Dem Lia steepled her fingers and touched her lips, better to conceal the subvocalizing. "You've tapped into their tightbeam?"

"Yes, of course," said Saigyô. "Very primitive. They're broadcasting just the video and audio of this meeting, no data subchannels or return broadcasts from either the Ousters near us or from the forest ring."

Dem Lia nodded ever so slightly. Since the *Helix* was also carrying out complete holocoverage of this meeting, including infrared study, magnetic-resonance analysis of brain function, and a dozen other hidden but intrusive observations, she could hardly blame the Ousters for recording the meeting. Suddenly her cheeks reddened. Infrared. Tightbeam physical scans. Remote neuro-MRI. Certainly the fully space-adapted Ouster could *see* these probes -- the man, if man he still was, lived in an environment where he could see the solar wind, sense the magnetic-field lines, and follow individual ions and even cosmic rays as they flowed over and under and through him in hard vacuum. Dem Lia subvocalized, "Shut down all of our solarium sensors except the holocameras."

Saigyô's silence was his assent.

Dem Lia noticed Far Rider suddenly blinking as if someone had shut off blazing lights that had been shining in his eyes. The Ouster then looked at Dem Lia and nodded slightly. The strange gap of a mouth, sealed away from the world by the layer of forcefield and clear ectodermal skin plasma, twitched in what the Spectrum woman thought might be a smile.

It was the young Templar, Reta Kasteen, who had been speaking. "... so you see we passed through what was becoming the Worldweb and left human space about the time the Hegemony was establishing itself. We had departed the Centauri system some time after the original Hegira had ended. Periodically, our seedship would drop into real space -- the Templars joined us from God's Grove on our way out -- so we had fatline news and occasional firsthand information of what the interstellar Worldweb society was becoming. We continued outbound."

"Why so far?" asked Patek Georg.

The Chief Branchman answered, "Quite simply, the ship malfunctioned. It kept us in deep cryogenic fugue for centuries while its programming ignored potential systems for an orbital worldtree. Eventually, as the ship realized its mistake -- twelve hundred of us had already died in fugue creches never designed for such a lengthy voyage -- the ship panicked and began dropping out of



Hawking space at every system, finding the usual assortment of stars that could not support our Templar-grown tree ring or that would have been deadly to Ousters. We know from the ship's records that it almost settled us in a binary system consisting of a black hole that was gorging on its close red-giant neighbor."

"The accretion disk would have been pretty to watch," said Den Soa with a weak smile.

The Chief Branchman showed his own thin-lipped smile. "Yes, in the weeks or months we would have had before it killed us. Instead, working on the last of its reasoning power, the ship made one more jump and found the perfect solution -- this double system, with the white-star heliosphere we Ousters could thrive in, and a tree ring already constructed."

"How long ago was that?" asked Dem Lia.

"Twelve-hundred-and-thirty-some standard years," broadcast Far Rider.

The Templar woman leaned forward and continued the story. "The first thing we discovered was that this forest ring had nothing to do with the biogenetics we had developed on God's Grove to build our own beautiful, secret startrees. This DNA was so alien in its alignment and function that to tamper with it might have killed the entire forest ring."

"You could have started your own forest ring growing in and around the alien one," said Ces Ambre. "Or attempted a startree sphere as other Ousters have done."

The True Voice of the Tree Reta Kasteen nodded. "We had just begun attempting that -- and diversifying the protogene growth centers just a few hundred kilometers from where we had parked the seedship in the leaves and branches of the alien ring, when ... " She paused as if searching for the right words.

"The Destroyer came," broadcast Far Rider.

"The Destroyer being the ship we observe approaching your ring now?" asked Patek Georg.

"Same ship," broadcast Far Rider. The two syllables seemed to have been spat out.

"Same monster from hell," added the Chief Branchman.

"It destroyed your seedship," said Dem Lia. So that was why the Ousters seemed to have no metal and why there was no Templar-grown forest ring braiding this alien one.

Far Rider shook his head. "It *devoured* the seedship, along with more than twenty-eight thousand kilometers of the tree ring itself -- every leaf, fruit, oxygen pod, water tendril -- even our protogene growth centers."

"There were far fewer purely space-adapted Ousters in those days," said Reta Kasteen. "The adapted ones attempted to save the others, but many thousands



died on that first visit of the Destroyer ... the Devourer ... the Machine. We obviously have many names for it."

"Ship from hell," said the Chief Branchman, and Dem Lia realized that he was almost certainly speaking literally, as if a religion had grown up based upon hating this machine.

"How often does it come?" asked Den Soa.

"Every fifty-seven years," said the Templar. "Exactly."

"From the red giant system?" asked Den Soa.

"Yes," broadcast Far Rider. "From the hell star."

"If you know its trajectory," said Dem Lia, "can't you know far ahead of time the sections of your forest ring it will ... devastate, devour? Couldn't you just not colonize, or at the very least evacuate, those areas? After all, most of the tree ring has to be unpopulated ... the ring's surface area has to be equal to more than half a million Old Earths or Hyperions."

Chief Branchman Keel Redt showed his thin smile again. "About now -- some seven or eight standard days out -- the Destroyer, for all its mass, not only completes its deceleration cycle, but carries out complicated maneuvers that will take it to some populated part of the ring. Always a populated area. A hundred and four years ago, its final trajectory took it to a massing of O₂ pods where more than twenty million of our non-fully space-adapted Ousters had made their homes, complete with travel tubes, bridges, towers, city-sized platforms and artificially grown life-support pods that had been under slow construction for more than six hundred standard years."

"All destroyed," said True Voice of the Tree Reta Kasteen with sorrow in her voice. "Devoured. Harvested."

"Was there much loss of life?" asked Dem Lia, her voice quiet.

Far Rider shook his head and broadcast, "Millions of fully space-adapted Ousters rallied to evacuate the oxygen breathers. Fewer than a hundred died."

"Have you tried to communicate with the ... machine?" asked Peter Delem Dem Tae.

"For centuries," said Reta Kasteen, her voice shaking with emotion. "We've used radio, tightbeam, maser, the few holo transmitters we still have, Far Rider's people have even used their wingfields -- by the thousands -- to flash messages in simple, mathematical code."

The five Amoiete Spectrum Helix people waited.

"Nothing," said the Chief Branchman in a flat voice. "It comes, it chooses its populated section of the ring, and it devours. We have never had a reply."

"We believe that it is completely automated and very ancient," said Reta Kasteen. "Perhaps millions of years old. Still operating on programming developed when the alien ring was built. It harvests these huge sections of the



ring, limbs, branches, tubules with millions of gallons of tree-ring manufactured water ... then returns to the red-star system and, after a pause, returns our way again."

"We used to believe that there was a world left in that red-giant system," broadcast Far Rider. "A planet which remains permanently hidden from us on the far side of that evil sun. A world which built this ring as its food source, probably before their G2 sun went giant, and which continues to harvest in spite of the misery it causes us. No longer. There is no such planet. We now believe that the Destroyer acts alone, out of ancient, blind programming, harvesting sections of the ring and destroying our settlements for no reason. Whatever or whoever lived in that red giant system has long since fled."

Dem Lia wished that Kem Loi, their astronomer, was there. She knew that she was on the command deck watching. "We saw no planets during our approach to this binary system," said the green-banded commander. "It seems highly unlikely that any world that could support life would have survived the transition of the G2 star to the red giant."

"Nonetheless, the Destroyer passes very close to that terrible red star on each of its voyages," said the Ouster Chief Branchman. "Perhaps some sort of artificial environment remains -- a space habitat -- hollowed-out asteroids. An environment which requires this plant ring for its inhabitants to survive. But it does not excuse the carnage."

"If they had the ability to build this machine, they could have simply fled their system when the G2 sun went critical," mused Patek Georg. The red-band looked at Far Rider. "Have you tried to destroy the machine?"

The lipless smile beneath the ectofield twitched lizard-wide on Far Rider's strange face. "Many times. Scores of thousands of true Ousters have died. The machine has an energy defense that lances us to ash at approximately one hundred thousand clicks."

"That could be a simple meteor defense," said Dem Lia.

Far Rider's smile broadened so that it was very terrible. "If so, it suffices as a very efficient killing device. My father died in the last attack attempt."

"Have you tried traveling to the red giant system?" asked Peter Delem.

"We have no spacecraft left," answered the Templar.

"On your own solar wings then?" asked Peter, obviously doing the math in his head on the time such a round trip would take. Years -- decades at solar sailing velocities -- but well within an Ouster's life span.

Far Rider moved his hand with its elongated fingers in a horizontal chop. "The heliosphere turbulence is too great. Yet we have tried hundreds of times -- expeditions upon which scores depart and none or only a few return. My brother died on such an attempt six of your standard years ago."

"And Far Rider himself was terribly hurt," said Reta Kasteen softly. "Sixty-eight of the best deep spacers left -- two returned. It took all of what remains of



our medical science to save Far Rider's life, and that meant two years in recovery pod nutrient for him."

Dem Lia cleared her throat. "What do you want us to do?"

The two Ousters and the Templar leaned forward. Chief Branchman Keel Redt spoke for all of them. "If, as you believe, as we have become convinced, there is no inhabited world left in the red giant system, kill the Destroyer now. Annihilate the harvesting machine. Save us from this mindless, obsolete, and endless scourge. We will reward you as handsomely as we can -- foods, fruits, as much water as you need for your voyage, advanced genetic techniques, our knowledge of nearby systems, anything."

The Spectrum Helix people glanced at one another. Finally Dem Lia said, "If you are comfortable here, four of us would like to excuse ourselves for a short time to discuss this. Ces Ambre would be delighted to stay with you and talk if you so wish."

The Chief Branchman made a gesture with both long arms and huge hands. "We are completely comfortable. And we are more than delighted to have this chance to talk to the venerable M. Ambre -- the woman who saw the husband of Aenea."

Dem Lia noticed that the young Templar, Reta Kasteen, looked visibly thrilled at the prospect.

"And then you will bring us your decision, yes?" radioed Far Rider, his waxy body, huge eyeshields, and alien physiology giving Dem Lia a slight chill. This was a creature that fed on light, tapped enough energy to deploy electromagnetic solar wings hundreds of kilometers wide, recycled his own air, waste, and water, and lived in an environment of absolute cold, heat, radiation, and hard vacuum. Humankind had come a long way from the early hominids in Africa on Old Earth.

And if we say no, thought Dem Lia, three-hundred-thousand-some angry space-adapted Ousters just like him might descend on our spinship like the angry Hawaiians venting their wrath on Captain James Cook when he caught them pulling the nails from the hull of his ship. The good captain ended up not only being killed horribly, but having his body eviscerated, burned, and boiled into small chunks. As soon as she thought this, Dem Lia knew better. These Ousters would not attack the Helix. All of her intuition told her that. And if they do, she thought, our weaponry will vaporize the lot of them in two-point-six seconds. She felt guilty and slightly nauseated at her own thoughts as she made her farewells and took the lift down to the command deck with the other three.

"You saw him," said True Voice of the Tree Reta Kasteen a little breathlessly. "Aenea's husband?"

Ces Ambre smiled. "I was fourteen standard years old. It was a long time ago. He was traveling from world to world via farcaster and stayed a few days in my second triune parents' home because he was ill -- a kidney stone -- and then the Pax troopers kept him under arrest until they could send someone to interrogate



him. My parents helped him escape. It was a very few days a very many years ago." She smiled again. "And he was not Aenea's husband at that time, remember. He had not taken the sacrament of her DNA, nor even grown aware of what her blood and teachings could do for the human race."

"But you *saw* him," pressed Chief Branchman Keel Redt.

"Yes. He was in delirium and pain much of the time and handcuffed to my parents' bed by the Pax troopers."

Reta Kasteen leaned closer. "Did he have any sort of ... *aura* ... about him?"

"Oh, yes," said Ces Ambre with a chuckle. "Until my parents gave him a sponge bath. He had been traveling hard for many days."

The two Ousters and the Templar seemed to sit back in disappointment.

Ces Ambre leaned forward and touched the Templar woman's knee. "I apologize for being flippant -- I know the important role that Raul Endymion played in all of our history -- but it was long ago, there was much confusion, and at that time on Vitus-Gray-Balianus B I was a rebellious teenager who wanted to leave my community of the Spectrum and accept the cruciform in some nearby Pax city."

The other three visibly leaned back now. The two faces that were readable registered shock. "You *wanted* to accept that ... that ... *parasite* into your body?"

As part of Aenea's Shared Moment, every human everywhere had seen -- had known -- had felt the full *gestalt* -- of the reality behind the "immortality cruciform" -- a parasitic mass of AI nodes creating a TechnoCore in real space, using the neurons and synapses of each host body in any way it wished, often using it in more creative ways by *killing* the human host and using the linked neuronic web when it was at its most creative -- during those final seconds of neural dissolution before death. Then the Church would use TechnoCore technology to resurrect the human body with the Core cruciform parasite growing stronger and more networked at each death and resurrection.

Ces Ambre shrugged. "It represented immortality at the time. And a chance to get away from our dusty little village and join the real world -- the Pax."

The three Ouster diplomats could only stare.

Ces Ambre raised her hands to her robe and slipped it open enough to show them the base of her throat and the beginning of a scar where the cruciform had been removed by the Aeneans. "I was kidnapped to one of the remaining Pax worlds and put under the cruciform for nine years," she said so softly that her voice barely carried to the three diplomats. "And most of this time was *after* Aenea's shared moment -- after the absolute revelation of the Core's plan to enslave us with those despicable things."

The True Voice of the Tree Reta Kasteen took Ces Ambre's older hand in hers. "Yet you refused to become Aenean when you were liberated. You joined what was left of your old culture."



Ces Ambre smiled. There were tears in her eyes, and those eyes suddenly looked much older. "Yes. I felt I owed my people that -- for deserting them at the time of crisis. Someone had to carry on the Spectrum Helix culture. We had lost so many in the wars. We lost even more when the Aeneans gave us the option of joining them. It is hard to refuse to become something like a god."

Far Rider made a grunt that sounded like heavy static. "This is our greatest fear next to the Destroyer. No one is now alive on the forest ring who experienced the Shared Moment, but the details of it -- the glorious insights into empathy and the binding powers of the Void Which Binds, Aenea's knowledge that many of the Aeneans would be able to farcast -- freecast -- anywhere in the universe. Well, the Church of Aenea has grown here until at least a fourth of our population would give up their Ouster or Templar heritage and become Aenean in a second."

Ces Ambre rubbed her cheek and smiled again. "Then it's obvious that no Aeneans have visited this system. And you have to remember that Aenea insisted that there be no 'Church of Aenea,' no veneration or beatification or adoration. That was paramount in her thoughts during the Shared Moment."

"We know," said Reta Kasteen. "But in the absence of choice and knowledge, cultures often turn to religion. And the possibility of an Aenean being aboard with you was one reason we greeted the arrival of your great ship with such enthusiasm and trepidation."

"Aeneans do not arrive by spacecraft," Ces Ambre said softly.

The three nodded. "When and if the day ever comes," broadcast Far Rider, "it will be up to the individual conscience of each Ouster and Templar to decide. As for me, I will always ride the great waves of the solar wind."

Dem Lia and the other three returned.

"We've decided to help," she said. "But we must hurry."

There was no way in the universe that Dem Lia or any of the other eight humans or any of the five AIs would risk the *Helix* in a direct confrontation with the Destroyer or the Harvester or whatever the hell the Ousters wanted to call their nemesis. It was not just by engineering happenstance that the three thousand life-support pods carrying the 684,300 Spectrum Helix pioneers in deep cryogenic sleep were egg-shaped. This culture had all their eggs in one basket -- literally -- and they were not about to send that basket into battle. Already Basho and several of the other AIs were brooding about the proximity to the oncoming harvesting ship. Space battles could easily be fought across twenty-eight AU's of distance -- while traditional lasers, or lances, or charged particle-beam weapons would take more than a hundred and ninety-six minutes to creep that distance -- Hegemony, Pax, and Ouster ships had all developed hyperkinetic missiles able to leap into and out of Hawking space. Ships could be destroyed before radar could announce the presence of the incoming missile. Since this "harvester" crept around its appointed rounds at sublight speed, it seemed unlikely that it would carry C-plus weaponry, but "unlikely" is a word that has



undone the planning and fates of warriors since time immemorial.

At the Spectrum Helix engineers' request, the Aeneans had rebuilt the *Helix* to be truly modular. When it reached its Utopian planet around its perfect star, sections would free themselves to become probes and aircraft and landers and submersibles and space stations. Each of the three thousand individual life pods could land and begin a colony on its own, although the plans were to cluster the landing sites carefully after much study of the new world. By the time the *Helix* was finished deploying and landing its pods and modules and probes and shuttles and command deck and central fusion core, little would be left in orbit except the huge Hawking drive units with maintenance programs and robots to keep them in perfect condition for centuries, if not millennia.

"We'll take the system exploratory probe to investigate this Destroyer," said Dem Lia. It was one of the smaller modules, adapted more to pure vacuum than to atmospheric entry, although it was capable of some morphing. But compared to most of the *Helix's* peaceful subcomponents the probe was armed to the teeth.

"May we accompany you?" said Chief Branchman Keel Redt. "None of our race has come closer than a hundred thousand kilometers to the machine and lived."

"By all means," said Dem Lia. "The probe's large enough to hold thirty or forty of us, and only three are going from our ship. We will keep the internal containment field at one-tenth gee and adapt the seating accordingly."

The probe was more like one of the old combat torchships than anything else, and it accelerated out toward the advancing machine under 250 gravities, internal containment fields on infinite redundancy, external fields raised to their maximum of class twelve. Dem Lia was piloting. Den Soa was attempting to communicate with the gigantic ship via every means available, sending messages of peace on every band from primitive radio to modulated tachyon bursts. There was no response. Patek Georg Dem Mio was meshed into the defense/counterattack virtual umbilicals of his couch. The passengers sat at the rear of the probe's compact command deck and watched. Saigyô had decided to accompany them, and his massive holo sat bare-chested and cross-legged on a counter near the main viewport. Dem Lia made sure to keep their trajectory aimed *not* directly at the monstrosity, in the probability that it had simple meteor defenses: if they kept traveling toward their current coordinates, they would miss the ship by tens of thousands of kilometers above the plane of the ecliptic.

"Its radar has begun tracking us," said Patek Georg when they were six hundred thousand clicks away and decelerating nicely. "Passive radar. No weapons acquisition. It doesn't seem to be probing us with anything except simple radar. It will have no idea if life-forms are aboard our probe or not."

Dem Lia nodded. "Saigyô," she said softly, "at two hundred thousand clicks, please bring our coordinates around so that we will be on intercept course with the thing." The chubby monk nodded.

Somewhat later, the probe's thrusters and main engines changed tune, the starfield rotated, and the image of the huge machine filled the main window. The view was magnified as if they were only five hundred clicks from the spacecraft.



The thing was indescribably ungainly, built only for vacuum, fronted with metal teeth and rotating blades built into mandible-like housings, the rest looking like the wreckage of an old space habitat that had been mindlessly added onto for millennium after millennium and then covered with warts, wattles, bulbous sacs, tumors, and filaments.

"Distance, one hundred eighty-three thousand clicks and closing," said Patek Georg.

"Look how blackened it is," whispered Den Soa.

"And worn," radioed Far Rider. "None of our people have ever seen it from this close. Look at the layers of cratering through the heavy carbon deposits. It is like an ancient, black moon that has been struck again and again by tiny meteorites."

"Repaired, though," commented the Chief Branchman gruffly. "It operates."

"Distance one hundred twenty thousand clicks and closing," said Patek Georg. "Search radar has just been joined by acquisition radar."

"Defensive measures?" said Dem Lia, her voice quiet.

Saigyô answered. "Class-twelve field in place and infinitely redundant. CPB deflectors activated. Hyperkinetic countermissiles ready. Plasma shields on maximum. Countermissiles armed and under positive control." This meant simply that both Dem Lia and Patek Georg would have to give the command to launch them, or -- if the human passengers were killed -- Saigyô would do so.

"Distance one hundred five thousand clicks and closing," said Patek Georg. "Relative delta-v dropping to one hundred meters per second. Three more acquisition radars have locked on."

"Any other transmissions?" asked Dem Lia, her voice tight.

"Negative," said Den Soa at her virtual console. "The machine seems blind and dumb except for the primitive radar. Absolutely no signs of life aboard. Internal communications show that it has ... intelligence ... but not true AI. Computers more likely. Many series of physical computers."

"*Physical* computers!" said Dem Lia, shocked. "You mean silicon ... chips ... stone axe-level technology?"

"Or just above," confirmed Den Soa at her console. "We're picking up magnetic bubble-memory readings, but nothing higher."

"One hundred thousand clicks ... " began Patek Georg, and then interrupted himself. "The machine is firing on us."

The outer containment fields flashed for less than a second.

"A dozen CPB's and two crude laser lances," said Patek Georg from his virreal point of view. "Very weak. A class-one field could have countered them easily."

The containment field flickered again.

"Same combination," reported Patek. "Slightly lower energy settings."



Another flicker.

"Lower settings again," said Patek. "I think it's giving us all it's got and using up its power doing it. Almost certainly just a meteor defense."

"Let's not get overconfident," said Dem Lia. "But let's see all of its defenses."

Den Soa looked shocked. "You're going to *attack* it?"

"We're going to see if we *can* attack it," said Dem Lia. "Patek, Saigyô, please target one lance on the top corner of that protuberance there ... " She pointed her laser stylus at a blackened, cratered, fin-shaped projection that might have been a radiator two clicks high. " ... and one hyperkinetic missile ... "

"*Commander!*" protested Den Soa.

Dem Lia looked at the younger woman and raised her finger to her lips. "One hyperkinetic with plasma warhead removed, targeted at the front lower leading edge of the machine, right where the lip of that aperture is."

Patek Georg repeated the command to the AI. Actual target coordinates were displayed and confirmed.

The CPB struck almost instantly, vaporizing a seventy-meter hole in the radiator fin.

"It raised a class-point-six field," reported Patek Georg. "That seems to be its top limit of defense."

The hyperkinetic missile penetrated the containment field like a bullet through butter and struck an instant later, blasting through sixty meters of blackened metal and tearing out through the front feeding-orifice of the harvesting machine. Everyone aboard watched the silent impact and the almost mesmerizing tumble of vaporized metal expanding away from the impact site and the spray of debris from the exit wound. The huge machine did not respond.

"If we had left the warhead on," murmured Dem Lia, "and aimed for its belly, we would have a thousand kilometers of exploding harvest machine right now."

Chief Branchman Keel Redt leaned forward in his couch. Despite the one-tenth g field, all of the couches had restraint systems. His was activated now.

"Please," said the Ouster, struggling slightly against the harnesses and airbags. "Kill it now. Stop it now."

Dem Lia shifted to look at the two Ousters and the Templar. "Not yet," she said. "First we have to return to the *Helix*."

"We will lose more valuable time," broadcast Far Rider, his tone unreadable.

"Yes," said Dem Lia. "But we still have more than six standard days before it begins harvesting."

The probe accelerated away from the blackened, cratered, and newly scarred monster.

"You will not destroy it, then?" demanded the Chief Branchman as the probe



hurried back to the *Helix*.

"Not now," responded Dem Lia. "It might still be serving a purpose for the race that built it."

The young Templar seemed to be close to tears. "Yet your own instruments -- far more sophisticated than our telescopes -- told you that there are no worlds in the red giant system."

Dem Lia nodded. "Yet you yourselves have mentioned the possibility of space habitats, can cities, hollowed-out asteroids ... our survey was neither careful nor complete. Our ship was intent upon entering your star system with maximum safety, not carrying out a careful survey of the red giant system."

"For such a small probability," said the Chief Branchman Ouster in a flat, hard voice, "you are willing to risk so many of our people?"

Saigyô's voice whispered quietly in Dem Lia's subaudio circuit. "The AI's have been analyzing scenarios of several million Ousters using their solar wings in a concentrated attack on the *Helix*." Dem Lia waited, still looking at the Chief Branchman.

"The ship could defeat them," finished the AI, "but there is some real probability of damage."

To the Chief Branchman, Dem Lia said, "We're going to take the *Helix* to the red giant system. The three of you are welcome to accompany us."

"How long will the round trip last?" demanded Far Rider.

Dem Lia looked to Saigyô. "Nine days under maximum fusion boost," said the AI. "And that would be a powered perihelion maneuver with no time to linger in the system to search every asteroid or debris field for life-forms."

The two Ousters were shaking their heads. Reta Kasteen drew her hood lower, covering her eyes.

"There's another possibility," said Dem Lia. To Saigyô, she pointed toward the *Helix*, now filling the main viewscreen. Thousands of energy-winged Ousters parted as the probe decelerated gently through the ship's containment field and aligned itself for docking.

They gathered in the solarium to decide. All ten of the humans -- Den Soa's wife and husband had been invited to join in the vote but had decided to stay below in the crew's quarters -- all five of the AIs, and the three representatives of the forest-ring people. Far Rider's tightbeam continued to carry the video and audio to the three hundred thousand nearby Ousters and the billions waiting on the great curve of tree ring beyond.

"Here is the situation," said Dem Lia. The silence in the solarium was very thick. "You know that the *Helix*, our ship, contains an Aenean-modified Hawking drive. Our faster-than-light passage does harm the fabric of the Void Which Binds, but thousands of times less than the old Hegemony or Pax ships. The



Aeneans allowed us this voyage." The short woman with the green band around her turban paused and looked at both Ousters and the Templar woman before continuing. "We could reach the red giant system in ... "

"Four hours to spin up to relativistic velocities, then the jump," said Res Sandre. "About six hours to decelerate into the red giant system. Two days to investigate for life. Same ten-hour return time."

"Which, even with some delays, would bring the *Helix* back almost two days before the Destroyer begins its harvesting. If there is no life in the red-giant system, we will use the probe to destroy the robot harvester."

"But ... " said Chief Branchman Keel Redt with an all-too-human ironic smile. His face was grim.

"*But* it is too dangerous to use the Hawking drive in such a tight binary system," said Dem Lia, voice level. "Such short-distance jumps are incredibly tricky anyway, but given the gas and debris the red giant is pouring out ... "

"You are correct. It would be folly." It was Far Rider broadcasting on his radio band. "My clan has passed down the engineering from generation to generation. No commander of any Ouster seedship would make a jump in this binary system."

True Voice of the Tree Reta Kasteen was looking from face to face. "But you have these powerful fusion engines ... "

Dem Lia nodded. "Basho, how long to survey the red-giant system using maximum thrust with our fusion engines?"

"Three and one-half days transit time to the other system," said the hollow-cheeked AI. "Two days to investigate. Three and one-half days back."

"There is no way we could shorten that?" said Oam Rai, the yellow. "Cut safety margins? Drive the fusion engines harder?"

Saigyô answered. "The nine-day round-trip is posited upon ignoring all safety margins and driving the fusion engines at one hundred twelve percent of their capacity." He sadly shook his bald head. "No, it cannot be done."

"But the Hawking drive ... " said Dem Lia, and everyone in the room appeared to cease breathing except for Far Rider, who had never been breathing in the traditional sense. The appointed Spectrum Helix commander turned to the AIs. "What are the probabilities of disaster if we try this?"

Lady Murasaki stepped forward. "Both translations -- into and out of Hawking space -- will be far too close to the binary system's Roche lobe. We estimate probability of total destruction of the *Helix* at two percent, of damage to some aspect of ship's systems at eight percent, and specifically damage to the pod life-support network at six percent."

Dem Lia looked at the Ousters and the Templar. "A six percent chance of losing hundreds -- thousands -- of our sleeping relatives and friends. Those we have sworn to protect until arrival at our destination. A two percent chance that



our entire culture will die in the attempt."

Far Rider nodded sadly. "I do not know what wonders your Aenean friends have added to your equipment," he broadcast, "but I would find those figures understated. It is an impossible binary system for a Hawking drive jump."

Silence stretched. Finally Dem Lia said, "Our options are to destroy the harvesting machine for you without knowing if there is life -- perhaps an entire species -- depending upon it in the red giant system, however improbable. And we cannot do that. Our moral code prevents it."

Reta Kasteen's voice was very small. "We understand."

Dem Lia continued, "We could travel by conventional means and survey the system. This means you will have to suffer the ravages of this Destroyer a final time, but if there is no life in the red giant system, we will destroy the machine when we return on fusion drive."

"Little comfort to the thousands or millions who will lose their homes during this final visit of the Destroyer," said Chief Branchman Keel Redt.

"No comfort at all," agreed Dem Lia.

Far Rider stood to his full four-meter height, floating slightly in the one-tenth gravity. "This is not your problem," he broadcast. "There is no reason for you to risk any of your people. We thank you for considering ... "

Dem Lia raised a hand to stop him in mid-broadcast. "We're going to vote now. We're voting whether to jump to the red giant system via Hawking drive and get back here before your Destroyer begins destroying. If there is an alien race over there, perhaps we can communicate in the two days we will have in-system. Perhaps they can reprogram their machine. We have all agreed that the odds against it accidentally 'eating' your seedship on its first pass after you landed are infinitesimal. The fact that it constantly harvests areas on which you've colonized -- on a tree ring with the surface area equal to half a million Hyperions -- suggests that it is programmed to do so, as if eliminating abnormal growths or pests."

The three diplomats nodded.

"When we vote," said Dem Lia, "the decision will have to be unanimous. One 'no' vote means that we will not use the Hawking drive."

Saigyô had been sitting cross-legged on the table, but now he moved next to the other four AIs who were standing. "Just for the record," said the fat little monk, "the AI's have voted five to zero against attempting a Hawking drive maneuver."

Dem Lia nodded. "Noted," she said. "But just for the record, for this sort of decision, the AIs' vote does not count. Only the Amoiete Spectrum Helix people or their representatives can determine their own fate." She turned back to the other nine humans. "To use the Hawking drive or not? Yes or no? We ten will account to the thousands of others for the consequences. Ces Ambre?"

"Yes." The woman in the blue robe appeared as calm as her startlingly clear



and gentle eyes. "Jon Mikail Dem Alem?"

"Yes," said the ebony life-support specialist in a thick voice. "Yes."

"Oam Rai?"

The yellow-band woman hesitated. No one on board knew the risks to the ship's systems better than this person. A two percent chance of destruction must seem an obscene gamble to her. She touched her lips with her fingers. "There are two civilizations we are deciding for here," she said, obviously musing to herself. "Possibly three."

"Oam Rai?" repeated Dem Lia.

"Yes," said Oam Rai.

"Kern Loi?" said Dem Lia to the astronomer.

"Yes." The young woman's voice quavered slightly.

"Patek Georg Dem Mio?"

The red-band security specialist grinned. "Yes. As the ancient saying goes, no guts, no glory."

Dem Lia was irritated. "You're speaking for 684,288 sleeping people who might not be so devil-may-care."

Patek Georg's grin stayed in place. "My vote is yes."

"Dr. Samel Ria Kem Ali?"

The medic looked as troubled as Patek had brazen. "I must say ... there are so many unknowns ... " He looked around. "Yes," he said. "We must be sure."

"Peter Delem Dem Tae?" Dem Lia asked the blue-banded psychologist.

The older man had been chewing on a pencil. He looked at it, smiled, and set it on the table. "Yes."

"Res Sandre?"

For a second the other green-band woman's eyes seemed to show defiance, almost anger. Dem Lia steeled herself for the veto and the lecture that would follow.

"Yes," said Res Sandre. "I believe it's a moral imperative."

That left the youngest in the group.

"Den Soa?" said Dem Lia.

The young woman had to clear her throat before speaking. "Yes. Let's go look."

All eyes turned to the appointed commander.

"I vote yes," said Dem Lia. "Saigyô, prepare for maximum acceleration toward the translation point to Hawking drive. Kem Loi, you and Res Sandre and Oam Rai work on the optimum inbound translation point for a systemwide search for life. Chief Branchman Redt, Far Rider, True Voice of the Tree Kasteen, if you



would prefer to wait behind, we will prepare the airlock now. If you three wish to come, we must leave immediately."

The Chief Branchman spoke without consulting the others. "We wish to accompany you, Citizen Dem Lia."

She nodded. "Far Rider, tell your people to clear a wide wake. We'll angle above the plane of the ecliptic outward bound, but our fusion tail is going to be fierce as a dragon's breath."

The fully space-adapted Ouster broadcast, "I have already done so. Many are looking forward to the spectacle."

Dem Lia grunted softly. "Let's hope it's not more of a spectacle than we've all bargained for," she said.

The *Helix* made the jump safely, with only minor upset to a few of the ship's subsystems. At a distance of three AU's from the surface of the red giant, they surveyed the system. They had estimated two days, but the survey was done in less than twenty-four hours.

There were no hidden planets, no planetoids, no hollowed-out asteroids, no converted comets, no artificial space habitats -- no sign of life whatsoever. When the G2 star had finished its evolution into a red giant at least three million years earlier, its helium nuclei began burning its own ash in a high-temperature second round of fusion reactions at the star's core while the original hydrogen fusion continued in a thin shell far from that core, the whole process creating carbon and oxygen atoms that added to the reaction and ... presto ... the short-lived rebirth of the star as a red giant. It was obvious that there had been no outer planets, no gas giants, no rocky worlds beyond the new red sun's reach. Any inner planets had been swallowed whole by the expanding star. Outgassing of dust and heavy radiation had all but cleared the solar system of anything larger than nickel-iron meteorites.

"So," said Patek Georg, "that's that."

"Shall I authorize the AI's to begin full acceleration toward the return translation point?" said Res Sandre.

The Ouster diplomats had been moved to the command deck with their specialized couches. No one minded the one-tenth gravity on the bridge because each of the Amoiete Spectrum specialists -- with the exception of Ces Ambre -- was enmeshed in a control couch and in touch with the ship on a variety of levels. The Ouster diplomats had been silent during most of the search, and they remained silent now as they turned to look at Dem Lia at her center console.

The elected commander tapped her lower lip with her knuckle. "Not quite yet." Their searches had brought them all around the red giant, and now they were less than one AU from its broiling surface. "Saigyô, have you looked inside the star?"

"Just enough to sample it," came the AI's affable voice. "Typical for a red giant at this stage. Solar luminosity is about two thousand times that of its G8



companion. We sampled the core -- no surprises. The helium nuclei there are obviously engaged despite their mutual electrical repulsion."

"What is its surface temperature?" asked Dem Lia.

"Approximately three thousand degrees Kelvin," came Saigyô's voice. "About half of what the surface temperature had been when it was a G2 sun."

"Oh, my God," whispered the violet-band Kem Loi from her couch in the astronomy station nexus. "Are you thinking ... "

"Deep-radar the star, please," said Dem Lia.

The graphics holos appeared less than twenty minutes later as the star turned and they orbited it. Saigyô said, "A single rocky world. Still in orbit. Approximately four-fifths Old Earth's size. Radar evidence of ocean bottoms and former riverbeds."

Dr. Samel said, "It was probably earthlike until its expanding sun boiled away its seas and evaporated its atmosphere. God help whoever or whatever lived there."

"How deep in the sun's troposphere is it?" asked Dem Lia.

"Less than a hundred and fifty thousand kilometers," said Saigyô.

Dem Lia nodded. "Raise the containment fields to maximum," she said softly. "Let's go visit them."

It's like swimming under the surface of a red sea, Dem Lia thought as they approached the rocky world. Above them, the outer atmosphere of the star swirled and spiraled, tornadoes of magnetic fields rose from the depths and dissipated, and the containment field was already glowing despite the thirty micromonofilament cables they had trailed out a hundred and sixty thousand clicks behind them to act as radiators.

For an hour the *Helix* stood off less than twenty thousand kilometers from what was left of what could once have been Old Earth or Hyperion. Various sensors showed the rocky world through the swirling red murk.

"A cinder," said Jon Mikail Dem Alem.

"A cinder filled with life," said Kem Loi at the primary sensing nexus. She brought up the deep-radar holo. "Absolutely honeycombed. Internal oceans of water. At least three billion sentient entities. I have no idea if they're humanoid, but they have machines, transport mechanisms, and citylike hives. You can even see the docking port where their harvester puts in every fifty-seven years."

"But still no understandable contact?" asked Dem Lia. The *Helix* had been broadcasting basic mathematical overtures on every bandwidth, spectrum, and communications technology the ship had -- from radio maser to modulated tachyons. There had been a return broadcast of sorts.

"Modulated gravity waves," explained Ikkyû. "But not responding to our



mathematical or geometrical overtures. They are picking up our electromagnetic signals but not understanding them, and we can't decipher their gravitonic pulses."

"How long to study the modulations until we can find a common alphabet?" demanded Dem Lia.

Ikkyû's lined face looked pained. "Weeks, at least. Months more likely. Possibly years." The AI returned the disappointed gaze of the humans, Ousters and Templar. "I am sorry," he said, opening his hands. "Humankind has only contacted two sentient alien races before, and *they* both found ways to communicate with *us*. These ... beings ... are truly alien. There are too few common referents."

"We can't stay here much longer," said Res Sandre at her engineering nexus. "Powerful magnetic storms are coming up from the core. And we just can't dissipate the heat quickly enough. We have to leave."

Suddenly Ces Ambre, who had a couch but no station or duties, stood, floated a meter above the deck in the one-tenth g, moaned, and slowly floated to the deck in a dead faint.

Dr. Sam reached her a second before Dem Lia and Den Soa. "Everyone else stay at your stations," said Dem Lia.

Ces Ambre opened her startlingly blue eyes. "They are so *different*. Not human at all ... oxygen breathers but not like the Seneschai empaths ... modular ... multiple minds ... so fibrous ... "

Dem Lia held the older woman. "Can you communicate with *them*?" she said urgently. "Send *them* images?"

Ces Ambre nodded weakly.

"Send them the image of their harvesting machine and the Ousters," said Dem Lia sternly. "Show them the damage their machine does to the Ouster city clusters. Show them that the Ousters are ... human ... sentient. Squatters, but not harming the forest ring."

Ces Ambre nodded again and closed her eyes. A moment later she began weeping. "They ... are ... so ... *sorry*," she whispered. "The machine brings back no ... pictures ... only the food and air and water. It is programmed ... as you suggested, Dem Lia ... to eliminate infestations. They are ... so ... so ... *sorry* for the loss of Ouster life. They offer the suicide of ... of their species ... if it would atone for the destruction."

"No, no, no," said Dem Lia, squeezing the crying woman's hands. "Tell them that won't be necessary." She took the older woman by the shoulders. "This will be difficult, Ces Ambre, but you have to ask them if the harvester can be reprogrammed. Taught to stay away from the Ouster settlements."

Ces Ambre closed her eyes for several minutes. At one point it looked as if she had stopped breathing. Then those lovely eyes opened wide. "It can. They are sending the reprogramming data."



"We are receiving modulated graviton pulses," said Saigyô. "Still no translation possible."

"We don't need a translation," said Dem Lia, breathing deeply. She lifted Ces Ambre and helped her back to her couch. "We just have to record it and repeat it to the Destroyer when we get back." She squeezed Ces Ambre's hand again. "Can you communicate our thanks and farewell?"

The woman smiled. "I have done so. As best I can."

"Saigyô," said Dem Lia. "Get us the hell out of here and accelerate full speed to the translation point."

The *Helix* survived the Hawking space jump back into the G8 system with no damage. The Destroyer had already altered its trajectory toward populated regions of the forest ring, but Den Soa broadcast the modulated graviton recordings while they were still decelerating, and the giant harvester responded with an indecipherable gravitonic rumble of its own and dutifully changed course toward a remote and unpopulated section of the ring. Far Rider used his tight-beam equipment to show them a holo of the rejoicing on the ring cities, platforms, pods, branches, and towers, then he shut down his broadcast equipment.

They had gathered in the solarium. None of the AIs was present or listening, but the humans, Ousters, and Templar sat in a circle. All eyes were on Ces Ambre. That woman's eyes were closed.

Den Soa said very quietly, "The beings ... on that world ... they had to build the tree ring before their star expanded. They built the harvesting spacecraft. Why didn't they just ... leave?"

"The planet was ... is ... home," whispered Ces Ambre, her eyes still shut tight. "Like children ... not wanting to leave home ... because it's dark out there. Very dark ... empty. They love ... *home*." The older woman opened her eyes and smiled wanly.

"Why didn't you tell us that you were Aenean?" Dem Lia said softly.

Ces Ambre's jaw set in resolve. "I am *not* Aenean. My mother, Dem Loa, gave me the sacrament of Aenea's blood -- through her own, of course -- after rescuing me from the hell of St. Theresa. But I decided *not* to use the Aenean abilities. I chose *not* to follow the others, but to remain with the Amoiète."

"But you communicated telepathically with ... " began Patek Georg.

Ces Ambre shook her head and interrupted quickly. "It is *not* telepathy. It is ... being connected ... to the Void Which Binds. It is hearing the language of the dead and of the living across time and space through pure empathy. Memories not one's own." The ninety-five-year-old woman who looked middle-aged put her hand on her brow. "It is so tiring. I fought for so many years not to pay attention to the voices ... to join in the memories. That is why the cryogenic deep sleep is so ... restful."



"And the other Aenean abilities?" Dem Lia asked, her voice still very soft. "Have you freecast?"

Ces Ambre shook her head, with her hand still shielding her eyes. "I did not want to *learn* the Aenean secrets," she said. Her voice sounded very tired.

"But you could if you wanted to," said Den Soa, her voice awestruck. "You could take one step -- freecast -- and be back on Vitus-Gray-Balianus B or Hyperion or Tau Ceti Center or Old Earth in a second, couldn't you?"

Ces Ambre lowered her hand and looked fiercely at the young woman. "But I *won't*."

"Are you continuing with us in deep sleep to our destination?" asked the other green-band, Res Sandre. "To our final Spectrum Helix colony?"

"Yes," said Ces Ambre. The single word was a declaration and a challenge.

"How will we tell the others?" asked Jon Mikail Dem Alem. "Having an Aenean ... a potential Aenean ... in the colony will change ... everything."

Dem Lia stood. "In my final moments as your consensus-elected commander, I could make this an order, Citizens. Instead, I ask for a vote. I feel that Ces Ambre and only Ces Ambre should make the decision as to whether or not to tell our fellow Spectrum Helix family about her ... gift. At any time after we reach our destination." She looked directly at Ces Ambre. "Or never, if you so choose."

Dem Lia turned to look at each of the other eight. "And we shall never reveal the secret. Only Ces Ambre has the right to tell the others. Those in favor of this, say aye."

It was unanimous.

Dem Lia turned to the standing Ousters and Templar. "Saigyô assures me that none of this was broadcast on your tightbeam."

Far Rider nodded.

"And your recording of Ces Ambres's contact with the aliens through the Void Which Binds?"

"Destroyed," broadcast the four-meter Ouster.

Ces Ambre stepped closer to the Ousters. "But you still want some of my blood ... some of Aenea's sacramental DNA. You still want the choice."

Chief Branchman Keel Redt's long hands were shaking. "It would not be for us to decide to release the information or allow the sacrament to be distributed ... the Seven Councils would have to meet in secret ... the Church of Aenea would be consulted ... or ... " Obviously the Ouster was in pain at the thought of millions or billions of his fellow Ousters leaving the forest ring forever, freecasting away to human-Aenean space or elsewhere. Their universe would never be the same. "But the three of us do not have the right to reject it for everyone."

"But we hesitate to ask ... " began the True Voice of the Tree Reta Kasteen.

Ces Ambre shook her head and motioned to Dr. Samel. The medic handed the



Templar a small quantity of blood in a shockproof vial. "We drew it just a while ago," said the doctor.

"You must decide," said Ces Ambre. "That is always the way. That is always the curse."

Chief Branchman Keel Redt stared at the vial for a long moment before he took it in his still-shaking hands and carefully set it away in a secure pouch on his Ouster forcefield armor. "It will be interesting to see what happens," said the Ouster.

Dem Lia smiled. "That's an ancient Old Earth curse, you know. Chinese. 'May you live in interesting times.' "

Saigyô morphed the airlock and the Ouster diplomats were gone, sailing back to the forest ring with the hundreds of thousands of other beings of light, tacking against the solar wind, following magnetic lines of force like vessels of light carried by swift currents.

"If you all don't mind," said Ces Ambre, smiling, "I'm going to return to my deep-sleep creche and turn in. It's been a long couple of days."

The originally awakened nine waited until the *Helix* had successfully translated into Hawking space before returning to deep sleep. When they were still in the G8 system, accelerating up and away from the ecliptic and the beautiful forest ring which now eclipsed the small, white sun, Oam Rai pointed to the stern window, and said, "Look at that."

The Ousters had turned out to say good-bye. Several billion wings of pure energy caught the sunlight.

A day into Hawking space while conferring with the AI's was enough to establish that the ship was in perfect form, the spin arms and deep-sleep pods functioning as they should, that they had returned to course, and that all was well. One by one, they returned to their creches -- first Den Soa and her mates, then the others. Finally only Dem Lia remained awake, sitting up in her creche in the seconds before it was to be closed.

"Saigyô," she said, and it was obvious from her voice that it was a summons.

The short, fat, Buddhist monk appeared.

"Did you know that Ces Ambre was Aenean, Saigyô?"

"No, Dem Lia."

"How could you not? The ship has complete genetic and med profiles on every one of us. You must have known."

"No, Dem Lia, I assure you that Citizen Ces Ambre's med profiles were within normal Spectrum Helix limits. There was no sign of post-humanity Aenean DNA. Nor clues in her psych profiles."

Dem Lia frowned at the hologram for a moment. Then she said, "Forged bio records then? Ces Ambre or her mother could have done that."



"Yes, Dem Lia."

Still propped on one elbow, Dem Lia said, "To your knowledge -- to any of the AIs' knowledge -- are there other Aeneans aboard the *Helix*, Saigyô?"

"To our knowledge, no," said the plump monk, his face earnest.

Dem Lia smiled. "Aenea taught that evolution had a direction and determination," she said softly, more to herself than to the listening AI. "She spoke of a day when all the universe would be green with life. Diversity, she taught, is one of evolution's best strategies."

Saigyô nodded and said nothing.

Dem Lia lay back on her pillow. "We thought the Aeneans so generous in helping us preserve our culture -- this ship -- the distant colony. I bet the Aeneans have helped a thousand small cultures cast off from human space into the unknown. They want the diversity -- the Ousters, the others. They want many of us to pass up their gift of godhood."

She looked at the AI, but the Buddhist monk's face showed only his usual slight smile. "Good night, Saigyô. Take good care of the ship while we sleep." She pulled the top of the creche shut and the unit began cycling her into deep cryogenic sleep.

"Yes, Dem Lia," said the monk to the now-sleeping woman.

The *Helix* continued its great arc through Hawking space. The spin arms and life pods wove their complex double helix against the flood of false colors and four-dimensional pulsations which had replaced the stars.

Inside the ship, the AI's had turned off the containment-field gravity and the atmosphere and the lights. The ship moved on in darkness.

Then, one day, about three months after leaving the binary system, the ventilators hummed, the lights flickered on, and the containment-field gravity activated. All 684,300 of the colonists slept on.

Suddenly three figures appeared in the main walkway halfway between the command-center bridge and the access portals to the first ring of life-pod arms. The central figure was more than three meters tall, spiked and armored, four-armed, and bound about with chrome razorwire. Its faceted eyes gleamed red. It remained motionless where it had suddenly appeared.

The figure on the left was a man in early middle age, with curly, graying hair, dark eyes, and pleasant features. He was very tan and wore a soft blue cotton shirt, green shorts, and sandals. He nodded at the woman and began walking toward the command center.

The woman was older, visibly old even despite Aenean medical techniques, and she wore a simple gown of flawless blue. She walked to the access portal, took the lift up the third spin arm, and followed the walkway down into the one-g environment of the life pod. Pausing by one of the creches, she brushed ice and condensation from the clear faceplate of the umbilically monitored sarcophagus.



"Ces Ambre," muttered Dem Loa, her fingers on the chilled plastic centimeters above her triune stepdaughter's lined cheek. "Sleep well, my darling. Sleep well."

On the command deck, the tall man was standing among the virtual AI's.

"Welcome, Petyr, son of Aenea and Endymion," said Saigyô with a slight bow.

"Thank you, Saigyô. How are you all?"

They told him in terms beyond language or mathematics. Petyr nodded, frowned slightly, and touched Basho's shoulder. "There are too many conflicts in you, Basho? You wished them reconciled?"

The tall man in the coned hat and muddy clogs said, "Yes, please, Petyr."

The human squeezed the AI's shoulder in a friendly embrace. Both closed their eyes for an instant.

When Petyr released him, the saturnine Basho smiled broadly.

"Thank you, Petyr."

The human sat on the edge of the table, and said, "Let's see where we're headed."

A holocube four meters by four meters appeared in front of them. The stars were recognizable. The *Helix's* long voyage out from human-Aenean space was traced in red. Its projected trajectory proceeded ahead in blue dashes -- blue dashes extending toward the center of the galaxy.

Petyr stood, reached into the holo cube, and touched a small star just to the right of the projected path of the *Helix*. Instantly that section magnified.

"This might be an interesting system to check out," said the man with a comfortable smile. "Nice G2 star. The fourth planet is about a seven-point-six on the old Solmev Scale. It would be higher, but it has evolved some very nasty viruses and some very fierce animals. Very fierce."

"Six hundred eighty-five light-years," noted Saigyô. "Plus forty-three light-years course correction. Soon."

Petyr nodded.

Lady Murasaki moved her fan in front of her painted face. Her smile was provocative. "And when we arrive, Petyr-san, will the nasty viruses somehow be gone?"

The tall man shrugged. "Most of them, my Lady. Most of them." He grinned. "But the fierce animals will still be there." He shook hands with each of the AI's. "Stay safe, my friends. And keep our friends safe."

Petyr trotted back to the three-meter chrome-and-bladed nightmare in the main walkway just as Dem Loa's soft gown swished across the carpeted deckplates to join him.

"All set?" asked Petyr.

Dem Loa nodded.



The son of Aenea and Raul Endymion set his hand against the monster standing between them, laying his palm flat next to a fifteen-centimeter curved thorn. The three disappeared without a sound.

The *Helix* shut off its containment-field gravity, stored its air, turned off its interior lights, and continued on in silence, making the tiniest of course corrections as it did so.

THE HYPERION CANTOS

Dan Simmons

Hyperion (1989)

The Fall of Hyperion (1990)

Endymion (1996)

The Rise of Endymion (1997)

The four *Hyperion* books cover more than thirteen centuries in time, tens of thousands of light-years in space, more than three thousand pages of the reader's time, the rise and fall of at least two major interstellar civilizations, and more ideas than the author could shake an epistemological stick at. They are, in other words, space opera.

As the reviewer for the *New York Times* said of the last book in the series, "Yet *The Rise of Endymion*, like its three predecessors, is also a full-blooded action novel, replete with personal combats and battles in space that are distinguished from the formulaic space opera by the magnitude of what is at stake -- which is nothing less than the salvation of the human soul."

The salvation of the human soul -- in the sense of finding the essence of what makes and keeps us human -- is indeed the binding theme through all of these space battles, dark ages, new societies, and the coming of a new messiah.

Hyperion introduces us to seven pilgrims crossing the WorldWeb of the Hegemony of Man on their way to the Valley of the Time Tombs on the planet Hyperion. In true Chaucerian form, six of the pilgrims (one doesn't survive long enough) tell each other their personal stories and reasons for coming on the pilgrimage as they cross The Sea of Grass and other obstacles to reach the Shrike -- the fabled killing creature of the Time Tombs, part machine, part time-



traveling god, part avenging angel, and all sharp thorns, spikes, claws, and teeth. The idea is that one of the pilgrims will have his or her request granted by the Shrike; the others will die. Through their stories we learn of the TechnoCore -- a hidden and manipulative group of Autonomous Intelligences escaped from human control -- of the destroyed (or perhaps just kidnapped) Old Earth; of the fake war between the Hegemony and the space-adapted, human-evolved Ousters; and of one Jesuit's discovery -- and rejection -- of a cross-shaped symbiote called the cruciform which can bring about physical resurrection. The story ends with the pilgrims' arrival at the Valley of the Time Tombs.

The Fall of Hyperion picks up exactly where *Hyperion* left off but utilizes totally different narrative techniques and structures to pursue John Keats's themes of individuals -- and species -- not happily surrendering their place in the scheme of things when evolution tells them it is time to go. The pilgrims from the first book find that their fates are not as simple as they had thought: the Time Tombs open, mysterious messages and messengers from the future show that the struggle for the human soul continues on for many centuries, the Shrike wreaks havoc but does not kill all, nor does it grant requests, and the complex interstellar society of the Hegemony of Man with its WorldWeb farcaster system is kicked apart like an ant hill by interstellar war -- although whether the war is between Hegemony and Ousters, or Humanity and the TechnoCore, is not clear. Of the pilgrims, one named Brawne Lamia is pregnant by her lover -- the John Keats cybrid created by the Core -- and it is rumored that her child will be The One Who Teaches, humanity's next Messiah. Another, soldier Fedmahn Kassad, travels to the future to meet his fate in combat with the Shrike. A third, Sol Weintraub, has stopped his daughter from aging backward to nonexistence, but now has to travel with her through a Time Tomb to their own complicated part in the mosaic of the future. The fourth pilgrim, the Hegemony Consul, takes an ancient spacecraft whose AI is inhabited with the essence of the dead John Keats cybrid and returns to explore the ruins of the Hegemony. The fifth pilgrim, a priest, dies and is reborn through the cruciform as the Jesuit whose tale he told -- now the pope of a reborn Catholic Church. The final living pilgrim -- the seven-hundred-year-old poet, Martin Silenus, who has been telling all this tale -- remains as obscene and crotchety as ever.

Endymion opens 274 years after the Fall of the Farcasters. Things have gone to hell -- which is usually the case in so-called Dark Ages between empires -- but the Pax, the civil-military arm of the reinvigorated Catholic Church, now extends its dominion to most of the former worlds of the Hegemony. The Church -- and the Pax -- control its citizens through its monopoly of resurrection. Unknown to most, the Church has entered into a Faustian bargain with the now-hidden TechnoCore and utilizes the cruciform symbiotes to bring its followers back to life and into obedience. Suddenly, an eleven-year-old messiah-to-be named Aenea appears on the scene. Aenea is Brawne Lamia's daughter, and she has fled across almost three centuries through the Time Tombs only to find the Pax authorities searching for her, and with both the Church and the Core acting on an absolute need to destroy her. The still alive, still obscene, still cranky poet, Martin Silenus, assigns a young soldier and escaped murderer -- Raul Endymion -- to rescue the



girl and to transport her wherever she wants to go on the now-dead Consul's returned ship. Most of *Endymion* is a massive chase across human space with the Pax in close pursuit, as Raul, Aenea, and the blue android A. Bettik run for their lives and perhaps the future of humanity. Created by the Core, unleashed by the Church, is a female monstrosity named Rhadamanth Nemes who makes the killing-creature Shrike look like a Sunday-school teacher. At the end of *Endymion*, Raul, Aenea, and a wounded A. Bettik make it to Old Earth -- not destroyed after all, just transported to the Lesser Magellanic Clouds by aliens known only as the Lions and Tigers and Bears. Our trio settles in at Frank Lloyd Wright's Taliesin West while young Aenea trains to be an architect.

The Rise of Endymion picks up four years after the events of *Endymion*. Aenea, now sixteen, knows that she must return to Pax-dominated space to carry out her role as The One Who Teaches. Raul, her protector and friend, has no wish to go. The idea of martyrdom -- especially his beloved Aenea's martyrdom -- appalls him. Aenea sends Raul "ahead" by farcaster, but actually his few weeks of traveling allow Aenea to age five years, thanks to the miracle of time dilation and time-debt during Raul's interstellar travels in the old Consul's ship. When they meet again, Aenea is a woman and well along in her role of The One Who Teaches. The Pax is still after her. The Church still needs her dead. The creature Nemes has now been joined by three equally impossibly powerful and destructive siblings. And amidst all this, on the mountaintop-and-cloud world of T'ien Shan, Aenea and Raul become lovers. This makes Raul, our narrator through the two books, even less happy at the thought of his beloved's becoming the messiah so many have predicted. Raul is not the smartest character in these books, but he is absolutely loyal, absolutely in love, and he is smart enough to know the fate of most messiahs.

The Rise of Endymion ends with tragedy, torture, death, and separation, followed -- not miraculously but inevitably -- by great enlightenment and the reunion of Raul and Aenea. The Pax has murdered her -- thus unwittingly bringing about their own downfall through Aenea's Shared Moment, wherein every human being on every world glimpses the truth behind the Pax, the Church, the cruciform, and the parasitic TechnoCore -- but during her "absent five years" while Raul was traveling, she had come ahead in time with the help of the Shrike to spend one year, eleven months, one week, and six hours with Raul on Old Earth. Earth has been emptied, cleansed, renewed, and returned to its proper place in the solar system by the Lions and Tigers and Bears.

Martin Silenus, the poet and constant character through all the books, dies shortly after Raul and Aenea are wed. Some of the poet's final words were to the Consul's ship, which has also come through a thousand years and four fat books -- "See you in hell, Ship."

As *The Rise of Endymion* ends, the still-mysterious Shrike stands vigil over Martin Silenus's grave on Old Earth; thanks to Aenea's sacrifice, humanity has been freed to "learn the language of the dead" by tapping into the empathic fabric underlying the universe -- and also by now being able to freecast, that is, personally teleport anywhere; and Raul and Aenea fly off on their ancient



hawking mat to celebrate their honeymoon on the empty, virginal Old Earth -- "
... our new playground, our ancient world ... our new world ... our first and future
and finest world."

-- *Dan Simmons*