Quanta

Volume III Issue 1

February 1991

ISSN 1053-8496

Contents

Volume III, Issue 1 *February, 1991*

Articles

Looking Ahead
Page 2 Daniel K. Appelquist

The Physics of Solar Sailing
Page 3 Christopher Neufeld

Serials

The Harrison Chapters
Page 11 Jim Vassilakos

Short Fiction

Burning, Burning
Page 5 Tom Maddox

Black Leaves
Page 10 Dana Goldblatt

Chasing Unicorn Songs
Page 21 Conrad Wong

A Subtle Change
Page 27 Matthew Sorrels

Popping In
Page 30 Christopher Kempke

Daniel K. Appelquist
Editor/Technical Director

Norman S. Murray
Editorial Assistant

David Blob
Carina Cornell
William Frank (The *Mad* Proofreader)
Karen Fabrizius
Nathan Loofbourrow
Proofreading

Quanta (ISSN 1053-8496) is Copyright ©1991 Daniel K. Appelquist. This magazine may be archived, reproduced and/or distributed under the condition that it is left intact and that no additions or changes are made to it. The individual works within this magazine are the sole property of their respective author(s). No further use of their works is permitted without their explicit consent.

All stories in this magazine are fiction. No actual persons are designated by name or character. Any similarity is coincidental.

All submissions, requests for submission guidelines, requests for back issues, queries concerning subscriptions, letters, comments or other correspondence should be sent to one of the following addresses:

quanta@andrew.cmu.edu
quanta@andrew.BITNET

Requests to be added to the distribution list should be sent to one of the following addresses. For PostScript subscriptions, send to:

quanta+requests-postscript@andrew.cmu.edu
quanta+requests-postscript@andrew.BITNET

For Ascii subscriptions, send to:

quanta+requests-ascii@andrew.cmu.edu
quanta+requests-ascii@andrew.BITNET

Please send mail messages only–no files or interactive messages. All subscription requests are handled by human beings.

Postal correspondence may be sent to:

Quanta Magazine
c/o Daniel K. Appelquist
5440 Fifth Avenue, Apartment 60
Pittsburgh, PA 15232, USA

Back issues may also be obtained from one of the anonymous FTP servers:

U.S.:
export.acs.cmu.edu (128.2.35.66)
/pub/quanta

Europe:
lth.se (130.235.16.3)
/Documents/Quanta

Quanta is produced using the LaTeX typesetting system and DVIPS, Copyright © 1986-90 Radical Eye Software

Looking Ahead

Daniel K. Appelquist

Welcome to a new volume of Quanta. Before I get to the meat of this article, let me tell you a little bit about two of the stories I've lined up for you in this issue.

Despite the fact that he swore up and down never to write another Teletrix story, Christopher Kempke is back this issue with *Popping In*, a story starring none other than Martin and June Kendall. (See the editor's note at the end of that story.) Chris says that Gremlins made him do it, but I think he really just can't bear to part with a set of characters and situations that really do work for him. I have a sneaking suspicion we may be seeing more of Martin Kendall in the future, despite Chris' protestations.

Secondly, heading up the 'short fiction' section, you may have noticed a story called *Burning, Burning* by Tom Maddox. This story is actually an excerpt from Tom's upcoming book, *Halo*, which is due to be published in the US and Britain sometime later this year, by TOR Books and Century Hutchinson respectively. This is the first opportunity I've had to publish something by an already published and well respected author. Tom said he decided to send me *Burning, Burning* in an effort to "support electronic publication in particular, and alternative modes of publication/distribution in general."

On that subject, I'm about to do something rather nasty to you. Those of you who watch American television may be familiar with the concept of "Public Television." Those of you who work with computers may be familiar with the concept of "share-ware." Starting with this issue, Quanta is going to become a fusion of these two concepts. If you think Quanta is worth money to you, I ask you to send your donations to keep it going. Note that, like public television or shareware, Quanta will continue to be 100% free to all subscribers, and available for anonymous FTP (see below for current anonymous ftp sites). What I'm asking for is *voluntary* contributions on your part.

I'd like to continue producing Quanta way into the future. I'd like to be able to pull in more established writers, like Tom Maddox, by enlarging Quanta's distribution and thereby giving them more incentive to donate material. I'd also like to (eventually) be able to pay writers for their submissions. Now, up until this point, I've been able to produce Quanta because, as a student at Carnegie Mellon University, I have access to the kind of computer facilities that most small colleges only dream about. This rather fortuitous boon won't last forever. Next year, I will have graduated from Carnegie Mellon and will no longer have access to their facilities. In order for Quanta to continue, and to continue to grow, it's going to need capital (at the very least, a computer with a UUCP feed and a printer). Donations will go to a fund which will go specifically toward the purchase of computer equipment and the expansion of Quanta into the 'paper' market.

If you like Quanta, and you happen to have five extra Dollars (Francs, Pounds, Yen, etc. . .), I encourage you to seal them in an envelope and mail them to the postal address given on the contents page of this issue. (Obviously, I'm being overly simplistic. Don't send cash through the mail, send a check, made out to "Quanta Magazine".) The point I'm trying to make is that no donation is too small. Only have a few dollars to spare? That's fine. Still want to receive Quanta but don't want to pay? That's fine too. The donation is entirely optional. Quanta is and will always remain entirely free to network subscribers. (Have I made this point enough?) I'm really beginning to sound like a public television announcer now, so I'll leave it at that. If you have any questions or comments about this, or anything concerning Quanta for that matter, feel free to send mail to me via *quanta@andrew.cmu.edu*.

Moving right along, let's talk about FTP servers. There are now two servers carrying current and back issues. One is located in the US (right here at Carnegie Mellon, actually) and the second is located in Sweden at the Lund Institute of Technology. The particulars are as follows:

Site: export.acs.cmu.edu (128.2.35.66)
Directory: /pub/quanta

Site: lth.se (130.235.16.3)
Directory: /Documents/Quanta

For both sites, use *anonymous* as a login name and type your email address as a password.

If you're located in Europe, using the site at lth.se would be the smart thing to do. If you're located somewhere in North or South America, using the other site would be better. Australians can take their pick (the American site would probably be better, actually.) If you have problems with either of these sites, please don't bother the administrators of the sites. Send your gripes to me, and I'll take check into them. Note that in both cases, the files on these servers are stored in UNIX compressed format, so make sure you set for **binary** transfers and make sure you have a version of **decompress** at your site. Please do not over-use these sites. I'd like Quanta to remain available on anonymous FTP long into the future.

Some further news this month on Jason Snell's new magazine now definitely to be titled *Intertext*: Jason's been tinkering with the format, and I think he's finally got it right, so we may see the first issue of that soon. *Intertext* will primarilly publish short fiction by amateur authors. From the samples that Jason's sent me, it looks good. If you want to subscribe, or just want more information, send mail to Jason at *jsnell@ucsd.edu*.

And with that, I must say goodbye. Enjoy this new issue. If you have material to contribute, I urge you to do so. Live in good health. □

The Physics of Solar Sailing

Christopher Neufeld

A couple of years ago, George Bush charged a committee with planning events to commemorate the five hundredth anniversary of Christopher Columbus' departure from Europe for the Americas. Among the ideas which were implemented by the Christopher Columbus Quincentenary Jubilee Commission was the Columbus 500 Space Sail Cup. Spacecraft are to launch on conventional chemical rockets around Columbus day of 1992 and have to go to Mars using only light pressure. Among the serious competitors are the Canadian Solar Sail Project, the Aeritalia Team from Italy, Cambridge Consultants from Great Britain, and the World Space Foundation from the United States. There are also teams from Japan, Israel, and the Soviet Union, though the status of those projects is less clear. There are numerous criteria for winning, such as shortest transit to Mars orbit and the closest approach to the planet. In order to be recognized as a winner the sail must receive no government funding, but may receive money from the Columbus Commission. The Commission is subsidizing the efforts of three ships to match the three ships Columbus took to the new world (there was a fourth, but it had to turn back). One team from each of the Americas, Europe, and Asia, will receive whatever money becomes available. The World Space Foundation sail is the official Americas sail, and will receive some of the money, if it ever is granted in the budget.

One way of looking at the mass-energy equivalence expressed in Einstein's famous equation, $E = mc^2$, is that any time energy moves from one place to another, it behaves in part as if mass is moving that way. If a mass is moving into another body, it pushes on it. The same is true of light. The momentum flux associated with light is very low, equal to the power flux divided by the speed of light. At Earth orbit, above the atmosphere, the solar power flux is roughly 1400 kilowatts per square metre. This corresponds to a momentum flux of 4.7 micronewtons per square metre. If a square metre of a perfectly absorbing material is put in direct sunlight above the atmosphere, and the light hits it perpendicularly to the surface, it feels a force of 4.7 micronewtons, or roughly one two thousandth of the weight of a paper clip at the Earth's surface. A perfectly reflecting material would feel double that force. Compare this to the three space shuttle main engines (SSMEs), each of which generates 1.67 meganewtons of thrust at sea level, and 2.1 meganewtons of thrust in vacuum.[1] Even a 100,000 square metre sail would not generate a millionth the thrust of a single SSME, though it would be a square as long on edge as three football fields.

Solar sailing will almost certainly never be used as a ground launcher, though a variant, a laser launcher, could be constructed in the next five or ten years. Solar sailing becomes attractive as a means of thrust on long voyages through interplanetary space. The three space shuttle main engines and the two solid rocket boosters together provide, very roughly, 8 km/second of delta-velocity before they burn out after 8.5 minutes. A shuttle which masses 2 million kilograms on the pad delivers itself and cargo, about a hundred thousand kilograms in total, to orbit. 95rocket exhaust gas, or is dropped into the sea in the form of spent boosters and empty external tank. Compare this to a solar sail. The propellant is sunshine, there is no fuel, and the thrust is continuous. The spacecraft does not have to be made to be 95mass. While it might be fifty percent or more sail by mass, that material is not expended. A sail can be reused, or the material melted down for use at the destination. If a rocket were used in a round trip to Mars, and it had to carry its fuel for the return journey, it would have to be huge at launch. If the fuel for the engines massed 9 times as much as the payload, which must include the fuel for the return trip, then the initial mass of the rocket would be 99

It might seem at first that the optimal configuration for a solar sail is one in which the light hits the sail at normal incidence (perpendicular to the surface). This doesn't turn out to be the case, though. A sail oriented this way exerts all its thrust along the line away from the sun. Because the intensity of the light from the sun falls off as the square of the distance, the magnitude of this outward thrust must fall off also as the square of the distance. In this way it is exactly like gravity. In fact, putting the sail at normal incidence to the sun has the same effect as would have reducing the mass of the sun. It places the sail into an elliptical orbit which moves farther away from the sun for a while, but must return to its starting point after one complete revolution about the sun. This is not a particularly useful configuration. The only way to avoid this with a sail at normal incidence is for the solar pressure to exceed the force of gravity, so that the sail goes into a hyperbolic escape from the solar system. In order to do this, for the power output and mass of our sun, the sail would have to mass no more than one kilogram for every 600 square metres of sail area, including the mass of payload and electronics. This is not practical for ground-based construction. The sail material for the Canadian Solar Sail Project will mass about a kilogram per hundred square metres, before putting on structure or electronics.

So, putting the sail at normal incidence to the sun is not the best configuration. It is better to angle the sail in such a way as to maximize the component of the thrust which is parallel to the direction of travel. This turns out to be when the angle between the sun and the perpendicular to the sail is about 35.3 degrees. In this configuration the spacecraft is being pushed along the direction of travel, and so it climbs the gravity well. In the counter-intuitive realm of orbital mechanics, the spacecraft slows down the whole time it is climbing the well.

[1] Shuttle Statistics taken from *The Space Transportation Systems Reference* edited by Christopher Coggon, ISBN 0-920487-00-9

Well, if the only important thing is the component of the thrust along the velocity vector, it can clearly be aligned the other way to oppose the velocity vector. This pushes against the direction of travel, dropping the sail down the gravity well, causing it to speed up the whole time. A solar sail, contrary to popular belief, can travel sunward just as easily as it can travel anti-sunward.

The travel time to Mars for a solar sail is a strong function of the mass to area ratio. It is not unreasonable to manufacture a solar sail which can be launched in the next two years to arrive at Mars in about another two years. It has been suggested that solar sail spacecraft could be used to send provisions and equipment to Mars ahead of a manned expedition. This two year time is not a fundamental limitation of solar sails, but is quite good for sailcraft launched from the ground.

If a solar sailcraft is to be launched from the ground and unfolded in space, the sail must be strong enough to withstand the stresses involved. For the solar sailcraft running in the race to Mars in 1992, the sails will be made of a strong polymer coated with aluminum for reflectivity. Once the sail is launched and unfolded, the polymer is just dead weight which has to be dragged to the destination by the sailcraft. It would be convenient if the substrate could be chosen to evaporate in the environment of space, for instance if the polymer breaks down in ultraviolet light, thus lightening the sail, and this possibility has been investigated by several teams.

In the future, solar sails might be manufactured and deployed in space, allowing square kilometres of very thin aluminum to be tethered to a cargo or passenger module. These sails could make an Earth-Mars transit in less time than a Hohmann transfer orbit. It has been speculated in science fiction that a solar sail would make an excellent asteroid surveyor, as it would have essentially an unlimited fuel supply.

Solar sails were seriously studied by NASA in the 1960s as possible manned transportation around the solar system. In those days of optimism serious plans were formed for lunar bases by 1975, nuclear launchers and interplanetary engines, and unmanned interstellar probes. None of these ever received serious funding, and they all died on the drawing boards and test beds by the early 1970s. Now, twenty years later, we will finally, to quote Arthur C. Clarke, ‘sail the wind from the Sun’.

Christopher Neufeld is a physics Ph.D. student at the University of Toronto and a team member on the Canadian Solar Sail Project, which is an initiative of the Canadian Space Society. In his copious free time he reads science fiction or pushes buttons on his Apple][GS.

neufeld@helios.physics.utoronto.ca

BURNING, BURNING

by Tom Maddox

Copyright © 1991

On a rainy morning in Seattle, Gonzales was ready for the egg. A week ago he had returned from Myanmar, the country once known as Burma, and now, after two days of drugs and fasting, he was prepared: he had become an alien, at home in a distant landscape.

His brain was filled with blossoms of fire, their spread white flesh torched to yellow, the center of a burning world. On the dark stained oak door, angel wings danced in blue flame, their faces beatific in the cold fire. Staring at the animated carved figures, Gonzales thought, *the fire is in my eyes, in my brain*.

He pushed down the s-curved brass handle and stepped through to the hallway, his split-toed shoes of soft cotton and rope scuffing without noise across floors of bleached oak. Through the open door at the hallway's end, morning's light through stained glass made abstract patterns of crimson and buttery yellow. Inside the room, a blue monitor console stood against the far wall, SenTrax corporate sunburst glowing on its face; in the center of the room was the egg, split hemispheres of chromed steel, cracked and waiting. One half-egg was filled with beige tubes and snakes of optic cable, the other half with hard dark plastic lying slack against the shell.

Gonzales rubbed his hands across his eyes, then pulled his hair back into a long hank and slipped a circle of elastic over it. He reached to his waist and grabbed the bottom hem of his navy blue t-shirt and pulled the shirt over his head. Dropping it to the floor, he kicked off his shoes, stepped out of baggy tan pants and loose white cotton underpants and stood naked, his pale skin gleaming with a light coat of sweat. His skin felt hot, eyes grainy, stomach sore.

He stepped up and into a chrome half-egg, then shivered and lay back as body-warmth liquid bled into the slack plastic, which began to balloon underneath him. He took hold of finger-thick cables and pushed their junction ends home into the sockets set in the back of his neck. As the egg continued to fill, he fit a mask over his face, felt its edges seal, and inhaled. Catheters moved toward his crotch, iv needles toward the crooks of both arms. The egg shut closed on him and liquid spilled into its interior.

He floated in silence, waiting, breathing slowly and deeply as elation punched through the chaotic mix of emotions generated by drugs, meditation, and the egg. No matter that he was going to relive his own terror, this was what moved him: access to the many-worlds of human experience–travel through space, time, and probability all in one.

Virtual realities were everywhere–virtual vacations, sex, superstardom, you name it–but compared to the egg, they were just high-res videogames or stage magic. VRs used a variety of tricks to simulate physical presence, but the sensorium could be fooled only to a certain degree, and when you inhabited a VR, you were conscious of it, so sustaining its illusion depended on willing suspension of disbelief. With the egg, however, you got total involvement through all sensory modalities–the worlds were so compelling that people waking from them often seemed lost in the waking world, as if it were a dream.

A needle punched into a membrane set in one of the neural cables and injected a neuropeptide mix. Gonzales was transported.

It was the final day of Gonzales's three week stay in Pagan, the town in central Myanmar where the government had moved its records decades earlier, in the wake of ethnic rioting in Yangon. He sat with Grossback, the Division Head of SenTrax Myanmar, at a central rosewood table in the main conference room. The table's work stations, embedded oblongs of glass, lay dark and silent in front of them.

Gonzales had come to Myanmar to do an information audit. The local SenTrax group supplied the Federated State of Myanmar with its primary information utilities: all its records of personnel and materiel, and all transactions among them. A month earlier, SenTrax Myanmar's reports had triggered "look-see" alarms in the home company's passive auditing programs, and Gonzales and his memex had been sent to look more closely at the raw data.

So for twenty straight days Gonzales and the memex had explored data structures and their contents, testing nominal functional relationships against reality. Wherever there were movements of information, money, equipment or personnel, there were records, and the two followed. They searched cash trails, matched purchase orders to services and materiel, verified voucher signatures with personnel records, cross-checked the personnel records themselves against government databases, and traced the backgrounds and movements of the people they represented; they read contracts and back-chased to their bid and acquisition; they verified daily transaction logs.

Hard, slogging work, all patience and detail, and so far it had shown nothing but the usual inefficiencies–Grossback didn't run a particularly taut operation, but, as of the moment, he didn't seem to have a corrupt one. However, neither he nor SenTrax Myanmar was cleared yet; Gonzales's final report would come later, after he and the memex had analyzed the records at their leisure.

Gonzales stretched and rubbed his eyes. As usual at the end of short-term, intensive gigs like this, he felt tired, washed-out, eager to go. He said to Grossback, "I've got a company plane out of here late this afternoon to Bangkok. I'll connect with whatever commercial flight's available there."

Grossback smiled, obviously glad Gonzales was leaving. Grossback was a slight man, of mixed German and Thai descent; he had a light brown complexion, black hair, and delicate features. He wore politically correct clothing in the old-fashioned Burmese style: a dark skirt called a *longyi*, a white cotton shirt.

During Gonzales's time there, Grossback had dealt with him coldly and correctly from behind a mask of corporate protocol and clenched teeth. *Fair enough*, Gonzales had thought: the man's operation was suspect, and him along with it. Anyway, people resented these outside intrusions almost every time; representing Internal Affairs, Gonzales answered only to his division head, F.L. Traynor, and SenTrax Board, and that made almost everyone nervous.

"You leaving out of Myaung U Airport?" Grossback asked.

"No, I've asked for a pick-up south of town." Like anyone else who could arrange it, he was not going to fly out of Pagan's official airport, where partisan groups had several times brought down aircraft. Surely Grossback knew that.

Grossback asked, "What will your report say?"

Surprised, Gonzales said, "You know I can't tell you anything about that." Even mentioning the matter constituted an embarrassment, not to mention a reportable violation of corporate protocol. The man was either stupid or desperate.

"You haven't found anything," Grossback said.

What was his problem? Gonzales said, "I have a year's data to examine before I can make an assessment."

"You won't tell me what the preliminary report will look like," Grossback said. His face had gone cold.

"No," said Gonzales. He stood and said, "I have to finish packing." For the moment, he just wanted to get out before Grossback did something irretrievable, like threatening him or offering a bribe. "Goodbye," Gonzales said. The other man said nothing as Gonzales left the room.

Gonzales returned to the Thiripyitsaya Hotel, a collection of low bungalows fabricated from bamboo and ferro-concrete that stood above the Irrawady River. The rooms were afflicted by Myanmar's tattered version of Asian tourist decor: lacquered bamboo on the walls, along with leaping dragon holos, black teak dresser, tables, chairs, and bed frame, ceiling fans that had wandered in from the twentieth century–just to give your average citizen that rush of the Exotic East, Gonzales figured. However, the hotel had been rebuilt less than a decade before, so, by local standards, Gonzales had luxury: working climatizer, microwave, and refrigerator.

Of course, many nights the air conditioner didn't work, and Gonzales lay sweaty and semi-conscious through hot, humid nights then was greeted just after dawn by lizards fanning their ruby neck flaps and doing push ups.

He had gotten up several of those mornings and walked the cart paths that threaded the plains around Pagan, passing among the temples and pagodas as the sun rose and turned the morning mist into a huge veil of luminous pink, with the towers sticking up like fairy castles. Everywhere around Pagan were the temples, thousands of them, young and flourishing when William the Conqueror was king. Now, quick-fab structures housing government agencies nested among thousand year old pagodas, some in near perfect condition, like Thatbyinnu Temple, myriad others no more than ruins and forgotten names. You gained merit by building pagodas, not by keeping up those built by someone long dead.

Like some other Southeast Asian countries, Myanmar still was trying to recover from late-twentieth century politics; in Myanmar's case, its decades-long bout with round-robin military dictatorships and the chaos that came in their wake. And as was so often the case in politically wobbly countries, it still restricted access to the worldnet; through various kinds of governments, its leaders had found the prospect of free information flow unacceptable. Ka-band antennas were expensive, their use licensed by permits almost impossible to get. As a result, Gonzales and the memex had been like meat eaters stranded among vegetarians, unable to get their nourishment.

He'd taken down the memex that morning. Its functions dormant, it lay nestled inside one of his two fiber and aluminum shock-cases, ready for transport. The other case held memory boxes containing SenTrax Myanmar group's records.

When they got home, Gonzales would tell the memex the latest news about Grossback, how the man had cracked at the last moment. Gonzales was sure the m-i would think what he did–Grossback was dog dirty and scared they would find it.

At the edge of a sandy field south of Pagan, Gonzales waited for his plane. Gonzales wore his usual international traveller's mufti, a tan gabardine two-piece suit over an open-collared white linen shirt, dark brown slipover shoes. His hair was gathered back into a ponytail held together by a silver ring made from lizard figures joined head-to-tail. Next to him sat a soft brown leather bag and the two shock-cases.

In front of him a pagoda climbed in a series of steeples to a gilded and jeweled umbrella top, pointing to heaven. On its steps, beside the huge paw of a stone lion, a monk sat in full lotus, his face shadowed by the animal rising massive and lumpy and mock fierce above him. The lion's flanks were dyed orange by sunset, its lips stained the color of dried blood. The minutes passed, and the monk's voice droned, his face in shadow.

"Come tour the temples of ancient Pagan," a voice said. "Shwezigon, Ananda, Thatbyinnu–"

"Go away," Gonzales said to the tour cart that had rolled up behind him. It would hold two dozen or so passengers in eight rows of narrow wooden benches but was now empty–almost all the tourists would have joined the crush on the terraces of Thatbyinnu, where they could watch the sun set over the temple plain.

"Last tour of the day," the cart said. "Very cheap, also very good exchange rate offered as courtesy to visitors."

It wanted to exchange kyats for dollars or yen: in Myanmar, even the machines worked the black market. "No thanks."

"Extremely good rate, sir."

"Fuck off," Gonzales said. "Or I'll report you as defective." The cart whirred as it moved away.

Gonzales watched a young monk eyeing him from the other side of the road, ready to come across and beg for pencils or money. Gonzales caught the monk's eye and shook his head. The monk shrugged and walked on, his orange robe billowing.

Where the hell was his plane? Soon hunter flares would cut into the new moon's dark, and government drones would scurry around the edges of the shadows like huge mutant bats. Upcountry Myanmar trembled on the edge of chaos, beset by

a multi-ethnic mix of Karens, Kachins, and Shans in various political postures, all fierce, all contemptuous of the central government. They fought with whatever was at hand, from sharpened stick to backpack missile, and they only quit when they died.

A high-pitched wail built quickly until it filled the air. Within seconds a silver swing-wing, an ungainly thing, each huge rectangular wing loaded with a bulbous, oversized engine pod, came low over the dark mass of forest. Its running lights flashing red and yellow, the swing-wing slewed to a stop above the field, wings tilting to the perpendicular and engine sound dropping into the bass. Its spots picked out a ten-meter circle of white light that the aircraft dropped into, blowing clouds of sand that swept over Gonzales in a whirlwind. The inverted fans' roar dropped to a whisper, and with a creak the plane kneeled on its gear, placing the cockpit almost on the ground. Gonzales picked up his bags and walked toward the plane. A ladder unfolded with a hydraulic hiss, and Gonzales stepped up and into the plane's bubble.

"Mikhail Gonzales?" the pilot asked. His multi-function flight glasses were tilted back on his forehead, where their mirrored ovoid lenses made a blank second pair of eyes; a thin strand of black fiberoptic cable trailed from their rim. Beneath the glasses, his thin face was brown and seamed– *no cosmetic work for this guy*, Gonzales thought. The man wore a throwaway "tropical" shirt with dancing pink flamingos on a navy blue background.

"That's me," Gonzales said. He gestured with the shockcase in his right hand, and the pilot toggled a switch that opened the luggage locker. Gonzales put his bags into the steel compartment and watched as the safety net pulled tight against the bags and the compartment door closed. He took a seat in the first of eight empty rows behind the pilot. Cushions sighed beneath him, and from the seatback in front of him a feminine voice said, "You should engage your harness. If you need instructions, please say so now."

Gonzales snapped closed the trapezoidal catch where shoulder and lap belts connected, then stretched against the harness, feeling the sweat dry on his skin in the plane's cool interior. "Thank you," said the voice.

The pilot was speaking to Myaung U Airport traffic control as the plane lifted into twilight over the city. The soft white glow from the dome light vanished, then there were only the last moments of orange sunlight coming through the bubble.

The temple plain was spread out beneath, all murk and shadow, with the temple and pagoda spires reaching up toward the light, white stucco and gold tinted red and orange.

"Man, that's a beautiful sight," the pilot said.

"You're right," Gonzales said. It was, but he'd seen it before, and besides, it had already been a long day.

The pilot flipped his glasses down, and the plane banked left and headed south along the river. Gonzales lay back in his seat and tried to relax.

They flew above black water, following the Irrawady River until they crossed an international flyway to Bangkok. Dozing in the interior darkness, Gonzales was almost asleep when he heard the pilot say, "Shit, somebody's here. Partisan attack group, probably–no recognition codes. Must be flying ultralights–our radar didn't see them. We've got an image now, though."

"Any problem?" Gonzales asked.

"Just coming for a look. They don't bother foreign charters." And he pointed to their transponder message flashing above the primary displays:

```
THIS INTERNATIONAL FLIGHT IS
NON-MILITARY.
IT CLAIMS RIGHT OF PASSAGE
UNDER U.N. ACT OF 2020.
```

It would keep on repeating until they crossed into Thai airspace.

The flight computer display lit bright red with COLLISION WARNING, and a Klaxon howl filled the plane's interior. The pilot said, "Fuck, they launched!" The swing-wing's turbines screamed full out as the plane's computer took command, and the pilot's hands gripped his yoke, not guiding, just hanging on.

Gonzales's straps pulled tight as the plane tumbled and fell, corkscrewed, looped, climbed again–smart metal fish evading fiery harpoons. Explosions blossomed in the dark, quick asymmetrical bursts of flame followed immediately by hard thumping sounds and shock waves that knocked the swing-wing as it followed its chaotic path through the night.

Then an aircraft appeared, flaring in fire that surged around it, its pilot in blazing outline–a stick figure with arms thrown to the sky in the instant before pilot and aircraft disintegrated in flame.

Their own flight went steady and level, and control returned to the pilot's yoke. Gonzales's shocked retinas sparkled as the night returned to blackness. "Collision averted," the plane's computer said. "Time in red zone, six point eight nine seconds."

"What the hell?" Gonzales said. "What happened?"

"Holy Jesus motherfucker," the pilot said.

Gonzales sat gripping his seat, chilled by the blast of cold air from the plane's air conditioner onto his sweat-soaked shirt. He glanced down to his lap: no, he hadn't pissed himself. Really, everything happened too quickly for him to get that scared.

A Mitsubishi-McDonnell "Loup Garou" warplane dived in front of them and circled in slow motion. Like the ultralights it was cast in matte black, but with a massive fuselage. It turned a slow barrel roll as it circled them, lazy predator looping fat, slow prey, then turned on brilliant floods that played across their canopy.

The pilot and Gonzales both froze in the glare.

Then the Loup Garou's black cockpit did a reverse-fade; behind the transparent shell Gonzales saw the mirror-visored pilot, twin cables running from the base of his neck. The Loup Garou's wings slid forward into reverse-sweep, and it stood on its tail and disappeared.

Gonzales strained against his taut harness.

"Assholes!" the pilot screamed.

"Who was that?" Gonzales asked, his voice thin and shaking. "What do you mean?"

"The Myanmar Air Force," the pilot said, his voice tight, face red beneath the flight glasses' mirrors. "They set us up, the pricks. They used us to troll for a guerrilla flight." The pilot flipped up his glasses and stared with pointless intensity out the cockpit window, as if he could see through the blackness. "And waited," he said. "Waited till they had the whole flight." The pilot swiveled around abruptly and faced Gonzales, his

features distorted into a mad and angry caricature of the man who had welcomed Gonzales ninety minutes before. "Do you know how fucking close we came?" he asked.

No, Gonzales shook his head. No.

"Milliseconds, man. Fucking milliseconds. Close enough to touch," the pilot said. He swiveled his seat to face forward, and Gonzales heard its locking mechanism click as he settled back into his own seat, fear and shame spraying a wild neurochemical mix inside his brain–

Gonzales had never felt things like this before–death down his spine and up his gut, up his throat and nose, as close as his skin; death with a bad smell . . . *burning, burning*.

• • •

As the morning passed, the sun moved away from the stained glass, and the room's interior went to gloom. Only monitor lights remained lit, steady rows of green above flickering columns of numbers on the light blue face of the monitor panel.

A housekeeping robot, a pod the size of a large goose, worked slowly across the floor, nuzzled into the room's corners, then left the room, its motion tentacles beneath it making a sound like wind through dry grass.

The cockpit display flashed as landing codes fed through the flight computer, then the swing-wing locked into the Bangkok landing grid and began its slide down an invisible pipe. They went to touchdown guided by electronic hands.

The pilot turned to Gonzales as they descended and said, "I'll have to file a report on the attack. But you're lucky–if we had landed in Myanmar, government investigators would have been on you like white on rice, and you could forget about leaving for days, maybe weeks. You're okay now: by the time they process the report and ask the Thais to hold you, you'll be gone."

At the moment, the last thing Gonzales wanted to do was spend any time in Myanmar. "I'll get out as quickly as I can," he said.

Now that it was all over, he could feel the Fear climbing in him like the onset of a dangerous drug. Trying to calm himself, he thought, *really, nothing happened, except you got the shit scared out of you, that's all*.

As the swing-wing settled on the pad, Gonzales stood and went to pick up his luggage from the open baggage hold. The pilot sat watching as the plane went through its shutdown procedures.

Do something, Gonzales said to himself, feeling panic mount. He pulled the memex's case out of the hold and said, "I want a copy of your flight records."

"I can't do that."

"You can. I'm working with Internal Affairs, and I was almost killed while flying in your aircraft."

"So was I, man."

"Indeed. But I need this data. Later, IA will go the full official route and pick everything up, but I need it now. A quick dump into my machine here, that's all it will take. I'll give you authorization and receipt." Gonzales waited, keeping the pressure on by his insistent gaze and posture.

The pilot said, "Okay, that ought to cover my ass."

Gonzales slid the shock-case next to the pilot's seat, kneeled and opened the lid. "Are you recording?" he asked the pilot.

The man nodded and said, "Always."

"That's what I thought. All right, then: for the record, this is Mikhail Mikhailovitch Gonzales, senior employee of Internal Affairs Division, SenTrax. I am acquiring flight records of this aircraft to assist in my investigation of certain events that occurred during its most recent flight." He looked at the pilot. "That should do it," he said.

He pulled out a data lead from the case and snapped it into the access plug on the instrument panel. Lights flashed across the panel as data began to spool into the quiescent memex. The panel gonged softly to signal transfer was complete, and Gonzales unplugged the lead and closed the case. "Thanks," he said to the pilot, who sat staring out the cockpit bubble.

Gonzales stood and patted the case and thought to himself, *hey, memex, got a surprise for you when you wake up*. He felt much better.

A carry-slide hauled Gonzales a mile or so through a brightly- lit tunnel with baby blue plastic and plaster walls marked with signs in half a dozen languages promising swift retribution for vandalism. Red and green virus graffiti smeared everything, signs included, and as Gonzales watched, messages in Thai and Burmese transmuted, and new stick figures emerged with dialogue balloons saying god knows what. A lone phrase in red paint read in English, HEROIN ALPHA DEVIL FLOWER. Shattered boxes of black fibroid or coarse sprays of multi-wire cable marked where surveillance cameras had been.

Grey floor-to-ceiling steel shutters blocked the narrow portal to International Arrivals and Departures. Faceless holoscan robots–dark, wheeled cubes with carbon-fiber armor and tentacles and spiked sensor antennas–worked the crowd, antennas swiveling.

All around were Asian travelers, dark-suited men and women: Japanese, Chinese, Malaysians, Indonesians, Thai. They spread out from Asia's "dragons," world centers of research and manufacturing, taking their low margins and hard sell to Europe and the Americas, where consumption had become a way of life. Everywhere Gonzales traveled, it seemed, he found them: cadres armed with technical and scientific prowess and fueled by persistent ambition.

They formed the steel core of much of the world's prosperity. The United States and the dragons lived in uneasy symbiosis: the Asians had a hundred ways of making sure the American economy didn't just roll over and die and take the prime North American consumer market with it. Whether Japanese, Koreans, Taiwanese, Hong Kong Chinese-Canadians–they bought some corporations and merged with others, and Americans ended up working for General Motors Fanuc, Chrysler Mitsubishi, or Daewoo-DEC, and with their paychecks they bought Japanese memexes, Korean autos, Malaysian robotics.

Shutter blades cranked open with a quick scream of metal, and Gonzales stepped inside. An Egyptian guard in a white headdress, blue-and-white checked headband, and gray U.N. drag cross-checked his i.d., gave a quick, meaningless smile–teeth white and perfect under a black moustache–and waved him on.

Southeast Asian Faction Customs waited in the form of a small Thai woman in a brown uniform with indecipherable scrawls across yellow badges. Her features were pleasant and impassive; she wore her black hair pulled tightly back and held with a clear plastic comb. She stood behind a gray metal table; on the floor next to it was a two-meter high general purpose scanner, its controls, screens, and read-outs hidden under a black cloth hood. Dirty green walls wore erratically-spaced signs in a dozen languages, detailing in small type the many categories of contraband.

The woman motioned for him to sit in the upright chair in front of the table, then for him to put his clothes bag and cases on the table.

She spoke, and the translator box at her waist echoed in clear, neuter machine English: "Your person has been scanned and cleared." She put the soft brown bag into the mouth of the scanner, and the machine vetted the bag with a quiet beep. The woman slid it back to Gonzales.

She spoke again, and the translator said, "Please open these cases" as she pointed toward the two shock-cases. For each, Gonzales screened the access panel with his left hand and tapped in the entry codes with his right. The case lids lifted with a soft sigh. Inside the cases, monitor and diagnostic lights flashed above rows of memory modules, heavy solids of black plastic the size of a small safety deposit box.

Gonzales saw she was holding a copy of the Data Declaration Form the memex had filled out in Myanmar and transmitted to both Myanmar and Thai governments. She looked into one of the cases and pointed to a row of red-tagged and sealed memory modules.

The translator's words followed behind hers and said, "These modules we must hold to verify that they contain no contraband information."

"Myanmar customs did so. These are SenTrax corporate records."

"Perhaps they are. We have not cleared them."

"If you wish, I will give you the access protocols. I have nothing to hide, but the modules are important to my work."

She smiled. "I do not have proper equipment. They must be examined by authorities in the city." The translator's tones accurately reflected her lack of concern.

Gonzales sensed the onset of severe bureaucratic intransigence. For whatever occult reasons, this woman had decided to fuck him around, and the harder he pushed, the worse things would be. Give it up, then. He said, "I assume they will be returned to me as soon as possible."

"Certainly. After careful examination. Though it is unlikely that the examination can be completed before your departure." She slid the case off her desk and to the floor behind it. She was smiling again, a satisfied bureaucrat's smile. She turned back to her console, Gonzales's case already a thing of the past. She looked up to see him still standing there and said, "How else can I help you?"

The machine-world began to disperse, turning to fog, and as it did, banks of low-watt incandescents lit up around the room's perimeter, and the patterns of console lights went through a series of rapid permutations as Gonzales was brought to a waking state. The room's lights had been full up for an hour when the desynching series was complete and the egg began to split.

Inside the egg Gonzales lay pale, nude, near-comatose, machine-connected: a new millennium Snow White. A flesh-colored catheter led from his water-shrunken genitals, transparent iv feeds from both forearms. White sealant and anti-irritant paste had clotted around the tubes from throat and mouth. The sharp ozone smell of the paste was all over him.

An autogurney had rolled next to the egg, and its hands, shining chrome claws, began disconnecting tubes and leads. Then it worked with hands and black flexible arms the thickness of a stout rope to lift Gonzales from the egg and onto its own surface.

Gonzales woke up in his own bedroom and began to whimper. "It's okay," the memex whispered through the room's speaker. "It's okay."

Some time later Gonzales awoke again, lay in gloom and considered his condition. Some nausea, legs weak, but no apparent loss of gross motor control, no immediate parapsychological effects (disorientations, amnesias, synesthesias) . . .

Gonzales got up and went to the bathroom, stood amid white tile, polished aluminum and mirrors and said, "Warm shower." Water hissed, and the shower stall door swung open. The water ran down his skin and the sweat and paste rolled off his body.

Tom Maddox has published stories in Omni, Isaac Asimov's SF Magazine, and in anthologies and magazines in the U. S. and abroad, including Mirrorshades: The Cyberpunk Anthology. The excerpts presented here are from Halo, his first novel; it will be published in November of this year by Tor Books in the U. S. and Century Hutchinson in England.

He is currently the writing coordinator at The Evergreen State College, Olympia, Washington. On the net, he frequents rec.arts.books, alt.cyberpunk, alt.postmodern, rec.arts.sf-lovers, and alt.flame; he has been involved in a few moderately lunatic flame wars. He plays blues guitar. He was cited at the end of Neuromancer as the inventor of ICE.

maddox@blake.u.washington.edu

BLACK LEAVES

by Dana Goldblatt

Copyright © 1990

Black leaves falling, all around; last autumn we had gold, orange, brown, all bright or mottled with green and insect-tasted; now we have black, a shiny brown-black like eyeliner, on whole and perfect leaves, which refuse even to decay. They rule in dark splendor over every lawn with trees.

And the deciduous do not darken alone. The evergreens too feel the blight, if it is a blight. Whole pine forests are dropping black needles in the places pines grow; Christmas tree wholesalers are desperate. The science section of the newspaper had a long article on the problem, the point of which was that no one understood what the problem was. No one even knew about it before last year; and few believed it to be serious before this September.

We shall all suffocate slowly, my husband says. He is referring to the common belief that it is the world's forests which supply our oxygen. I do not trust this. There are too many other plants for the trees to be so vital, I think.

We are going to the woods, he and I, and our daughter, to see something which may be going out of the world.

Packing the supplies we need in several boxes and putting those into the trunk on top of the tent, I am able to stop thinking over and over that this is the last camping trip I shall take. I am able to trust my mind while my hands are occupied.

Tricia helped me pack for a while but tired quickly and went to take a nap. Now she will be awake for the ride, which means whining and silly games. If I am lucky, Allen will be in a cheerful mood and keep her occupied; otherwise I will have to do it. When we return, the leaves will cover the lawn, and we will not be able to see the grass.

Allen read an article from the December issue of *Geo Science* on the train this afternoon. Photosynthesis has been replaced by a different but closely related process in trees, which releases ammonia in small quantities, as well as oxygen and carbon dioxide. It creates some kind of long chainlike molecules in the leaves. Allen says it's like the leaves are a plastic factory instead of a food factory.

I told him that was impossible, it would kill the trees. It is killing them, he said. I still didn't believe it, but I stopped arguing. He'd read the article, not me.

Soon we are on our way to the campgrounds. Tricia plays window Bingo with Allen while I drive. The colorful billboards are a contrast to the black trees.

We put our tent up yesterday evening at twilight. When we arrived, there were at least thirty tents and motor homes; by the time we got our tent assembled nearly ten had left.

This morning there were fifteen still here. Allen and I dressed ourselves and Tricia and set out on a nature hike. Spotting a small yellow flower with dark green leaves, I asked Allen its name, was surprised that he didn't know. Tricia picked some dandelions. Except for the lack of brilliant foliage, the woods seemed the same as on any late October weekend.

We returned to our tent, Tricia clutching a fistful of dandelions with a black-eyed susan reigning over the bouquet. Allen had picked a handful of leaves off a maple tree which seemed especially afflicted. Its bark was much darker than it should have been, according to Allen. Having scattered the dandelions on the ground and placed the black- eyed susan on her sleeping bag, Tricia wandered over to where Allen and I sat talking. She wanted one of his black leaves; they were shinier and more attractive to her than the ones on the ground outside. Allen gave her one.

I went to check on her and found her chewing on the leaf. Snatching it out of her hand wasn't enough; she'd swallowed some. Did she feel sick, Allen asked. No, she was fine. I'd taken her leaf away, Tricia said, even though she always chewed on leaves and grass blades at home.

I tried to get Allen to take her to a hospital. You're being hysterical, he said. It was just a leaf. But these aren't just leaves, I said. They have ammonia, and plastic, and all that awful stuff in them. She'll be fine, he said. Do you want to upset her? he asked. But she did get sick. She got a terrible stomach ache and vomited until she was exhausted; we left the campground and arrived home early this evening. She seems to be completely recovered. I hope I will sleep well tonight; I should, since I will be in my own bed.

I slept badly last night. I dreamed Tricia had died; her corpse was black and shiny. We laid her out in her coffin, covered her with black flowers and took her to the cemetery. Our minister, our friends, my parents all stood around the grave as Allen talked about long chainlike molecules. In the cemetery, there was grass as far as I could see: not one blade was green.

Dana Goldblatt never has admitted to preferring science fiction over other forms of fiction, except when it was cheaper at used bookstores. She started writing stories for fun in high school, but didn't finish any until after she graduated. When she was an editor of Brandeis University's literary magazine, Kether*, she started writing a lot more often. Dana is currently a graduate student in computer science, and is still attending Brandeis.*

dana@chaos.cs.brandeis.edu

THE HARRISON CHAPTERS
Chapter 4

by Jim Vassilakos

Copyright © 1990

Mike leaned against the wall and squinted into the cool, scented spray as it stung his face and shoulders and dissolved into a fine, white mist, pools gathering in clusters and slipping down his aching body to the hexagonal tiles below. He vaguely wondered what he would tell Linden, trying to rehearse the words in his mind. "Oh, remember that guy with the android who kidnapped Niki and bugged your offices and home? Yeah, he's really an okay guy. I was just talking to him this morning. He decided not to jettison me out his torpedo tubes. Isn't that the nicest thing?"

Robin was in the next room prying about, trying to glean information about him from every facet of his life. Boss's orders, she explained, but she approached the assignment with a curiosity beyond mere orders. He hardly knew her and she was already getting on his nerves.

"Okay. Dry now." The spray shut off and short blasts of warm air jetted from the sides of the stall. A clear bowl-shaped device lowered itself from the ceiling until it surrounded his head. He shut his eyes as hot air jets whipped around his ears. In a few moments Mike stepped out of the stall and looked for the threads. Robin had laid a black three piece suit out for him. He hated formal wear, but he knew the occasion warranted it. Quickly dressing, he grabbed a comb and then set it back down as it scratched bare flesh. He found a formal hat beside the imager.

Robin, dressed in a long white evening dress, sat on the couch bent over the Niko camera system with its various parts sprawled across the living room floor. She had been sifting through pictures in storage and apparently one had caught her fancy.

"What're you up to?" Mike approached cautiously remembering the last night's incident and the pain she could inflict.

"I didn't know you had another Siri. Who's this one?"

Mike glanced at the picture on the screen. A young Siri woman, perhaps five years older than Niki, stood facing a large triangular lake finished in polished black stone centered around three fountains outlined by the dim amber light of Calanna's dying red sun. Her eyes, dark and bitter, seemed to cast a shadow across the black stone tiles upon which naked symbols were etched like tortured spirits, bonded to the stone for all eternity. Mike remembered the sacrificial alter for all its beauty and pain; and as if by reflex, he reached to the monitor and the screen went black.

Robin looked up startled, "I was just looking."

"She was an old friend. You wanna go?"

"There's still another hour. What's your hurry?" She stood up and walked into the bedroom.

"Nothin'. What's yours?" Mike packed the camera into its case and continued to ponder what he would tell Chuck. He walked to the bedroom, pausing before the door, reflecting what Robin might be doing. He tried to take into account the fact that she was an android, but with everything that happened, it still seemed impossible.

"I always did like a girl who was straight-forward." He smiled at the poor taste of his comment.

"Excuse me?"

Mike entered the room to see Robin hooked up to the computer system via a thin clear cord leading into the comm-socket from her ear. Suddenly he found it not so hard to think of her as an android.

"What are you doing to Cindy?"

"Talking," she smiled. "You have everything locked up real tight. No access to private files."

Mike felt relieved. For a moment he debated inwardly between snapping her cord or just yanking it out of her ear. The thought made him grin.

"Cindy, give Robin all the information you have on the Nissithiu."

"It is done, Michael."

Robin unplugged and the thin cord automatically retracted into her head. Mike felt generous, as if he had a choice in the matter.

Robin stared at him for a moment before speaking. "What makes you so sure?"

Mike shrugged, "The facts fit. C'mon, let's go see Linden."

The subway to Greenflower was slower than most since it traveled above the surface for much of the ride. Mike imagined that its architect preferred monorails with their visual entertainment of clearings, crop-land, and rolling hills speeding quickly by the windows to the functional subways which moved a person tens of kilometers in a matter of a few minutes without anything to look at except bare earth along the way. True, the subway to Greenflower was more pleasant than most, but it wasn't really a subway.

Robin didn't seem particularly impressed, however. She kept studying Mike and the other passengers, and when she caught Mike watching she even faked a yawn. It didn't bother Mike, but he didn't like it either. If she was going to fake a human characteristic, better that she should fake being delighted to see the trees dashing by or the rushing sound the wind made whenever the tracks would turn. That was what he liked so

much about Niki. She was always so happy just to experience and be alive. That was what he envied most about her ever since the day he met her at the Psi Institute on Tizar after his last return from Calanna. He liked her so much he didn't even bother checking out the full range of her talents, and when he had found out how limited they were, Mike still decided to keep her on.

Niki was not nearly as talented as her predecessor in the picture, but she was happier all the same, though even that could become irritating sometimes. Robin on the other hand was either dead or cruel. Mike smiled at the thought, because he knew he was being too judgemental, but it seemed true all the same. Robin had her excuse, however; she was an android. Her makers wouldn't program her so she could have a good time. Anything as state of the art as herself would have some purpose. Mike, on the other hand, was human. He wondered what his excuse might be.

The train pulled into the Greenflower station. The Lion's Den was only on the neighboring hillside looking down over a bluff onto the inland town. It was perhaps a twenty minute walk, fifteen if they hurried, two or three if they took a taxi. Mike felt like walking but realized he wouldn't have a choice as two men in green uniforms entered the compartment.

"Galactican security," one drily announced, "Please come with us."

Every mega-corporation was like a nation state; they all had their own private police, whether the company specialized in cargo transport, starship construction, agricultural production, or news gathering and dissemination. The Galactican was no exception, and on every world under its scope it recruited from the ranks of the planetary ground command. The people they invariably got were low quality mercenaries who couldn't cut it in an interstellar outfit. That knowledge kept the ground cop humble in comparison with his starlaw counterpart. It was a quality Mike appreciated.

The two security officers led Mike and Robin to a grav-car outside the subway. The cool evening air enveloped them as the taller of the men fiddled with the electronic keypad-lock. The other rested his hand on his holster, his rough fingers lightly touching the handle of his automatic, while his eyes stared at the back of Robin's neck. The gun looked like army ordinance. Mike guessed that the short clip contained armor piercing bullets.

Once inside the car, they sped up the hillside toward the Lion's Den. With variable altitude control, the ride was non-stop; and cars on cross-aisles sped above or below at intersections. Within two minutes they had settled outside the banquet hall, the tall statue pillars of the building suggested a certain elegance of manner which Mike knew would be lacking within. The tall officer motioned for Mike to follow as he withdrew from the car toward the white stone building.

Mike looked over his shoulder as the shorter guard stood blocking the door, "What about her?"

"She stays here," the tall one answered.

Mike followed the security officer into the building, noticing familiar faces smiling and nodding in every direction. Linden sat at the front table flanked by the departmental heads. Mike approached cautiously, catching Linden's eye as he walked toward the table.

"Mike!" It was Niki. Bill stood behind her, his long dark hair combed back and knotted. Several heads turned suddenly from the crowd.

"We thought you might not. . . "

"I know," He cut her short. "What did you tell Chuck?"

"Everything," Bill responded first. "When you didn't come back. . . what happened?"

Mike scowled, "Things are screwed up. I've gotta see Chuck."

"Hold on a sec. . . "

Mike cut through the crowd toward the editor. Linden wore a blue suit and a confident smile. He stood up as Mike reached the table, and several of the department heads followed the editor's example, offering their hands to Mike as the guard took an unobtrusive position in the background.

"Gentlemen, you know Mr. Harrison."

"Good to see you again young man, you're doing a great job for the paper."

"I hear you will be speaking tonight, Mr. Harrison."

"That was a brilliant piece on Telmar."

Mike shook their hands and exchanged pleasantries before pulling Linden aside.

"Chuck, we have to talk"

Linden kept smiling, "You bet."

"Now."

Once they were outside, Linden dropped his show smile, "Okay, what happened."

Mike let out a long breath, taking his hat off as an opener. Linden blinked with astonishment at the shaven head and short metal barbs.

". . . what the. . . you okay?"

"For starters, I've got to wear these until I get away from our psychotic, android friend. Clay wants me to take Robin to Calanna to find Fork, and I don't think he's an Imp."

"He's not," Linden stopped staring when the hat went back on. "We checked over that disk you stole from the Solomon estate. The one you planted on Niki for us to find."

Mike nodded, "Anything juicy?"

"It seems a lot of people were visiting Mr. Solomon that day. Many are listed as tourists. Other's as diplomats. We think they may be spies."

"Azazi?"

"Draconian Corporation. You stumbled onto something very big."

Mike tried to puzzle everything together in his head, but none of the pieces matched.

"Have you informed the government."

Linden shook his head, "And blow the story? No way."

Mike gulped down wondering how long he could go to prison for concealing information about Draconian spies. He finally looked up, "What do I do?"

"Take her to Calanna. Get into her programming over there."

"We can do that better over here."

"No," Linden stared into the reporter's eyes. "Mike, we've already agreed that somebody had to get into my office and home to plant those bugs, and that somebody was probably in security. If they have and agent in security, they could just as easily have ten in technical. Get the job done on Calanna. It'll be more quiet that way."

Mike looked down to the grassy turf below his feet, "Okay. Get me a ship and I'm off."

"Thank you, Mr. Chairman, for that more than generous introduction. It is certainly a pleasure to be here, and to speak to such a distinguished assemblage of colleagues, employers, and guests."

There was a titter from the audience as Michael Harrison surveyed the banquet hall. There were easily over a hundred people present and none who knew what he was about to say, himself included. Mike tried to concentrate on what they wanted to hear, but his head was still dizzy from the events of the day, and he felt a cold sweat beneath the hat as the metal implants began to itch.

"As Mr. Jaden pointed out, I've been working for the Galactican for a very short time, and my work experience often borders on the fantastic, so whatever advice I have to share with my colleagues, whatever incriminations I have to send to my employers, and whatever insights I have to give to our guests tonight, should all be taken with a granule of sodium-chloride.

"Investigative gathering is a very individualistic effort; everybody in the business has their own style and way of tackling a case, so be forewarned that what works fine for me will probably fail miserably for you."

This time there was laughter from the audience. Mike began to relax and let the words flow. His trick was just to keep speaking and never really think about what he was saying. As long as his mouth kept moving, shovelling out the meaningless phrases stuck together with the pointless glue that was public speaking, he'd be through with his obligation in no time.

But underneath the cool exterior his mind began to wander away from the speech. Being an engaged speaker was what they taught in oral communications. He remembered the class well enough. He remembered two of his instructor's pet phrases: "Reach out to your audience;" "speak with them, not at them." Mike inwardly smiled remembering how he had passed the class: by being disengaged. Speaking was frightening enough, let alone engaged speaking. Mike always had an alternate method, for almost everything. He liked to experiment until he found out for himself what worked best.

The same was true with investigative reporting. Some guys would read the morning updates until they found something interesting, and then they'd go and research a spin-off. Others would carry a team of news-hounds, usually young people just entering the workforce who were looking for a few extra credits. Mike decided to rent-a-psyche.

He could have found John Doe #17 any of the other ways, but the fact was that Niki found him the day she visited the med-center for a psi-rating test. She had contacted the institute on Tizar and they referred her to Dr. Albertus. After the test she was still keyed-up and open to psi-emissions as they were called. That was the day they brought Fork into D-ward.

"D" was for Disaster. He had been apprehended in a cafeteria at the starport with a bloody fork in his hand. It was the real kind, not like the grav-utensils which couldn't hurt a flee. He must have been from off-world. There was no record of him anywhere in the planetary directory. And to top it off, he had no identification what-so-ever. Niki just happened to sense his total confusion while walking by the two nurses who were transporting a wacko to solitary, bound in a straight-jacket and tied to a stretcher. It had been in the updates, any nurse news- hound could have called somebody on the floor, but as it happened, Niki spotted the opportunity and took it. That's the way the dice fell, and Mike couldn't say he was any happier for it.

Fork was messed up, that anyone could tell, but what nobody had known was that the damage had been the result of a mind- scanner. It took a trained "psyche" to know that. Even sophisticated medical equipment could miss it. It was that little bit of knowledge which everyone else had carelessly avoided that gave Mike a story. To each, his own.

The mind-scanner was an expensive piece of technology far more advanced than the sensatizer Mike had so recently experienced. It attempted to do what any well-trained Siri could do, read the mind of its victim. Victim was the word to use, because mental damage was often associated with overzealous use of the equipment. If someone was well trained at hiding a secret inside their mind, all that there was to do was kill a few brain cells until such training departed. And then, sometimes, the scanner wasn't used to get secrets. On rare occasions, it was used to maim. Mike believed that Fork's was such a case; and he believed that the Imps were the responsible party.

But how did the Draconians enter into it? That was the piece of the puzzle Mike couldn't place. It hinted at something much larger in scope, something which dwarfed both Mike and Fork and all of Tizar. It was the real itch that he couldn't yet scratch, until he got to Calanna.

"Being a reporter for an interstellar news syndicate also has certain fringe benefits, not entirely immaterial. For starters, nobody wants to piss you off."

Mike looked around. Everywhere he saw people laughing. He hoped they were laughing with him and not at his obvious lies.

"Another, and this one is just as critical as it sounds, is that often if there is an important public figure you need to interview, that person will generally take time out of their busy schedule to get some good press, whereas if you were working for some two-bit firm out of Arcadia. . . " he stopped for a wide if sheepish grin, "I hope there's nobody here from Arcadia tonight. . . " The audience was loving it.

Except for one person. She sat in a corner near the back. Her dark features were not so stern as they were indifferent, but her eyes were as sharp and cold as steel. She seemed vaguely unimpressed, and Mike felt his heart skip a beat as she stared directly through him.

"The last fringe benefit I can bring to mind, tonight, is that after the story is written and published and read by the masses, the reporter gets to speak to a distinguished assemblage of his colleagues, employers, and guests. That's always a lot of fun."

The entire audience tilted on the edges of their seats, hands poised in clapping-position.

"And with that I'd like to return control of this honors banquet to one of my most esteemed employers, your friend and mine, Mr. Ray Jaden. Mr. Chairman."

Mike hurried away from the lectern amidst raucous applause from a mostly standing audience, and took his seat next to Niki and Bill. They both congratulated him with pats on the back, and Mike guessed that the speech went okay, though he still hadn't the faintest inkling to know what is was that he said.

"Nice speech buddy."

"Thanks Bill."

"...cept, next time I'd leave out that part about taking a dump outside the Cubbyhole."

Mike turned around, "What?"

"You 'member. When we came back from Telmar and got..."

"I didn't." Mike felt his mouth drop open.

Bill's face broke into a grin, "Just kidding, Mike."

Mike sighed with relief as Walker laughed, "You have to admit, I had you goin'."

Bill Walker was one of the few people who really knew how Mike worked. Mike tried to teach him everything, and in the end he'd taught Bill too much. Now he'd do his best just to hide things from the younger gatherer.

Mike looked over his shoulder and saw the woman in the corner. She was still focused on him. He turned around but could feel her stare boring into the back of his skull. Her face was familiar, but he couldn't place it. Some foreign official, he decided.

"Bill, who's the woman in that corner in the white dress, nothing over the shoulders. She keeps looking over here."

Bill took a half turn using the full extent of his peripheral vision, which was far better than most people's. Mike figured that he had lots of practice.

"She's turned around."

"Well, she was..."

"Wait. It's Draconian Ambassador Kato. Don't you read the paper? Oh, of course. Look who I'm talking to. Forget I asked."

"Don't let it happen again," Mike used his best Draconian accent. It sounded absurdly frustrated, and Bill laughed.

"I think she likes you."

"Shut-up."

Natasia Uhambra Kato was the permanent Draconian envoy to Tizar. It was uncommon for her to attend social gatherings unless she was required to do so by her office. Mike figured that drastic circumstances had called for drastic measures. But what did she hope to accomplish?

"Here comes the booty, mate." Bill looked pleased with himself as Jaden placed a tray of wall plaques on the table beside the lectern. He had a list of "winners" in his left hand and a glass of water in his right.

"This could take awhile."

Bill smiled back, "Should we pick up the yawn patrol."

"But that would be rude," Mike countered as he began his first glorious yawn of the evening. Bill attended with voluminous seconds.

"Our first award goes to one of our speakers tonight, a gatherer who has done a splendid job for the Galactican, and a close personal friend of mine."

"I wish he hadn't said that," Bill slowly began to struggle up from his seat.

Mike placed a hand on his shoulder, "Sit down."

"This gentleman has preserved the sacred trust our paper holds with the public, that of reporting the truth as it is, without reservation and without dramatization."

"At least we know it can't be you."

"Shusshhh..."

"He headed the best-selling issue of the Galactican this year with his front page article headlined, 'Telmar Prepares For Civil War' which I might add, was quite accurate if we are to have any faith in the current news.

"His articles and essays are insightful and are a fine example of the very best in journalism. With that, it gives me great pleasure and pride to award this plaque to Michael J. Harrison, for his contributions to the Galactican."

As Mike accepted the award there were resounding cries for another speech, all of which died down as he resumed his seat. It took an act of will to not sneak a glance toward the corner of the hall. There was something different about her.

"I hope you're not reading me."

Niki turned, startled, "Somethin' the matter?"

"I'll tell you about it later."

The plaque wasn't especially impressive. Mike wondered if they imported the silver ore from Telmar. Jaden continued to hand out various other plaques to various other people for various other accomplishments while company photographers stood around snapping images.

"I wish I had one," Bill interrupted Mike's thoughts with his most sullen voice. He looked like a four-year-old who lost his lollipop.

Mike stuffed the plaque in Bill's jacket pocket.

"Hey..."

"You can change the name."

Bill laughed, "Hey, thanks dude."

"Anytime."

As the tray grew empty, Mike noticed that he and Bill weren't the only one's yawning. However, nobody had the guts to make for the door. Mike knew that the first person to break open the doors and leave would cause a tidal-wave of people to follow, but nobody dared start the congestion.

Finally, Jaden congratulated the readership, everyone who came, and everyone who didn't get an award but thought they deserved one all the same. With the final laugh, he declared the ceremony complete and adjourned the congregation. The rabble, anticipating the clap of the gavel, were already on their feet with more raucous applause, but this time with constipated steps as they tried to squirm outside and perform their relative duties to nature. Mike laughed remembering the Cubbyhole.

"Are we having fun yet?"

Mike gave Niki a hug, "We're about to."

"Michael..."

Linden approached from behind Niki, "I got that ship."

Mike looked over her shoulder, "How soon?"

"It's at the starport in pre-flight. Hanger 183."

"Accommodations?"

"Four."

"Okay, thanks Chuck."

Niki tugged Mike's arm, "What's goin' on?"

"Get your stuff packed, you too Bill, we're going to Calanna."

"Now?"

"Yeah."

Bill headed toward the doors muttering something about his mother. Niki followed, and then suddenly turned.

"What about you?"

"I've got everything I need."

She turned and ran out after Bill.

"Mike," Linden turned back to face the reporter. The multitudes were still bumping their way outside amidst the congestion at the Hall's entrance.

"What is it, Chuck?"

The editor's hands were wrung into a knot as he tried to lean casually against the lectern. He smiled his real smile for the first time in the night.

"Nothing... Good luck."

Mike nodded, "Thanks."

Outside the air was cold, not at all like the balmy summer nights on most of Calanna. Mike saw the dark figures recede into the distance, climbing into their chauffeured limousines, a sign of their decadent elegance. The security officer stood beside the company gravcar. He was looking for Mike amidst the approaching crowd. Mike guessed that Robin was still tucked away inside. It would have been a long wait for a human.

"Mr. Harrison."

Mike swung around abruptly, barely catching his head in time to keep the hat from falling off.

The Ambassador smiled and tried unsuccessfully to stifle a giggle, "I'm sorry if I surprised you. My name is Natasia."

"I know." He reached out his hand to shake hers. He wondered if there was some other sort of protocol.

"But my friends call me Nuke. Don't worry," she withdrew her hand abruptly, "you don't have to kiss it or anything. I'm not Imperial royalty."

Her long dark hair shined in the moonlight. She was a tall as him, but very slim. She suppressed another giggle rather poorly, and her face glittered with amusement, but her eyes told a different story.

"Can I help you Ambassador?"

"No." She waited for her reply to sink as she smiled seductively, "I wanted to commend you on a brilliant speech."

Mike wondered if she was being sarcastic or giddy.

"Thank you."

"You are welcome."

Her eyes glimmered with icy bemusement as the reply sank deeper into his mind. Something within them toyed about an idea, as if she were sifting though his memories for an occasional... stolen disk.

"What do you want? You want to know something."

She studied him for a moment, "I already have what I want. You've told me everything."

Mike clenched his fist, knowing he'd given away his thoughts.

She put her hands on his shoulders and rubbed her thumbs into the fabric of his collar while staring into his eyes with a message of sympathy.

"Yes, you have. Now I want you to have a safe and happy trip. And be sure to find Mr. Fork. He's very, very important."

• • •

A dim, filtered luminescence clung to the cold air as Christina Quatalis re-checked her flight instructions for the fourth and final time, shaking her head with a now comfortable disbelief. The recycler hummed in a shaded corner of the bridge as the computer silently reconfigured her upper boards to account for the installation of turbo-fan chemical jets into the IFM Vista's tertiary ports. Hazel eyes scanned its progress, reading the textures of data with a mixture of apathy and distrust. Over the bridge IC she heard Rrkal's husky voice shouting obscenities amidst the dull background chatter of ground techs.

She opened her line, "Some sorta prob, engineering?"

"Captain?" It was Victor. His York accent was easily discernible over any transmitter. "Com-beta on the third tube is right out. If we had another day we could make repairs, but not in space."

"Typical ISS surplus. Don't sweat it. We can still route navcom through manual."

"Only if we tear open your panel. And then we'll probably have to reconfigure the whole system from scratch. Is it really worth it?"

"We haven't any choice. We're taking-off in five hours."

There was a growl from the other end.

"What's that?"

"Never mind. It's not repeatable."

Chris smiled, "Tell Rrkal to watch his lip. I want you back up here to chart our course."

"I thought our course was already registered."

"Just get up here; there's been a slight change in plans."

"On my way."

The bridge lights flickered as local batteries kicked in. It was one of Rrkal's ways of letting everyone know when he was annoyed. Chris punched up another channel.

"Gunnery, are you ready for the Jane's files on Wasps."

"Ready Freddy," Rita's voice crackled over the IC.

"Sending now..."

Mike cautiously stepped onto the maintenance grav-plate. The congested workspace of Hanger 183 made him feel conspicuously overdressed. Robin dangled her legs over the edge of the plate as it slowly lifted to the spacecraft above. Large spotlight attached to the wall illuminated the aft of the vessel as water vapor condensed and frosted along the fuel hoses and quickly sublimated back into the air a few meters down the line. A large Vargr, his coveralls stained with lubrication fluid, barked directions to the starport maintenance personnel from a small engine port. An expression of distaste seemed to cross his black, furry snout as he sniffed the pair's scented formals.

"Y'da pass'ngerz?"

Mike stepped onto the cold, steel hull extending his hand, "That's right. My name's Mike."

"Rrkal," the Vargr shot Mike a toothy grin and turned toward the airlock. "Da stat'rhoomz don'da lif'tund beinty stups sdhar'burd. Blu dhoorz."

"Thanks," Mike winced as the engineer's breath steamed into his face. "We can find our way around."

The airlock's iris valves rotated open as Mike and Robin approached the outer hatchway. A youngish woman with short, sandy-blonde hair stood in the short passage. Her khaki uniform showed command rank.

"Ms. Clay, Mr. Harrison, it's a pleasure to welcome you aboard the Imperial Free Merchant Vista. I'm Captain Quatalis. If you'll follow me, I'll be happy to show you to your cabin. Our other two passengers have not yet arrived. Will you be staying together?"

Mike and Robin followed the Captain through the airlock's double iris valves and into a hexagonal passage with railings and iron grating floors.

"No. What are the accommodations?"

The Captain glanced toward Mike, twisting a red lever which opened a set of sliding doors to a small cargo lift.

"Two staterooms, double occupancy."

The lift descended one level and the doors slid open. Three passages ran to the bow, port, and starboard respectively. The floors and walls were all finished in an artificial, white substance made to look like polished marble, but the metal handrails remained. One was conspicuously bent outward several centimeters.

"Bumpy rides?"

"We often get comments on that."

They followed the captain through the starboard passage and into an oval common area. A wide table occupied the central floorspace, its translucent body suspended from the ceiling by a reflective, holographic projection rod. Gravitic recliner housings lay scattered on the floor around the table like an assemblage of anthills. Nested into the far wall were cupboards, a hydration oven, a squat cooling unit, and two air filters. Sliding, blue doors to either side marked the stateroom entrances.

"You'll find the galley down the port passage in case you get hungry. Rrkal, I believe you've met our engineer, he cooks the supper chow at eighteen hours ship time. Otherwise, its fend for yourself. If you need to use medical, that's next to the galley. Rita doubles as our ship's medic; you'll meet her if you get spacesick. If you need anything else use channel zero on the IC. We'll be leaving Tizar in four standard hours, or a little over fifteen cents local time. After we jump into hyperspace we will review your drop-off instructions," Captain Quatalis paused with this last thought searching for the right words. "I hope you enjoy your stay. Good-day."

She quickly headed down the passage and made a swift right turn away from the lift.

"Apparently in a hurry," Robin poked her nose into the cupboard.

Mike leaned against the passage railing, "What drop-off instructions?"

"I think she means we aren't landing at the spaceport. Wanna split a can of mash?"

At T-0:02 Bill and Niki showed up, packed as tightly as two rats could pack. For Niki, that meant a pair of pris glasses, a string of worry beads and the standard med-kit with bandages and casting-foam. Bill carried his own sort of med-kit, three vials of purified ethanol, ten grams of hexobarbital, a laser blade, and one fiberglass body pistol of last resort. Mike never understood how two people so different could get along so well. Getting Bill and Niki together was a recipe for destruction. At formal banquets they could behave, but in a starship galley…

"Foodfight!"

"Hey Mike, what's the matter. I thought you liked yogurt."

"Wanna smoke an enchilada?"

"What the hell is going on here?!"

"Uh..oh.. Ah, hi el cap-i-tan. How beautiful you look this evening."

"This passenger is drunk!"

"Who?"

"I want to know who the hell brought drugs onboard this vessel!"

"Hic…"

Mike began to question the wisdom of bringing along an entourage. Niki was essential, just because without her finding Fork would be next to impossible. Robin was part of the deal, which could have been broken back on Tizar. And Bill, with his aptitude and inclination for brawling, was just cannon fodder. Mike smiled, wondering if he would get that far.

"Are you aware of the term 'depressurization', Mr. Walker?"

"She's gonna space me…"

"Only if you're lucky. And as for you miss Sen…"

"Tee hee hee…"

Captain Quatalis had an interesting method for dealing with drunks. First, they were injected with a nausea inducing compound causing them to sacrifice to the porcelain god the entire contents of their stomaches in addition to several dry heaves just for good measure. Then she had them hooked up to plasma vaccs where they had their blood filtered by the Empire's most sadistic gunner/medic. Finally, she had them stuffed into low berths for one hour of uninterrupted hibernation, just so they wouldn't miss the hangover. Then, after they were thoroughly sobered, she offered them her sincerest apology for having put them through such stringent disciplinary measures and broke out a bottle of Antares' finest spirit, just to show them how much she meant it. If they accepted, they got to go through the whole process over again.

Mike sat in the corner of medbay taking notes and plenty of pictures for future blackmail. Half way through the proceedings he felt an unmistakable disorientation.

Bill leaned on the plasma filter, pukestance. "Was that the drug or just me?"

"We just jumped into hyperspace," Rita Ghomes examined the readings along the med displays. "Oh… that's interesting."

"Sweet mama, Mike, get me the hell outta here."

"Sorry Bill, captain's orders."

"Billy…" Niki curled herself into a little ball around the base of her filter, probably to keep the room from turning so fast.

"What is it Niki?"

"I feel woosy."

"Yeah, that's one way of putting… Mike?"

Mike looked over at his sobering companion. Bill had plainly noticed something new in his now undrunken state.

"Take off the hat, Harrison."

Mike obliged him, relishing the surprise of a half-suspended grin. Niki's was less controlled, and evolved from giggles to more puke which nobody thought she possessed.

"What the…"

"It's a long story."

"Them's head-tricks, Mike. Highly illegal for Tizarians."

Mike nodded, "Courtesy of Mr. Clay."

"In other words, you didn't have any choice."

Mike smiled, "I guess he wants to keep me in line."

"Or out of line."

Niki looked up from her barf, "I think it's gross."

"Look who's talking."

"Hey, at least I hit the bucket, okay?"

Mike turned about and left, donning his hat only as an afterthought. The dark passage with its white finish and bent railing seemed to flow over with misplaced memories. He leaned against the metal as if testing its strength. Something about the cold steel put him at ease, as if the time-space bubble which now surrounded the ship would take them somewhere else beside Calanna. Even Telmar was preferable. Or perhaps Tyber. Mike remembered the dense, choking atmosphere, mildly acidic carbons and sulfates eating his lungs as he scrambled for a filter mask, tall smokestacks cutting through the lethal fog a mile and more. Even that would be preferable to Calanna.

The oval antechamber to the passenger staterooms was dark and cold. Mike searched the table's surface for environmental controls without success, finally fumbling across the IC.

"Hello?" The voice was strange. A York accent?

"Hi. How d'ya turn the lights on?"

Suddenly the room lighted up.

The person at the other end seemed to laugh, "I think you found the magic words."

"Oh. Sorry."

"Glad to be of assistance."

Mike switched the line closed and stumbled into a gravitic recliner beside the table. He wondered who he had just talked to, and how many more "strangers" were aboard the Vista.

"Computer on." Nothing happened.

"Quaint. . . " Mike leaned over the table and found the switch at the base of the connector. The air above the table began to glow with a luminescent texture as the holo-rod generated a spinning three-dimensional representation of the Vista. Mike paused, waiting for some sort of prompt. The image of the Vista continued rotating.

"Hi."

"Unrecognized command."

"Help."

"No help available."

Mike went to the cooling unit and returned to his seat empty handed.

"Show passengers."

"Respecify at unrecognized parameter. . . passengers."

"Cargo manifest."

"Records unavailable."

"Bullshit. . . "

"Unrecognized command."

"Show flight instructions."

"Records unavailable."

Mike returned to the cooling unit and grabbed a sluice-stick. He bit off the end and sucked out a quarter of its frozen, syrupy contents.

"Who the fuck programmed you?"

"Respecify at unrecognized parameter. . . the."

Mike sat back in the gravitic recliner and let the head tilt back until he rested on a forward incline, his feet sticking upward and out like a gull's tail feathers.

"Who. . . are you?"

"Specify data format."

"Verbose."

"Vista, Imperial Free Merchant, SG-64923. Laid down 124-618, Dimstar, Imperial Dimstar Corporation. Tonnage two-hundred standard, twenty-eight hundred cubic meters displacement. Engineering, one Dopel PF-18 fusion-linked power plant driving two Ditar AG-217e hyperfield generators and one Monoquad MQ-3 fixed impulse maneuver drive with dual Zalpha-X turbofan installation. Gravitics, Napaliastics I-14 Field Generators with standard inertial compensation and zero to two gee sustained gravity adjusters. Range, sixteen point three light-years with unlimited maneuver. . . "

Mike straightened his posture as the holographic display zoomed-in on specific systems aboard the craft. He tried to keep pace with the output as the computer jumped from one topic to the next. The Vista was a 38-year-old retired scout ship built by Dimstar based on a standard design two-hundred ton hull. It had been purchased at discount by the Bank of Ares and leased through the Galactic Press Corporation as a refitted free merchant. Its entire class had a history of excellent atmospheric maneuverability, but the Vista, in particular, had been placed in dry dock six years previously with orders that it be scrapped due to a series of critical drive failures. Somehow a deal had been cut, and the defective drives had been repaired.

The vessel was crewed by two Galactican personnel, two independent contractors, and three robots. The captain, Christine Quatalis, was born on Tyber. She served as a pilot in the Imperial Scouts before being hired on by the Galactican. Her first mate, Victor Darian, was from Ares. He served Sector Navy as a tac-ship lieutenant before being discharged in naval cutbacks three years earlier. Rita Ghomes, a native of Telmar, was discharged around the same time from her planetary guard while the civil unrest was beginning to brew into open revolt. Rrkal, the vargr engineer, was from the outworld coalition. He worked his passage from the frontier aboard a merchant craft until he was laid off near Dimstar. The three robots worked in cargo, maintenance, and engineering respectively, places which passengers were unlikely to ever see.

The passenger roster was classified as were flight instructions. Mike guessed that he could have broken the security if he had Cindy on hand or access to the ship's computer directly. An idea itched away somewhere deep inside his mind, but he put it away shaking his head and smiling. If he hadn't seen the way Captain Quatalis dealt with drunks, he might have been more willing to see how she dealt with snoops.

Mike decided he was tired. He peeked down the passage and saw no sign of movement. Niki and Bill were going to spend a few more hours in sick bay for sure. Mike pulled himself to his feet and started toward the closest of the staterooms.

"Lights off." The door slid open as the room darkened behind him. He shuffled out of his shirt and climbed into where he though the null-tube should be.

"Mike?" It was Robin.

"Uh..oh.. I think I stumbled into the wrong room."

"It's okay. You don't have to go."

"What makes you think I was going to?"

She didn't bother to come up with a reply but scooted over to make more room. Mike tried to make out her features in the pitch darkness. He wondered what she was wearing.

It! It's an android. Mike tried to refocus his thoughts, but they kept twisting around on him.

She moved again, "What are you thinking?"

"Wrong question."

"You're trying to see me, aren't you."

Not your typical android question, Mike thought. "Can you see in the dark?"

No answer.

"Like, infrared?" His throat felt dry.

She moved again, her head very close to his, but without breath. "With a dash of the ultraviolet." He could almost see her smile.

Mike closed his eyes and tried to sleep wondering why she would do the same. She seemed to mimic humans in almost all aspects of their behavior. Was it simply a part of her programming or something deeper? After several minutes he felt the supressant currents slowly rock as she seemed to breathe, quietly, peacefully. He finally let himself sink slowly beneath the cover of sleep, the depth of space closing inward like a far away dream realized in a sudden instant. And in his mind's eye he saw the fine red outline of a short fence post, its needle-thin barbs pressing outward, seeking blindly in the static wind as a trio of squat, white figures lay aside, their fluffy forms resting on a bed of green haze.

"If I wanted your opinion, I would have asked for it."

Captain Quatalis looked mildly irritated. She chewed on the end of a buttersprout and glanced around the galley looking for her lightpen. Victor sat in the far corner of the room still sizing up her intended audience of four passengers as Rrkal and Rita stirred a can of condensed Terriak hearts into their joint concoction.

Niki studied the map on the near wall, trying to decipher the gist of the implications. "What if we get caught?"

Quatalis turned to the Siri, "If we land at the spaceport we'll all be picked up by starlaw, or worse, by ISIS. This is the only alternative."

"That's only true if the Calannan guard lets the Imps push them around, which is something I find highly unlikely."

"It's more likely than you might think Mr. Harrison, particularly since Calanna has never been a friend of Tizar or the Galactic Press Corporation."

Mike nodded, and reconsidered. The drop-off instructions, drawn by an ex-army commander working directly under Jaden and heading the Tizar office's internal security division, were simple and direct; a clean military troop insertion if Mike had ever seen one. Under the plan, the Vista would jump in at the far side of Calanna's smaller moon, dive into the planet's atmosphere, deal with any resistance as necessary, make the drop via gravchutes, and get out. The only problems were the gravitational effects on the hyperspatial drives, and the resistance, most likely in the form of Wasp fighter craft. After the four were safely dirtside, they should easily ditch the chutes and hide in the local terrain. After that, hiking twenty kilometers into Aelflan, a large agricultural community, would be a snap.

The incident would be logged as yet another smuggling operation which made it through. Since many government and security officials took part in such activities themselves on a regular basis, no eyebrows would be raised. The Wasps would probably follow the Vista out at a safe distance and let the few ground personnel available handle the drop. Probability of success: 90% plus, or so it was written. And better still, the Imps would be thinking Harrison and company still on Tizar counting the ashes of poor Mr. Fork.

"Fine, but how do we get out." It was Niki again.

Quatalis had wondered when somebody would ask the obvious question. The fact that it had been asked meant that they had already accepted the plan for getting in.

"The Vista's cargo shuttle, the Ariya, will land at the spaceport eight days after the drop. We'll unload our cargo and begin speculating. No doubt we'll attract some Imperial attention, so when you try to get back in contact, be subtle. We'll stick around for ten days after that, or until we are no longer needed. The Vista, herself, will be hiding under scanner range of the system's largest gas giant. In case of complications, I suggest you arrange for a backup spacecraft. Are there any questions?"

Seeing none, Rrkal announced open season on the supper, and the crew plus one android dug in. Bill poked at the food with the end of his laser blade, watching the mixture fizzle and flame with tempered distaste, and Niki gathered half-a-bowl in a half- hearted attempt to put something down. Mike just sat around watching the others, his appetite all but evaporated by the discussion.

Rrkal grinned at the trio, "Da Pass'engurz don' eet hartz."

Bill looked up from his bowl, an enigmatic smile slowly creeping across his face.

"Z'hartz goood foood. Ven Z'Droyd noez."

Mike looked across at Robin. She was still shovelling it down with an eager hunger bordering on ravenous.

"Zhe eetz like und no tomarwoo."

Robin looked up from the table, gulping down her mouthful without chewing.

"Why iz zat, droyd?"

"Because there might not be. . . " She looked across at Mike with a matter-of-fact smile. Taken together with the fake sleeping, yawning, detachable ears, and punch in the chest, he decided he didn't like smiling androids, not that he had ever known any others to justify the generalization. Mike reflected on his attitude as she resumed eating.

"Doz zhe zhit too?"

Her eyebrow cocked at the query, and for the first time Mike felt an inkling of interest in the conversation, such as it was. Bill perked up too, as did the captain after a moment's pause.

"Not exactly your usual supper manners, Rrkal."

"I'm. . . tirzty." He seemed to search for the last word as if unsure of the translation.

Quatalis regarded him with a passing curiosity. "You're thirsty? For knowledge?"

"Da." The Vargr grinned, two canines dropping from either side of his snout. He seemed rather pleased that he'd gotten his point across, and had all but forgotten about Robin.

Mike looked across the table, "I don't know; Robin, do you?"

"Do I what?"

Mike smiled at the slated reply, "Y'know, 'zhit."'

Niki spilled her bowl as Mike felt a raw reminder of the pain coarse up his spine, snapping each vertebra as it ascended until it loomed at the threshold of his mind. He awaited the burning, but it just stood there like a flickering candle flame, pausing for some sort of twisted invitation.

Mike opened his eyes to see everyone staring at Niki, her face averted in shame as she tried to dry the table. Rrkal slided across and began helping her clean-up as the Captain shuffled out of her recliner to grab a hand-vacc.

"Maybe we should have discussed the drop after supper."

Bill kept frozen in his place, his eyes sweeping from Niki to Robin, and then over to Mike. As their eyes locked in an understanding that didn't need explanation, Bill reached down to the base of his recliner and switched off, his body slowly rotating into a standing position before the gravitic currents gave way to the surrounding fields. Mike followed suit, and soon found his feet placed firmly on solid decking.

"Thanks for the food, but we're not hungry."

"Daz okay… mor foood fur uz."

Mike followed Bill to the hold, the younger man entering an access code at the lift and again at storage. A security camera watched from the corner of the room as Bill hauled one of the gravchutes off the near wall.

"Mama says it's best to strike while the enemy is out to lunch."

Mike nodded, "Looks like you've been keeping busy."

"I figured it was high time I paid my keep." Bill took his last vial of ethanol from his back pocket.

"She let you keep that?"

"I told her it was for barter… on planet."

Mike snatched the vial from Bill's open hand, twisting off its cap as the younger gatherer broke out a two and a half gram capsule.

"I wouldn't drink that if I were you, Mike."

"Not straight."

"Straight or mixed, you'd die." He began opening the chute's gravitics, snipping a thin wire with the end of his knife and fishing it out.

"Ethanol?"

"Guess again, Mike." His grey eyes seemed to flicker with amusement he tied the thread around the capsule.

"I dunno."

"Well, for starters, it's radioactive. The vial's the shield."

Mike handed it back without the cap, "Fine… you drink it."

"Not very likely." Bill plunged the capsule into the liquid and extended his hand as if for a shake.

"This isn't gonna work, Bill."

"The cap."

Mike handed it over, sweat droplets beginning to form on his forehead. "They're gonna check these things out."

"Really?" Bill's eyes widened with pretended surprise.

"Really."

"Don't be a puss, Mike. It'll take at least fifty claps for the current to dissolve the casing." Bill produced a foam napkin, wrapping the vial and tying it securely at both ends, the thin wire string falling from its interior. "And in another twenty… give or take… " He gritted his teeth as the laser blade burnt the wire back into place.

"Then what?"

Bill closed the unit and replaced the chute back on its rack, nicking its polymer housing almost as an afterthought.

"Boom?"

"Neutrinos, Mike. Lots of neutrinos."

The Vista hung cloaked beneath the shadow of Baal, Calanna's lesser moon, as its port sensors began scanning the cloudy world below. On the distant horizon, the rutilant giant descended into night, saffron rays slipping carelessly away to space.

"Passive EMS reports local clear."

"Focus IR, 3rd Octh, Coord 34.21, 84.13." Captain Quatalis cautiously edged the Vista between the jutting walls the dark lunar canyon. An eerie silence crept outside the craft as the joints along her spine began to tingle in anticipation and fear.

"How long 'til the batteries… "

"That depends," Victor's hand fidgeted over the sensor boon controls while his adjunct talked to the ship's computer and played with the data.

"Nothing unusual."

"Try Neutrino."

"Already done. Minutes clean."

"Maybe."

Mike sucked in cold air outside the dropshaft, glancing toward the digital altimeter on the far wall. Niki and Bill sat opposite, knees bent upright, boots braced together. Bill wore a worried expression. Niki looked elsewhere, she was ignoring the tension. Mike focused his eyes forward, a cool sweat breaking out along his hairline. Robin gently fingered the straps of her gravchute.

"Overweight?"

"Paranoid."

Mike smiled at the reply as the vessel jolted sharply against a deafening noise.

"Minute's clean! Get me DR and ID!"

Christina struggled with the helm controls as the Vista rocked and tumbled with the impact.

"They're ground to air. Quiet Snipers."

"They?"

"Two mark ten."

"Ghomes, are you reading this!?"

The Vista's hull armor crackled and glowed against the atmospheric friction as the heat seekers scrambled in pursuit. A swarm of plasma cells jettisoned from the aft and exploded in a fiery blaze over fifteen miles high.

"Sending pinpoint on source."

"Fire at will!"

The robot eye scanned skyward, over the grey and dusty clouds, a cumbersome program slowly analyzing the data. Chemical explosion. Plasma release. A small mechanical motor raised the antenna to an upright position as the launcher's comm unit broadcast the coordinates of the hit. Within moments only a burning crater remained.

"Okay, give me decoys."

"Is that neces… "

"Yes!"

Six gravballs dropped in pairs from the Vista's ventral aft, dispersing about the vessel as it darted toward the cloud-cover below.

"DR Victor."

"Hull breach in tank seven, jump's out also."

"Oh, and by the way."

Victor smiled at the criticism, then stopped smiling.

"Two wasps, cold fuel. No make that four, in close form pairs. They're mark six. Missile range in twelve."

"Eyes open Ghomes."

"Get me fix."

"Sending… Eight goblins folks."

A single Hellraiser flushed into the inky black as Victor pronounced the "E" in "Eight." Within scarce moments a billion cubic yards of sky burst into an intense white flame.

"One and two nixed. Three and four are breaking up. Four dupes out."

"We got lucky."

"Four more goblins. Mark five and six."

Christina reflexively pulled hard and to starboard as Rita fired an antimissile and loosed a swarm of plasma cells despite the tumbling and turning of the spacecraft. Suddenly the Vista lurched from impact, its steel frame splintering open and erupting from all sides in a fiery inferno of fusion and plasma.

Jim's a grad-student at UC Riverside, hoping and praying like crazy that he'll get his MBA before the dean's axe gets him first. In between classes and term papers, he can be found editing The Guildsman*, the raunchiest gaming zine ever to be published.* The Harrison Chapters *were originally written as a setting description for his Traveller (SF-RPG) campaign. His story, he says, is what you get when you combine an overactive imagination with the foolish tendency to wing it. He says he writes exactly the same way he gamemasters: without any semblance of plan or preconception.*

What has been published here as Chapter Four *is actually chapters six and seven as written originally by Jim.* The Harrison Chapters *will be continued next issue.*

jimv@ucrmath.ucr.edu

CHASING UNICORN SONGS

by Conrad Wong

Copyright © 1991

A chestnut-colored centaur paused at the door of the passenger lounge. She brushed tangled black hair over her tanned shoulder and bent a delicate equine ear to the enchantingly beautiful music coming from within. Intrigued, she peeked in, her wide brown eyes searching for the talented singer.

Across the circle: a silhouette sat in the many-colored shifting light of the Tangled Web nebula. The feline bard's bright green-gold eyes looked out at her audience from under a well-brushed mane of dark black hair and short triangle ears of calico fur. She wore a simple burgundy red shipsuit, her only concessions to fashion her jeweled earrings. Her slender arms danced over the strings of a crystal harp, and she sang, a sweet purring voice that filled the room without seeming to.

That voice drew her listeners into the teaching ballad every child knew, the song of the famed spacefarer Mikato, who grew up an Owned Person in the days before Ragnarok when humans, deified by science, could call down lightning or raise up palaces at a moment's whim. The Owned People were created in their image and yet different, that the humans might be admired, waited upon, even worshiped. Yet a few, the Compassionate, took pity on their playthings and set free those they could.

The Compassionate named Mikato captain and crew of the sentient ship *Starlight Runner* and sent him forth to seek out a new world for the Free People, one of suitable climate and far from human affairs so that they might develop on their own. His wife, the young and pretty Amaranth, and the best of the people the Compassionates freed slept in cryogenic capsules while he outwitted the dangers that waited beyond human space.

At last Mikato found Elyse, a glowing blue-green pearl in the cloth of the Tangled Web. Too ancient and long in space ever to return to planetary gravity, he shed tears watching as *Starlight Runner* sent the final shuttle to the surface bearing Amaranth's cryocoffin. Forever apart from his wife who remained still young and even more beautiful than he'd remembered, out of despair Mikato plunged his ship into the heart of Elyse's star and died.

As the bard sang the last keening songs of Mikato's dirge, a growing silence fell. Then, one by one, her listeners clapped, filling the room with wild applause.

Intending to offer a drink to the singer, the centaur took two glasses filled with amber-gold nectar from the bartender and trotted past a group of stunned vulpines returning slowly to their neglected drinks. She found two unwelcome tiger-men admirers ahead of her. The singer batted ineffectually at their grasping paws; her whiskers bristled angrily at their coarse whisperings. Nearby patrons murmured disapprovingly but declined to intervene, noting the mercenaries' weapons they carried.

The centaur stepped in casually and tapped one of them on the shoulder. He turned about lazily to stare right into the muzzle of an antique 12mm semi-automatic pistol. Made fearless by intoxication, he lazily drawled, "Got a permit for that?"

"Better than that. Diplomatic immunity." The centaur flicked the safety off with an audible click, causing the tiger-man to sober up quickly. He glanced down to his weapons, all securely holstered and locked away beyond any chance of his outdrawing her, then tapped his companion on the shoulder. They slinked out, ears flattened.

"I'm Zephyr-Racer of Chrysanthemum, Riftworlds ambassador," the centaur said, briskly. She replaced her automatic pistol in a belt pouch and passed one of the drinks she carried to the singer who accepted it gladly. "But my friends call me Zephyr."

"Ariaou, a novice bard of Meetpoint Academy," the bard replied quietly. Then, tail curling in a suddenly concerned S-curve, she asked, "How may I repay you for your help?"

"Our debt's paid by the memory of your beautiful singing. But you've not the look of the industrialist or academician about you. Why're you bound for Ryme?" Zephyr cocked her equine ears forward, all curiosity, and rested her elbows on the table.

"It's a long tale, and sometimes, I think, half imagined," Ariaou murmured, sipping the nectar and sitting back on her chair. "Perhaps I've spent sixteen long, lonely years chasing a foolish child's dreams."

Ariaou struck a chord on her crystal harp, beginning a steady rhythm and melody. She sang softly, her words interwoven with her playing, of fair Mnehim, a lush M'nahnee colony world far to the coreward side of the nebula. A warm summer afternoon colored the trees golden, sunlight setting on the verdant forest and sparkling brightly off the rounded stones within a gurgling brook. Two kittens played nearby, one calico, the other black.

She murmured softly over her playing, "Tommiau and I argued over pebbles in a stream, each claiming the other's stone was worthless and his or her own a precious gem. We paid little heed to the lengthening shadows and the first sweet songs of the nightingales. Then an elusive melody came dancing through the trees."

A shiver ran down Zephyr's spine at the pure silvery tones of the song, pale shadow though it was of the music Ariaou had heard so long ago. It spoke of a wanderer with laughing eyes, of his joy in visiting faraway stars and worlds, and his delight in

bestowing enigmas upon those he met, that they might prosper and grow in the understanding. Deep strength and wisdom ran beneath his bright song, and a sadness born of millenia.

"We gave chase, thinking at every turn that the musician would step out of the brush, so close he seemed, his song weaving about us sweetly. And behind us, unheard, a forest predator loped, yellow eyes shining ferally in the moonlight. It hungered, seeking easy prey for a midnight supper."

Ariaou's song tumbled over itself, wove into danger: a young Ariaou fell to the forest floor, and Tommiau cried for help, all alone, surrounded by blinking eyes in the underbrush. Dark shapes ghosted overhead, the carrion birds following the predator hopefully, their cries raucous. The wolf crouched, its sinews tightening into steel coils for the pounce–

"It howled forlornly and fell out of the bush, run through and through by the horn of a golden unicorn that stepped out behind. He shone in the moonlight, his voice warm as sunshine, and his eyes clear sky blue. He sang to us with amusement: such brave kittens we were to run free in the woods, but had we no parents to watch over us?"

Young Ariaou and Tommiau clambered onto the unicorn's back. His grand song arched over them, cascading glissandos of starlight notes forming a rainbow road on which they galloped over the treetops. The forest sped by as if they flew on true wings of song, with a herd of other unicorns all the colors of the spectrum galloping beside the golden unicorn.

"Tommiau fell asleep on our ride, as the unicorn intended, but I did not. In the morning, he awoke remembering nothing of the night's events, and my stories were met with disbelief and scoldings, for there were no such animals as unicorns in the modern world."

Ariaou continued, quietly, the music fading to gentle strumming. "For sixteen years, I've studied music at Meetpoint Academy. Nine years gone by, my parents were killed when terrorists hijacked their starliner. Three years ago, my brother Tommiau was murdered at King Ascenion's coronation. And still I search for the unicorn, and his songs, my own unreachable star in the heavens."

Ariaou let a final questing note ring into silence on her crystal harp. Zephyr remained wordless for a time, then reached over to give the singer a warm hug, which the feline accepted with a thankful purr.

Six hours later, the starliner *Lady of Nine Trumps Unblown* docked with the Ryme deep space station *Quiet Reason*, a large, nickel-iron asteroid moved into the Oort cloud centuries ago and excavated. Ariaou watched fascinatedly as the ship slowly folded its warpspace vanes and drifted slowly into the huge cavern of the spaceport on jets of compressed air. A spiderweb of docking lines spun slowly about the spindle-like craft, holding it in place.

They disembarked into the pressurized corridors of the station, having elected to share quarters. Zephyr guided Ariaou past the officials at the customs desk and through the station's labyrinthian corridors. "I want you to meet my friends," Zephyr said. "You'll like them. There'd be only a few diplomats here, but the Dragon Queen's called a nebula-wide trade conference."

"Dragon Queen?" Ariaou asked softly. Her ears flicked curiously.

"The Coordinator of Ryme. Mirdis Shakherak Tarekkha Nazk, for short, her full name would take far too long to remember and recite. I think she secretly prefers our name for her." Zephyr grinned mischievously.

"Mirdis. . . " Ariaou murmured to herself. "I've seen that name before." She searched her shipsuit, came up with a video pad, tapped several buttons with claw-tips, then showed Zephyr the letter.

"Interesting," Zephyr mused. "She politely invited you to visit the recently excavated pre-Ragnarok ruins, and included a ticket aboard the *Lady of Nine Trumps Unblown.* Yet I know that the ruins have been closed to tourists and scientists until the initial mapping has been completed. It's not often the Dragon Queen takes such mysterious actions."

The feline bard nodded. "I have no idea how I could have come to her notice, but 'tis my hope that in the ruins I may find something to help me in my quest. Though the unicorns are long gone from this universe, their memories linger in the ancient relics of the past."

"I'd be careful, though. Mirdis will probably want something in return." Zephyr shook her head ruefully, causing her hair to swirl gracefully. "She's sharp, cunning, a hard bargainer– they wrote the proverb 'Never play chess with a dragon' just for her. But if I don't play her games, how am I going to find out if I'm good enough to come away with whole horsehide?"

Zephyr stopped in front of the fifth level conference room, palmed the lock. The door irised open. Within, instead of the many people standing about chatting and laughing that Zephyr clearly expected, a gleaming bronze-scaled draconian shape filled the far wall of the oval room. She raised her head, regarding them with opalescent black eyes that reflected the dim starlight of the overhead skylight.

After a moment's silence, the Dragon Queen drummed her claws impatiently. "It's terribly impolite to leave the door open like that. This is not an official meeting, Zephyr, so you may dispense with the frightened look. Now, come and examine this position."

Upon an ivory and onyx chessboard on a granite pedestal, five chess pieces stood ranged, each a different color and shape, all of the finest quality. "I've seen this game before," Ariaou said hesitantly. "But there were many more pieces, and they were white and black, not all colors."

"This is a fairy chess variant in which each piece has its own ambitions and allies. They may work together, but only if it serves their own interests. Observe." Mirdis moved an orange-streaked marble pawn a step forward. "The pawn's moved to the seventh row, about to advance and be promoted to a superior piece."

The dull grey steel king, cut with knife-like edges, moved next to the pawn, threatening its advance. A translucent glass knight that shimmered with rainbows swept in to defend the pawn's imminent move but itself coming under attack. "The knight sacrifices itself, a subtle and elusive piece, in the hope of far greater gain."

Mirdis placed a smoothly polished rook of dark brown wood along the row of the pawn. "The rook supports the pawn, threatening the king indirectly."

Another uncomfortable moment passed as they studied the board and the remaining unmoved piece, a glittering gold queen of smooth curves, before a dry rasping voice came from be-

hind. "Fascinating, lady Mirdis. Yet we have little time for trivialities."

Ariaou whirled about, saw a familiar grey-cloaked figure, his face shrouded by a starry black veil. She exclaimed softly, "Tarnkappe!"

"Do you know this mysterious person, Ariaou?" Mirdis asked.

"We've met," Tarnkappe snapped. "May we dispense with small talk?"

"By no means," Mirdis purred, producing a silver tray of tea, coffee, and biscuits. "Tell me about him, dear feline." Zephyr passed the cups, evidently glad of an excuse to do something besides look confused.

While sipping a cup of coffee with cream, Ariaou murmured, "I don't know much about him, even his name; I call him Tarnkappe for his cloak and the way he appears and disappears mysteriously. Sometimes he tells the future. One time it saved me from a horrible crash that killed seventeen people. The last time he said I'd be getting a letter from Ryme– and so I did."

"An innovative approach, making your own prophecies come true. It must save tremendously on worries," the Dragon Queen mused over a cup of Elysian herbal tea held delicately in two claws. "Has he ever explained to you why he helps you in this way?"

Ariuo considered that, taking a biscuit and nibbling delicately on its flakey edges. "Long ago, he told me that he was an old friend of the family from long ago. He never explained how; in fact, he's never said more than a few words at any time, but he seems to know more about me than I do."

"Intriguing. Tsk, but I forget my manners. Allow me to introduce the exiled Prince Gavar Mordenkainen of Hellsgate. The honored dignitary has been badgering me all month about permission to visit the ruins." Mirdis chuckled to herself, a deep rumbling sound.

Tarnkappe bowed ironically, a gesture returned warily by Ariaou and Zephyr, then nodded gravely. "My request for a permit for two to enter site fifteen of the ruins? I should like to depart by midnight."

"Postponed," the Dragon Queen said briskly. "There will be no ships bound for Ryme within the next three days."

"I had heard the shuttle *Octave Black* was to depart in three hours?"

"The crew's enjoying stationside recreation while the technicians give the drive systems a much needed overhaul. *Octave Red* is held on Ryme because of a reported bomb threat."

"There is too little time," Tarnkappe muttered to himself.

"On the contrary, there's all the time in the world," Mirdis replied. "The ruins certainly aren't going to get up and walk away. Your stationside expenses here including quarters will be covered by Ryme; come back and talk to me in four days, and I'll arrange the permit and transportation personally. Now do enjoy your stay here on *Quiet Reason*."

Ariaou and Zephyr nodded, sensing the unofficial meeting was at an end. They turned about and departed as Tarnkappe vanished in his own mysterious way, the feline looking back in time to see Mirdis move the golden queen to place the king in check.

Three hours passed. Zephyr located her friends in the seventh level conference room and persuaded Ariaou to play dance music for them. Then Ariaou's sweet voice led them in several folk ballads, unifying their voices into a single grand chorus. Food and drink flowed freely from the dispensers, and the dignitaries conversed amiably with each others.

Zephyr had to drag Ariaou out of the party as station time approached midnight; they walked back to their quarters, sweat beading down the centaur's chestnut brown horsehide. The feline purred softly with tail and whiskers held high in such good humor that Zephyr teased, "See, I told you that you'd enjoy meeting them. Not such stodgy and pompous bureaucrats, are we?"

"Indeed," Ariaou said with a quiet laugh. "I'd never imagined that an angel could have impure thoughts, let alone know all the lyrics to 'The Thing with All the Eyes and the Asteroid Miner's Daughter'."

"One of my oldest friends and a perennial scandal to her homeworld," Zephyr replied with a grin. She palmed the lock and the door to their stateroom irised open, revealing a familiar grey-cloaked figure within.

"Elements!" Zephyr sighed. "Is everyone following us today?"

"It lacks but half an hour of midnight," Tarnkappe said, ignoring the looks of slight exasperation they gave him. "We have little time if we are to be off the station by then."

The centaur protested, "There won't be an atmosphere-capable ship ready for two days yet!"

"There is one now. The personal cruiser of the Coordinator."

"What gall," the centaur grumbled. "Ariaou?"

She nodded slowly. "'Tis now, or wait upon Mirdis's pleasure."

"Now or never," Tarnkappe said helpfully. "I will not wait."

"That decides that," Zephyr said. "Let's get changed into sensible planetside clothes, Ariaou. Prince Gavar, if you'd be so kind and give us some privacy?..."

Fifteen minutes later, Zephyr cantered and Ariaou walked to the spaceport cavern, both dressed in plain and serviceable blue kelvarite planetside clothes, a material that maintained a comfortable temperature and humidity in a wide range of environments and afforded protection from sharp objects. Tarnkappe strode along in the same grey cloak, apparently unconcerned about any danger.

Tarnkappe led them through the central elevator that ran through the core of *Quiet Reason*. He entered a control code into a heavily armored airlock that irised open to reveal the null gravity pressurized repair and refueling dock surrounding the Dragon Queen's personal cruiser *Fool's Mate*, a sleek black-winged shape equally at home in deep space or within planetary atmosphere.

Two guards stood in front of the catwalk leading to the airlock, dressed in station security uniforms and carrying needle rifles slung over their shoulders. The closer one called out, "Who's there? Identify yourself!"

Tarnkappe stepped forward as they leveled their guns and shouted for him to halt. His arms blurred into motion almost too fast to be seen; razor-sharp claws clicked out from his fingers, slashed left and right efficiently, and the guards fell away gurgling horribly, throats cut and blood drifting in slow spheres. He cycled the yacht's airlock open as if nothing had happened and beckoned for them to enter.

They stepped nervously past Tarnkappe, entering the forward half of the passenger compartment, and settled into soft padded anti-acceleration seats. Ariaou whispered urgently to Zephyr, watching Tarnkappe anxiously, "That's the same way my brother Tommiau was murdered three years ago."

"We're stuck with playing this round out," Zephyr replied quietly. "You didn't bring a weapon, did you? Luckily I always keep my sidearm."

Tarnkappe gave no signs of noticing their whisperings as he went forward to the pilot's seat and initiated the departure sequence, his long fingers skimming across the banks of controls. The station's com band came alive with protests of unauthorized departure and unfiled flight plans, all of which he blandly ignored. Mirdis's yacht hummed as its engines powered up slowly.

Fool's Mate lifted off silently on compressed hydrogen jets from the support gantries, refueling and repair arms snapping and falling free. The docking bay depressurized, air vanished through powered fans, and the exit hatch opened silently into deep space. Tarnkappe floated the yacht out slowly and deliberately, then started making preparations for the first boost out of the docking cavern and away from the station.

A voice crackled over the military band, causing Tarnkappe to scrabble surprisedly for nonexistent weapons controls. "The station's weapons are locked onto you, *Fool's Mate*. Repeat, our guns are locked on you. Do not attempt to leave station orbit. You are charged with two counts of first degree murder, grand theft, failure to file a flight plan or authorization with traffic control–"

"Oh hush, dear Captain," a low rumbling reply came from behind them. "It's my yacht and I wrote the rules, so I can take it out when I need to. Do be a dear and take care of the paperwork for me, will you?"

"Understood, Coordinator," the voice replied as Ariaou and Zephyr turned about to gape at the familiar ancient bronze dragon that filled the rear passenger space. "*Quiet Reason* station over and out."

"How did you know we would be here?" Ariaou asked.

"As I'm sure Prince Gavar knows already, my yacht was the only one that he could obtain which could safely make it to Ryme within his time limit." Mirdis turned to look reprovingly at Tarnkappe. "Really, though, killing the guards was a bit much. The paperwork for that will run up more than the rest of this put together."

"They were unimportant," Tarnkappe replied as he examined the unfamiliar astronavigation controls. Slight irritation became evident in his gestures as lights blinked and starmaps flickered on and off despite his efforts.

"As ever, you ignore all but your grand schemes. Even the smallest thing can count." The Dragon Queen reached forward to start the autopilot, which obediently began to follow its preprogrammed course with an efficiency that clearly annoyed Tarnkappe.

He dismissed the matter with a wave of his hand, intently studying the new information coming onto the displays. "I advise you all to brace yourselves, as we will be entering jump in thirty seconds, thanks to lady Mirdis's thoughtful preparations."

Fool's Mate accelerated to near lightspeed on anti-matter engines, its artificial gravity protecting its passengers from being smeared against the aft bulkheads by G-force. Its warpspace vanes unfolded into position, long sheets of multiple mirror-bright panels reflecting the light of the receding station. With a sudden jolt, they transited into warpspace. A sense of unreality swept through the yacht.

The yacht emerged scant seconds later only ten minutes flight from the glowing sphere of Ryme that now hung suspended before the forward viewport. *Fool's Mate* folded its vanes and cut cleanly into the atmosphere under the autopilot's directions, atmospheric friction heating up its nose and bottom to a cherry bright glow. It glided over thick forest, its wings dissipating excess heat in the cool winds, then descended into the crater of an extinct volcano on compressed air jets.

Tarnkappe stepped out first. Ariaou and Zephyr cautiously followed, and Mirdis disentangled herself from the yacht last. They stood before an architectural magnificence, white marble sprawling within the crater's expanse, largely overgrown by vines and trees. The outermost walls had fallen long ago, sharp-cut stone blocks half buried in the soft earth; arches and gates still stood within the inner courtyards. The setting sun cast golden rays on the roofs.

Tarnkappe led them on a slow walk into the ruins through ancient moss-covered atriums reminiscent of prehistoric Rome. Ariaou unslung her harp and struck up an ancient requiem, slow and sweet notes like tides on the vast sea, the music echoing quietly from the distant corners like a second voice. Zephyr flicked an ear to listen, smiling slightly.

"This place might have been built in an hour, the summer palace of some far voyaging human who desired to live planetside a while," Mirdis commented from behind them, her black opal eyes unreadable. "Yet it's lasted the millenniums since Ragnarok, the humans' civil war that laid waste all their worlds. Only a few of their race survived, and none to this day. A shame."

They stepped into a still intact building, the smooth marble walls only slightly green with moss, the ceilings high and arching to a thin line over their heads. Zephyr's steady clip-clop echoed back weirdly from the corners and Ariaou's music took on new and disturbing resonances, portending strange and mysterious things. Tarnkappe directed them unhesitatingly, knowing exactly where to go.

Mirdis continued, "The dragons' oldest legends claim that many of the Compassionate, those who freed our people so long ago, survived with what little technology they could preserve. They willingly gave up their humanity to assume heraldic forms of great power, so that they could join our societies and watch over us. It's said that one Guardian single-handedly ended the war between Azhanti and Weyrhelm. A fairy tale for young dragons seeking protectors greater than themselves."

"The story is correct," Tarnkappe conceded reluctantly as they halted in a high-domed vault that held an ivory mausoleum. Gilt plaques lined the walls, carved with ancient writing. "Very shortly we will meet one of these guardians. The inscriptions tell of Sundancer and his wife Alysse Italy whom he married in the last echoes of human civilization's glories. When Ragnarok fell, she fled the battles in shame at the destructions she'd caused, and built her home on this distant world to live out her days. He visits this place once every century, mourning."

"So," Mirdis rumbled to herself thoughtfully. "You violated

this place, rather than wait upon a permit. As I guessed, Ariaou is important to your plans somehow. But why?"

"Revenge."

The exiled Prince Gavar pulled his hood back, removed the dark veil that hid his face. Ariaou gasped in recognition, seeing the glowing yellow eyes that haunted her worst nightmares, the grey fur now white with age. "A dire wolf!" she breathed, her paws falling from her harp.

"A genetic madness haunts my line," Gavar explained. "Each son in turn is stricken, reduced to unthinking bestiality. I was old when I fell ill, and exiled from my homeworld to a distant forest where I might hunt as I wished, so that no outsider would know the shame my family endured."

"Then the unicorn came, the one with a pelt like sunfire, and slayed me. But dire wolves are not so easily killed. I healed slowly, and when I awoke again, my thoughts were clear."

"It was an unwanted gift. As a pure wolf, I had known the joy of the wild hunt, the companionship of the pack, the bliss of mating. But I knew these things were wrong, and so I was ashamed. I swore to kill those who witnessed my shame. I killed Tommiau, three years ago. Here I will kill you, and the unicorn, and then there shall be none who know. Then I shall grant myself the peace of death."

"Peace I brought my wife so long ago," a voice like warm twilight said from behind the mausoleum. The golden unicorn Ariaou remembered stepped out, his sky blue eyes shining with ancient sadness and remembrance. "She would have laid waste your fledgling worlds, driven mad with loneliness and anger, and so I was forced to kill her."

"She lives," Gavar said with a wild laugh. "She hungers for your blood as much as I." He threw away the grey cloak, revealing a grizzled frame better muscled than any dire wolf had a right to be, covered with a silvery grey cloth that shimmered and flowed with sentient light. Razor-sharp claws snicked out from his fingers as he assumed a battle stance.

"Grave robber! You have violated her crypt!" the unicorn neighed, his voice a mighty bell ringing. "I could not bear to utterly extinct her mind from this plane of existence, and so I transferred it to the weave of her clothes, which you now wear."

"And which grants me powers like a god's, the power to slay!" With that, Gavar's suit flared into sudden star-like intensity, then released its energy in a bolt of lightning that blew the mausoleum apart in a shower of stone shards and ancient relics as Sundancer dodged aside. Shrapnel shattered Ariaou's crystal harp, sending its brittle pieces falling harmlessly against her kelvarite clothes. She gasped and stumbled closer to Zephyr.

With a sudden flicker, Sundancer teleported behind Gavar, lashed out with a gleaming sharp hoof. Gavar blocked it, his suit deflecting the blow harmlessly, and returned a vicious backhand swipe that gouged the wall. The unicorn raised a defensive aura of dim orange in time to absorb a second lightning bolt, which dissipated in harmless pyrotechnics, then skittered back before the wolf's lunge.

Ariaou staggered upright, holding onto Zephyr for support. Out of the corners of her eyes, she saw Zephyr about to pull something out of her belt pouch; Mirdis laid a cautionary claw on the centaur's forearm, clearly signalling *wait*. The battle raged on, the golden unicorn dancing back before the wolf's furious attack.

Sundancer stumbled back before a sudden glittering arc of metal, taking a fatal cut through his left foreleg, gushing arterial blood, then falling heavilly against the wall. Unable to dodge, he summoned up all his energies to drive his aura up through the spectrum to a glaring blue, then to blindingly intense white, as Gavar hailed lightning against his protective shield. "Ariaou," he called, desperately. "I need your help! Sing!"

"My crystal harp was broken," she wailed back, looking despairingly at the shards of her instrument. Gavar flicked an ear, but continued keeping the wounded unicorn pressed back; Sundancer did not reply, the golden unicorn's energy fading fast, his shield dropping down from white to blue under the force of the wolf's energy blasts.

Ariaou cast about for an instrument, tail lashing to express her fear, ears laid back. She saw an ancient shimmerlyre of unfamiliar design flung loose in the destruction of the mausoleum, against the far wall. It seemed an eternity away, meters of space across which Gavar might kill her with but a negligent blow.

The feline gave Zephyr and Mirdis a helpless look for an endless moment, flicked her ears forward agitatedly, then threw herself into a forward dive. She barely evaded a lazy claw swipe that whistled overhead and scooped up the instrument, raising it like a shield.

Its first note was magic, born of a lyre that had been old when the Owned People were born. Her voice joined it in sweet harmony, her paws lifting up to spin the soft, gentle, reassuring strains of a lullaby, the words coming to her unbidden, full of meaning even though she knew none of them. The shimmerlyre transformed her song to music worthy of the gods, soothing and warm, a golden skein that weaved about the room.

"Alas," an unfamiliar voice cried out, the contralto voice of a human woman, a ghost trapped within the suit and evoked by Ariaou's sweet singing. "What have I become, that I should strive to slay my beloved, my husband, my unicorn?"

Gavar fought with his suddenly contrary suit, becoming paralyzed as it refused to move for him, its light fading into a black darker than night. His lightning bolts ceased, leaving the unicorn to fall to the floor in a puddle of blood, the shield almost spent. Gavar howled defiantly, "Revenge shall be mine! I command you, my suit!"

A sound like repeated mute thunder filled the room, and a row of red dots appeared along his chest. He toppled over slowly like a broken statue, revealing Zephyr standing behind, and Mirdis close to her, nodding approval. The centaur slowly replaced her antique pistol in her pouch, a grim look furrowing her brows beneath marble dust-specked brown hair.

The unicorn breathed softly, "That lyre was my wife's. Now yours, Ariaou. And I bequeath to you my songs as well, for you are worthy." With that, Sundancer's body glowed and vanished in a sudden flare of light, leaving behind only the sun-bright spire of his crystal horn. Ariaou turned to see the silver suit fade as well, its weave falling into dust.

"The archaeologists aren't going to be happy about this," the Dragon Queen commented, looking about the wreckage.

Much later, back on the station *Quiet Reason*, they went their separate ways. Zephyr returned to the nebular trade conference. Mirdis cleared up the paperwork incurred in their exploits. Gavar's homeworld Hellsgate denied the existence

of any exiled Prince Gavar Mordenkainen; the Ryme bureaucracy duly made out the forms and filed it away.

Mirdis and Ariaou met once again in the same conference room, near the chess board the Dragon Queen had been studying on their arrival. They spoke for a short while over tea. Finally, Mirdis rumbled, "Then there is nothing I can do to persuade you to remain? Our scientists could undoubtedly learn much from Sundancer's horn."

"Nothing. I must return to Meetpoint, Mirdis," Ariaou replied quietly. "Call it fate, perhaps, or a duty to be fulfilled."

"Very well. From Zephyr, reservations for a first class suite on the starliner *Princess's Favor*. And I give you this to remember Ryme." The Dragon Queen picked up an orange-streaked marble piece from the chess board. At first Ariaou thought it was the pawn; then she looked closer to see that it was a unicorn rampant with eyes of glittering sapphire.

Conrad Wong is a CS student at U. C. Berkeley, about to graduate and face the terrifying world of "Real Life". He is not looking forward to it. Except, that is, to having more money to spend on the necessities of life: new science fiction and fantasy books, anthropomorphic comics (Conrad's particularly fond of Rhudiprrt), and getting permanent net access. His hobbies include feeble attempts at writing (one of which you see above), drawing, computer games, and MUDs.

cwong@cory.berkeley.edu

A SUBTLE CHANGE

by Matthew Sorrels

Copyright © 1991

Bright Sun

She was the most attractive brunette. Large, round, intelligent eyes, with a bright, sparkling smile. Not the type of girl a man dreams of, but the type of dream a man searches for. Roger wasn't much for dreaming though. Day in day out his life was always constant, but his eyes held the gleam of the sun in the middle of the day. No one could stay in that sun long.

"Roger, I want you to meet Cheryl Wilson. She is starting work here today. I thought I would put her next to you and have you help her get adjusted. Cheryl, Roger is one of the best data entry clerks we have. If you have any questions, he should be able to answer them, and I will be meeting with you this afternoon to handle the left over paperwork; welcome aboard."

"Nice to meet you, Cheryl. If there's anything I can help you with please let me know," Roger stammered out, "I know what its like to be new here, so don't hesitate to ask for help if you need it."

They worked side by side through the next six weeks. Roger worked for a large multinational corporation, just one insignificant person out of thousands in this building alone. Day in and day out he entered data into the massive computers. His job never varied, each day it was the same routine: type, check, type, check, type, check. Cheryl caught on quickly and soon was working at the same rate as Roger. They didn't talk much, no one talked much. An occasional nod, a quiet hello, sometimes a smile; that was life on the 93rd floor.

The room they worked in was long and wide, a gymnasium of office space. In small cubicles, over four-hundred data processors entered everything from survey data to insurance claims. Roger had spent the past six months of his life typing in the same repair bill, each time with different numbers and different names.

"Roger, what are you doing this evening?" Cheryl asked with a flip of her hair as she was getting her coat on, her question slicing through the bustle of the office at quitting time.

"Not much. Probably watch T.V. and go to bed early." Roger said with the tiredness of someone who had been doing the same thing for just a little too long.

"Why don't you come over to my place for dinner. I don't feel like eating alone tonight. I have some steaks and some nice wine, it should make a pleasant dinner."

Roger began to swell with thoughts of what this could spell the beginning of. "I would love to. What time would you like me there?"

"Here's my address. Lets see... I need some time to shower and change. Why don't you make it eight o'clock? Is that ok?"

"Great! Do you want me to bring anything? Dessert?"

"Sure, that sounds fine. Whatever you like, as long as it doesn't have bananas in it."

"Ok. I'll see you at eight."

Roger's mind began to race. He had nothing to wear, he had nothing to talk about. Literally, he was nothing. He stopped after work at a department store and bought an outfit that would go with the evening. He felt like a young kid going on a first date. His heart was racing, his head was spinning. For twenty-eight, he didn't have a lot of experience with women; he wasn't quite a virgin but he wasn't Mr. Smooth either. He was just like every other person, full of fear of true intimacy, full of confusion, full of life.

He showed up at three minutes to eight. She was dressed in a simple black dress; just a hint of romance was in the air. Dinner was served on the only china in the house. The wine was a bit sour, the meat a bit fresh. But it was the best dinner Roger had eaten in years. They ate slowly. Conversation was strange, at first, but after a while seemed natural.

"How long have you lived in the city, Roger?" She asked glad that she didn't start talking about the weather.

"Oh, lets see... about 5 years. I moved here right after school."

"It's so strange to live here, for me. I went to school in Kansas and I've spent most of my life in small towns. I don't think I was quite ready for the anomie that the city causes."

"Yeah, at first it takes some getting used to but that's the fun part. What kills you here is the constant nasal drone, the day-in-day-out sameness. You would think that in a big city, life would never get dull, but it does, terribly dull."

"Is your life terribly dull?" She said with a sarcastic smirk as she cleared the table and started to fix the dessert.

"Oh yes, terribly," he replied not realizing her sarcasm, "Sometimes, nothing ever seems to happen at all."

She put on some light instrumental jazz, filling the small apartment with a kind of high-tech warmth. As the music began to play he looked into her eyes and knew then that something had already happened between the two of them. They spent that night together, two people —one being.

They got married six months later and moved into a small family starter apartment on the south side of town. Life was finally going like it is supposed to. At last, Roger had something to live for, a reason to live in a world without any reason. He was put in charge of the data entry division and Cheryl quit work to have children. It was the classic American dream.

On August 16, 2005, his son was born. The nine months had been an experience that neither parent would forget. The

company Roger worked for was having major problems in the global market place, and Roger couldn't sleep some nights from the tension at work. Day in and day out it was his wife's face that gave him the strength to get through the day. Fortunately the pregnancy went fine. Roger looked in his newborn son's eyes for a glimmer of hope. His own emptiness answered him back.

Time passed, his son grew, his life settled. Things were the same as they had always been for beginning families. It was a kind of exile from the real world, where the only things that count live under your own roof, the brightness of his wife's smile when the money was tight, the gleam in his son's eye when he found out something new about the world, and a widening isolation from striving for anything new, a life upon the stagnant water.

A Sudden Rain

On Roger's 33th birthday he went to work, just like he always did. Each morning waking up at seven to catch the shuttle into town. Each morning kissing his wife on the forehead as he left for work. Each day buying the paper at the paper stand. Each day the same as the last. At the end of work that day Roger took the Fenston-Hampton mag-lev train home. Sitting on the hard bench staring out into the landscape, Roger just waited. His eyes didn't even blink when the computer called his stop. He crossed his legs and kept riding. Soon the airport stop was called. By now the train was nearly empty, Roger was one of about five people left. From the moment he stepped off the train, his hair blowing in the high wind out near the airport, he always looked toward the ground while walking into the terminal. He went to the nearest airline desk, placing his briefcase on the ground.

"I would like a ticket on the 8pm moon shuttle." he said with out a pause.

"Very good sir, and when will you be returning?" the flight clerk asked.

"One-way."

"And how many bags will you be checking today?"

"None."

"All right sir, thats one way to the moon on flight 564 leaving at 8pm arriving on luna station at 1am. That will be $456.34, can I get your name and how you be paying for this?"

"The name is Roger Lansta, and I will be paying cash."

As he was sitting in the terminal, molded into a little plastic chair, mindlessly staring out into space, he couldn't even focus on what he was doing. In one of the corners of the terminal, a conversation was taking place between a decrepit bag lady and a retarded man in a wheelchair. For the past thirty minutes, the bag lady had been making her psychotic way around the terminal, talking into space about her non-existent life and her opinions on the way the world should be. Most people just ignored her, but the poor man in the wheelchair seemed to welcome her company. Roger's ship would board soon. All he had to do was manage to sit still just a little while longer.

"I used to be a big star. I did tons of movies. I was famous." the poor woman claimed.

"I like movies. Like pretty pictures." the man in the wheelchair answered.

"But my real job was as a spy, I used to be undercover for the CIA. I traveled all over the world. But I'm retired now."

"I had a job. Good job, very good."

"You know what they have done to the trains? You know when they painted them the new colors? That was my idea. I have many friends in city hall," the woman continued without even noticing that the man in the wheelchair.

Roger boarded the ship and sat down in his seat. He closed his eyes and listened to the roar of the ship as it broke free from Earth's gravity. His mind was a complete blank, if he was to think but one thought his whole world would have collapsed like a red star. As the ship entered orbit around Earth, he saw the edge of the sun pouring down on the ship, burning his eyes. Somewhere in the dark void of space, he gave up what was left of his life.

Moonlight

"What am I doing here? I'm thousands of miles from my family, from my home, my wife, my child. Why am I here?" Roger screamed into the silent walls of his mind, but he did not leave. His inner thoughts were now racing, trying to explain his actions. "I can't focus on my life any more. I can't tell I am alive. To feel you're alive you must sometimes break the glass. You can't tell you're anything, unless you know what it's like to be nothing." The inner argument didn't help his soul, but the screaming did tire him to sleep. The nights did not pass easily, but he did not leave, he did not call home.

Roger took a job, processing low gravity metal alloys. The work was long and hard, sweating in a weightless shop twelve hours a day, coming home to a bare little hovel, eating a meager dinner, passing out only to find morning once again. Two years passed, Roger slowly built a life out of the nothing of the moon. Living space on the moon was cheap, as was everything else—food, clothes, entertainment, but there was a price—constant work.

"If there is a hell, this must have been the model it's based on." Roger often said to his co-workers. But in this constant pain, there was something that called to Roger. He didn't like living here, but he didn't want to leave, yet.

The work did its damage to Roger, and in time he was a living corpse. He had lost thirty pounds and did not sleep regularly anymore. Two more years went by. Roger outlasted everyone he knew. The work became routine. Get up in the morning, work, go to sleep at night. The demons that hunted Roger had finally left him.

"Roger, Roger. . . , ROGER! Look at you. Your dead tired, your not doing us a bit of good here. I want you to go home and sleep. Go home Roger, come back tomorrow." His boss was becoming worried about Roger's health.

"I'm ok. Just tired. So tired. I can't rest, though — can't. I have to keep going." Roger shook his head a few times and ran his hands through his hair. "I'm fine. I can go a few more hours, I just dozed off a bit."

"Roger, you nearly ran that drill press through your hand. If you don't leave I'm gonna have to call security. Don't make me do that. Go home."

"Ok. Ok. But I still think I'm fine. I'm fine."

Sea of Rains

One night a few weeks later at about 4 AM, with a fire burning through his blood, Roger ran out into the the night. Stealing a moon buggy and driving in a blind fear into the Mare Imbrium. He finally stopped and stared into the vast

depths of space. Up above were the stars glowing, tiny embers piercing the veil of darkness. Roger still felt the pulling at his soul, the same force that had driven him to abandon his family, abandon himself. It was hungry again. A call across the universe, one he had to answer.

The next night he left on an outbound ship. The ship was the *MakeFast*, a crew of two hundred headed for the outer colonies just beyond Alpha Centauri. It would take over six years to make it to the first planet, even with the Tesser propulsion drive. But on ships like this they always needed able hands, so Roger had no trouble getting on board. Once again, his life took the form of endless boredom.

"Did you hear about Zebob getting crunched in the gateway yesterday," One of Rogers friends mentioned.

"Yeah, I heard."

"Damn shame if you ask me, but he was a bit of a daredevil."

"Daredevil? Well yes I guess he was. But I don't think he would have felt it was a shame. It would have been a real shame if it had been an accident. Zeb never did like fate. He really believe that he was the master of the universe. Probably why he was so wild."

"But now he's dead. All he had to do was wear the safety rig. But no! He wasn't going to do something that pansy. Always the show-off."

"He was no more a show-off then the next guy. He really believe that his life was his. He wanted that thrill. It was his life and he ended it. I envy him. He lived his life and he caused his death, nothing could be simpler. It was pure."

Roger's friend stared at him for a short time, in disbelief. "Whatever you say Roger, but its still a shame."

Six years passed on board the *MakeFast*. Roger felt at peace, for some reason, with the blank and empty dark sky. He often asked himself how the first deep space explorers must have felt, to meet this void head on, and not flinch. The first planet that the ship came upon was quite a welcome sight for the crew. The planet looked like it would provide plenty of ore and other rare materials and could be savaged for a few years before moving on. The ship was put into a permanent orbit and a small colony was put on the planet. The atmosphere was breathable, and there was some soil that could be cultivated. The change to planet life didn't take all that long and, once again, the patterns of a stable life had begun.

Roger was placed in charge of a small mining group that worked in the mountains near the colony. The work was not as hard as mining on the moon had been and the ores were plentiful. Time went on. Each day another tussle with the world, each night a fitful sleep. Roger was no longer a young man, running from the world. Each night he searched the heavens, every day he longed to move on.

Sunburn

Knowing that he couldn't stay put on this planet much longer, he began to gather up supplies in order to leave. The ship had four scout vehicles that could be driven by one person, with the help of the onboard computers. It took him nearly a month to gather enough food and equipment to risk stealing one the the scouts, but he was once again determined to move on.

One night, Roger took the scout ship *MakeShort*. The ship had enough fuel and food to last for about a year if he didn't eat or drink much. This part of the galaxy was filled with stars and planets that were within a few months of each other. Roger skipped around the galaxy for about ten months, when he came upon a solar system with two suns. The suns were orbited by four planets, all quite large compared to the Earth. Roger set down on the most hospitable of the four but in a system with two suns, hospitable meant little more than looked like it had some atmosphere. Light years form reality and unable to leave, Roger made his home once again.

Dry Rain

After two months, all the water was gone. Roger realized for the first time that his death was coming. It was something that he had resigned himself to on the day he had left earth. His restless nature had driven him, on beyond all reason, into the vast depths of space, and now to the end of his world. He ran out into the desert for four days, always moving forward, refusing to stop for more than short breaks, driven by some need that only he could understand. He made his last stand on a hilltop in the middle of a burning sea of sand and wind.

He stood up. His ragged clothes flapping in the wind on top of the dune. His whole body scorched red from the sun. He looked into the bright light and for the first time in years, smiled. His face was grim and determined. His body was thin and weak, but he stood straight up. The sand swirled around him as his body took its last breath. As he feel forward into the sand, his face still kept that gaunt look of irresolute determination to not stand still. Even as the sand began to mutate his body, that look remained, unchanging in the burning desert.

Sunrise

John left home when he was sixteen. One morning, his mother went into his room, only to find that he had taken all his clothes and left. She cried for an entire day but knew that there was nothing she could have done, it was in his blood, in his soul.

Matthew Sorrels considers himself a modern existentialist. Torn between an overwhelming need to hack hardware and a craving for the purest form of code, he will most likely be found at the unemployment office searching for that entry-level position. You can easily identify him as the depressed person that consumes massive amounts of Diet Coke™.

ms90+@andrew.cmu.edu

POPPING IN

by Christopher Kempke

Copyright © 1991

Twilight

The windshield wipers came on the moment Billy Goldwin's mother started the car, testimony to some past rainstorm. She shut them off immediately, for they served no purpose on this particular day; the sun, though barely above the horizon, had no clouds to block it.

Billy's mood was not so bright. Summer vacation had just come to an end, and the interminable, probably endless days of school were about to begin again. Already his reluctance to submit to this fate had resulted in missing the school bus, and a near-successful attempt to hide his continued presence from his mother made him even later.

His mother's own outlook was, therefore, less than perfect. She didn't say a word to him as they slipped down the avenue away from their home, selected a few choice phrases for the next couple of blocks, then relapsed into the impenetrable silence as they covered the remaining three miles to the school's street.

Billy could see the three-story school building ahead, and sank deeper into his gloom. The doors were closed, he would be late. To have a pink slip on the very first day of second grade, in addition to the suffering of mere attendance, seemed more than he should be expected to survive.

With a passion he'd never felt before, he wished the school would disappear. In his head he could picture the street as it would appear without the school, the building gone entirely. It was a lovely dream, a Nirvana in which this particular hell no longer existed. He sharpened the mental image of the absent building, seeing only the shading trees and empty avenue. Billy lost himself in his sudden dream.

And a moment later that dream came true.

Billy and his mother had just enough time to realize that there was something wrong before the howling began; followed by a thunderous crash and a jerk that tore away all consciousness.

Martin Kendall's feet sat on an oak desk in a cave in the Colorado rockies. A coin fell through the air in front of him, vanished inches above the desk, and reappeared near the ceiling. A moment later, as it again neared the desk, the stunt repeated itself. Kendall had been doing this for nearly half an hour, just barely able to control the coin at terminal velocity.

An intercom buzzed, and he dropped his feet to the floor with sudden alertness. The coin, suddenly ignored, buried itself in his desktop.

"Martin?" The voice of his secretary was badly distorted by the cheap intercom. "Sorry to bother you, but Henry brought me this a few minutes ago, and I thought you should see it." A manila folder materialized on the desk. Kendall opened it at once.

It was a handwritten note, labeled "Transcription from Police Channel, St. Williams, Iowa".

"Jefferson Park School appears to have vanished. No trace of the building remains above ground level, and there is not enough debris present to hypothesize an ordinary explosion of any kind. Several nearby objects appeared to be picked up and tossed *toward* the scene of the disappearance, including several cars, whose occupants are currently being taken to Central Hospital for treatment. I will require backup and several ambulances."

Beneath it was scrawled hastily, "This looks like one of ours."

Kendall had his hand back on the intercom before he finished reading. "Get me four or five Teletrix and have them meet me at the school as fast as you can get them there. Is Henry still out there?"

His question was answered a second later when the specified party appeared in front of his desk. About fifty, Henry was still in perfect shape, with slightly silvered hair which seemed to argue with his blue jeans and tennis shoes. His face almost always wore a slight smile, but today it showed no trace of humor. His eyebrows rose in a silent question, his body almost quivering with repressed motion.

Kendall nodded, and the world changed. Without sound or transition, the rock walls of the Colorado cave were replaced by blue sky and defoliated trees. The chair on which he had been sitting a moment before vanished. Only the fact that he had begun to stand saved him from collapsing to the ground.

Henry was standing next to him, glancing around to be sure no one had observed the teleportation. Satisfied, he gestured toward a large, regularly shaped pit in front of them. Policemen were scattered around it, with the disoriented, suspicious wandering of people facing the completely unknown.

"That's the basement of the school building. The leaves and branches all around it are from the trees here. They were apparently sucked into the vacuum left when the school disappeared."

Kendall nodded silently. "You're right — it does look like a Shifter, or a Teletrix who wants us to think so. Let's see if we can get in there without the police harassing us."

"No problem." Henry held out a small wallet. Kendall opened it, saw a badge and a card which read, in part, 'George MacWills, Federal Bureau of Investigation.' He smiled.

The policeman who stopped them let them pass after seeing the badge. Henry dropped carefully into the pit and helped Kendall down.

The place was a disaster. Folding chairs, old desks, and pieces of brick wall had been picked up, smashed, and indis-

criminately tossed about by the winds.

"Quite a mess," Kendall commented. "Not likely there's going to be anything here to give us clues. What time was it here when this happened?"

"About eight thirty."

Kendall froze, turned around slowly. "So school was in session?"

Henry nodded slowly.

"Oh shit."

"The parents will start arriving once the word gets out, and there will be enough media attention to keep people talking for ages. There were almost fifteen hundred students there, plus the teachers and. . . " his voice trailed off suddenly.

Kendall followed his gaze, saw nothing at first, then a few droplets of crimson showed a macabre path to something Kendall didn't want to look at at all.

But he did. It was the lower half of a body, eviscerated and scattered about the floor, discreetly covered with leaves, almost invisible.

"He must have been walking down the stairs when the school was teleported. Half of him left here, the other half went. . . wherever the rest of the school went." Henry's voice quivered audibly, though he kept it just above a whisper.

Kendall shivered a bit himself. "This can't be seen from above. Let's get rid of it before the cops find it. They've had enough inexplicable things for one day." He teleported the body to a remote desert and brought back an equal volume of air to take its place. Only a slight shifting of the leaves showed that anything had happened.

"We're wasting time," Kendall continued. "Get in contact with as many of the Teletrix as you can find all over the world; use my files to look them up. We need to find out where that school was sent. It would have made quite a flash when it appeared; I'll see if any military satellites picked it up. While I'm at it I'll get the army to control this. That should effectively silence the media."

"We have people that high in the military?" Henry sounded surprised.

"We have people everywhere," Kendall said without emotion. "Wait here for the help I asked for to arrive, and get them to help you look. There's a couple thousand very confused people somewhere right now, most of them schoolchildren. We need to find out where they went."

Henry nodded. "I'll meet you at the Academy in an hour, whether I have news or not."

Kendall finished climbing out of the basement, headed for a small outbuilding, stepped behind it and vanished.

Two hours later three people gathered in Kendall's office. The third was a young woman of about twenty-five, an accomplished Teletrix and major instructor at the Academy.

"The army is currently guarding the school," Kendall commented. "And there's not going to be any mention in the media. But this is going to be hard to gloss over.

"Worse, the school still hasn't been located. None of the weather or military satellites registered a flash that hasn't been otherwise explained. And the students and teachers haven't phoned."

"Sounds bad," Emily Westlane said. "We have to assume they're dead. The odds appear that they weren't teleported anywhere on Earth, and even if they were the school building would probably have collapsed in it's new setting."

Henry nodded. "An extra-terrestrial destination seems likely. But who would want to send a school into outer space?"

Emily shrugged. "A student who didn't want to attend classes. We know that this was an amateur teleportation, possibly even a first manifestation of power. A child seems likely." She paused. "If it was their first time, it's unlikely that they would have known enough to take themselves along."

"So someone outside the school building, probably a student who didn't want to go to school, or a staff member that didn't want to go to work." Henry considered. "It was after school normally started, so there would be a relatively small number of people not in attendance. But I don't know how we could check every child and teacher in St. Williams."

The group became silent for a few moments. Then Kendall snapped his fingers.

"We don't have to. Just check the hospitals and morgue."

"Huh?" Henry looked confused.

Kendall smiled briefly. "This teleportation was amateur; the vacuum almost assures that. Only a tiny portion of them learn to use a grid for energy before we find them."

Henry's befuddled expression vanished. "So our Shifter must have been using his own energy."

"That school had a huge volume; quite an effort for an amateur. The strain must have been enormous." Emily sighed. "The morgue seems more likely."

"Check it," Kendall said. "Henry, you check the hospitals."

"There's only one," Henry said. "I'll be back in ten minutes. " He vanished.

"Me, too," Emily said, and Kendall was suddenly alone.

Three people who were not doctors exited a broom closet of the St. Martin city hospital wearing doctors' gowns. Henry had checked this hall only moments before, determined it to be relatively unused; no one was around to wonder what important medical conference had been held in the closet.

Henry set off at a brisk pace, Kendall and Emily at his heels.

"His name is William Goldwin, or 'Billy.' He's eight years old, starting second grade. He was late to school; his mother was driving him in. She says she saw the school simply vanish, felt a strong wind and heard thunder, then the car was lifted and thrown and she woke up in the hospital." Henry paused for breath. "She was treated for minor bruises and released, but Billy is in a coma. They're in there." He pointed to a door.

Kendall glanced at his watch. "My wife should be getting home right about now. Go get her, and tell her to bring her kit."

Henry nodded once, briefly, and then was not there. Kendall pushed open the door and stepped into the room. Emily followed.

Billy lay on a bed, various pieces of machinery attached to his face and chest. On the other side of the room a crying woman sat in a plush chair. A doctor stood over the bed, fiddling with one of the dials and consulting a clipboard. He looked up as Kendall and Emily entered.

The doctor looked up as they entered. "You're not doctors," he said simply.

Emily smiled broadly, but not without a hint of malice. "We need to talk, outside."

The doctor looked uncertain, glancing between her and the door. Kendall casually placed himself in the line of retreat.

"I don't know who you are, but this patient needs my attention now, and I don't have time for you. You'll have to wait outside."

Kendall gave Emily a sideways glance and shrugged. She pulled a wallet from a coat pocket, flipped it open toward the doctor. "You don't understand. I'm agent Smith of the FBI, and we need to talk outside right now."

The doctor's agitation increased considerably, but he held his ground. "No, you don't understand. I can't leave him right now."

Emily snapped the wallet closed and put it back in her pocket. "I think we're failing to communicate." She turned toward Billy's mother, who had looked up during the exchange. "Mrs. Goldwin, if you'll excuse us?"

An instant later Emily and the doctor were gone.

Mrs. Goldwin flew to her feet like she'd been stung. Kendall held up his hand in a restraining gesture, and smiled.

"Don't worry, ma'am. We're not really with the FBI, but we can help your son, I hope."

"How did they just disappear?" She was still standing, every muscle tensed as though she were about to run.

"I'll explain everything once we've gotten your son revived. Has he been thrashing around, like he's been having nightmares? Sweating?"

"No." She looked as though it took considerable effort to get the word out.

Kendall frowned. The energy drain usually caused terrible nightmares, except in the most extreme cases when the body was too deeply drained. He had never seen an extreme case survive.

"Mrs. Goldwin," he said slowly, "I need to ask you a couple questions, and the answers are extremely important. Your son has a very special ability, one that only a few people possess. He can make things move using only his mind. That's what happened to the school; he apparently sent it somewhere else."

"Billy would never do that!"

"He almost certainly did it by accident. Most people do, their first time. He was probably wishing the school would go away, and 'poof', it did. But it's very important to know where he sent it. Did he say anything just before the accident that might give us a clue?"

She considered. "No. He wasn't speaking at all. We'd had an argument about his going to school."

Kendall grimaced inwardly.

There was a slight movement behind him, and Mrs. Goldwin started.

"You rang?" June Kendall had a smile on her face. She lost it almost as soon as she realized her surroundings. She joined her husband at the bed, looked down into the boy's face. Carefully, she set her briefcase on the edge of the bed and opened it. Henry, who had teleported the two of them here, silently took a chair.

"Wake him up," Kendall said.

June frowned. "The only thing that might wake him is..." She trailed off, looked across the bed at Mrs. Goldwin. "You the boy's mother?"

"Yes, I am." She looked very pale.

Behind the cover of her open briefcase, June pressed a vial into Kendall's hand. "About half," she said aloud.

Kendall teleported about half the vial's contents into Mrs. Goldwin's lungs and chest, then teleported himself across the bed to catch her as she slumped. Carefully, he dragged her to the chair.

"That will keep her out for about twenty minutes. We'll tell her she fainted. She certainly looked bad enough."

Kendall nodded. "Can you wake him up?"

"Not safely. There's some stuff here that might work, but it's damn potent. It might wake him, on the other hand it might cause massive heart failure, too."

Kendall considered. "He's dead for sure if we don't wake him. But we'll need the doctor just in case. I hope Emily's done intimidating him. Henry, will you go get them? I suspect they're on the roof."

June shuddered. "Don't you folks have any less drastic intimidation techniques? Have you ever tried just talking to resolve your differences? Or maybe something just a trifle more subtle?"

Henry grinned slightly. "Subtlety isn't exactly the point we're trying to make. I'll go get them."

He vanished.

Midnight

A sharp slap brought Billy back to awareness. He could only barely get his eyes open, but he spread his lids carefully and tried to focus on his surroundings through the resulting haze.

Kendall sat on the edge of the bed with an intent look on his face. Behind him, beyond the range on which Billy could focus stood the doctor, Henry, Emily, and June. Billy's mother still dozed in her chair on the other side of the bed.

"Billy, can you hear me?" Kendall's voice was very low, almost a whisper. June prodded him in the back and he repeated the question a bit more loudly.

"Yes." It took several attempts to get the word out. Billy remembered a time he had almost drowned, the foggy feeling that would not go away. He felt like that now.

"Do you know what a grid is?"

Billy's brain refused to yield a definition. He shook his head slowly.

Kendall unfolded a large piece of paper, held it close to him. It was glossy black, with yellow lines at about three inch intervals forming squares.

"Can you close your eyes and imagine this?"

Billy tried, and sleep overcame him almost at once. Another slap brought him back.

"Billy, it's very important that you stay awake. Try to imagine this picture in your mind. Keep your eyes open."

Billy studied the grid intently for a few moments, formed an image of it in his mind. "Ok"

"Good. Now pretend that those yellow lines are all over the room, connecting everything with each other. Try to imagine a whole bunch of yellow lines."

Billy nodded. Kendall smiled slightly, pulled a coin from his pocket.

"Now here's the hard part. Look at this coin, and pretend that there's a yellow line connecting it with the blanket right here." Kendall patted the bed slightly. "Okay?"

"Okay."

"Now, imagine the coin moving along the yellow line to the bed."

There was a soft pop, and simultaneously a flash of brilliant light from the bed. The coin now sat on the blanket.

Billy's fatigue vanished, energy flowing through his body as though some internal dam had burst.

Kendall stood up, the coin vanishing as he did so. "Good, he'll be okay now. He's tapped the grid enough to get his energy back. Doctor, I don't think we'll be needing your services any more. June, see if you can wake his mother."

The doctor fled the room. Emily watched him go with a slight grin. June gently shook Billy's mother, awakening her easily.

"We all need to have a talk," Kendall said. "And this isn't the place to have it. I'm going to take us all to my office. Mrs. Goldwin, Billy, this may make you slightly uncomfortable. Everything around you is going to change suddenly, but you won't be hurt in any way. Are you ready?"

Mrs. Goldwin's eyes clearly said no, but she softly said, "Yeah."

Kendall smiled, nodded curtly, and the whole world changed.

Safely seated a half mile below the surface of a Colorado mountain, Kendall turned at once to business.

"Billy, when you were in the car with your mother, you sent the school away somewhere. It's very important that you tell us where you sent it so we can rescue the people who were in it."

Billy looked at his mother, back at Kendall. "I didn't do anything, it just went away."

Kendall's smile widened imperceptibly. "I know you didn't try to make it go anywhere, it was an accident. What were you thinking at the time?"

The glance at his mother was longer this time. "I just wanted the school to disappear," he admitted finally. His mother gasped softly.

"Disappear to where? It's very important."

Billy thought about it for a while. "Just disappear. I didn't want it to go somewhere else, I just wanted it not to be there." He burst into tears.

June came and caught his hand. "That's okay, now. Let's go get you something to eat, okay?" She winked at Billy's mother, led the child slowly from the room. Mrs. Goldwin rose to follow, but a gesture from Kendall made her sit back down. Emily and Henry silently left the room, uncharacteristically using the door rather than teleporting away.

"I've got to tell you a little bit more about your son, Mrs. Goldwin."

Mrs. Goldwin nodded slowly.

"Every now and then someone's born with the ability your son has. We call it teleportation; the ability to move things from one place to another without touching it or moving it through any of the space in between. About one person in a thousand is able to do it. Of those, about one person in one hundred ever discovers this ability on their own.

"But now and then something happens such as with Billy. For some reason or another, they think about an object in a different way than they have before, and 'poof', it moves. It's very draining on your energy, in a way more than just simple fatigue. It causes bad dreams and frequently even death. Many 'crib death' children are just latent teleporters who teleported something too large to handle in a dream, and died as a result.

"We call these people Shifters. They can teleport, but only with some danger and a lot of fatigue. The larger the volume of matter they wish to move, the more energy it takes to move it. Your son was very lucky; most children would have died teleporting a structure as large as that school building.

"Now, even ten percent of one in a thousand human beings makes for a fairly large number of people with this ability. When someone manifests this ability, they are usually noticed by one of our people, and brought here.

"This place you're in is called the Teletrix Academy, and its graduates are referred to as Teletrix. Billy will be one of those graduates eventually."

"Billy has to come here?"

"Yes, for a year or so, to learn how to use his gift well. There are techniques that allow a Teletrix to teleport things without using his or her own energy to do it. Also, the terrible side effects, light and thunder, can be avoided by some other tricks. But most importantly, we teach him to use his gift in an ethical fashion. A Teletrix out for personal gain would be a devastating force in the world. There have been a few who we might only call 'evil.' They are very dangerous people, and extremely difficult to stop. We'd just as soon make ourselves responsible for his moral training as well."

"But he has school to attend, and . . . "

"Many of our students do; and classes are provided here. You will be allowed to visit at any time. In fact, you may live here if you wish. You might want to take our tests — you may be a latent Teletrix yourself, although it's not particularly likely."

"But. . . "

"And, Mrs. Goldwin, I'm afraid I must insist. You see, he doesn't have a grasp on his abilities, and he's dangerous to others as well as himself. It's quite likely that he killed everyone in that school by teleporting them into outer space, or into the sun, or some other such 'accident' merely by ignorance. We can't allow that to happen again. In one year, perhaps less, he may return to the outside world and lead a productive life there. It is never easy to let your son go, but I assure you that it it necessary. I have had this conversation with hundreds of parents over the years, and always reach the same conclusion.

"I'm sorry that this had to happen like this. Usually Shifters manifest their powers in some small manner that allows us some time to break the news gently. It wasn't so this time, and training should begin at once before he decides to try again on his own. I am certain that another such attempt would result in his death."

Mrs. Goldwin was silent for a long moment. "It appears I have no choice. I'll have to discuss it with my husband, of course."

Kendall nodded. "I'll help you if you like. June will make sure that Billy is settled in here. My wife's a very pleasant lady, I'm sure he'll get along with her just fine for a while."

"Your wife. . . is she a. . . "

"Teletrix? No, she just had the misfortune of marrying one. I expect her to come to her senses any day." Kendall grinned. "Shall we go?"

Five hours later Emily dropped into one of Kendall's office chairs with something halfway between a sigh and a snore. The

others in the office had fared little better; Henry was pacing to keep himself alert, Kendall himself was sipping on his fourth cup of coffee in as many hours. June alone looked fresh; somehow she always did.

"Nothing," Emily said flatly. "But I suspect you already knew that. There are fifteen thousand Teletrix all over the world looking for that school building."

"I've still got them looking," Kendall acknowledged, "But I can't see that there's much chance we'll find anything any more. The flash was our best hope, but I've been over all the satellite photos a hundred times. I've been teleporting all over this planet so much I'm developing permanent jet lag."

"The army's fairly nervous about this, but the press is still in the dark. By the time it leaks, I think it will be old enough news that no one will believe it." Henry paused for a few moments. "Of course, somebody's eventually going to put all of these little stories together and draw some fairly dangerous conclusions, for us."

"They already have," Kendall commented. "But nobody believes them, either. I doubt the Academy is in any real danger for the time being." He looked toward his wife.

June shrugged. "I've been talking to Billy for hours. He continues to insist that he sent the school 'nowhere.' I even tried hypnosis. Any memory he has of where he sent it is locked up so tight that he can't get at it either consciously or subconsciously."

Henry tossed his wallet in the air. It vanished, appeared on Kendall's desk. With a slight frown, he teleported it across the room again. The rest of the room's occupants ignored him.

"So we're back at a dead end again," Kendall said. "I suppose we're going to have to get some sleep sometime, and I'm beginning to suspect that the school is permanently beyond our reach."

There was a soft sound of thunder, and Henry's wallet appeared on Kendall's desk in a brilliant flash of light.

"I'd almost forgotten how hard it was to teleport on your own power," Henry said. He stared at the wallet again, wrinkled his head in concentration. The wallet vanished with the customary pop. There was no corresponding flash of light.

"Eureka!" Henry shouted, and leapt to his feet. Everyone else in the room had been staring at him for several seconds, and flinched at the sudden flurry of motion.

"The wallet!" Henry said. "Where is it?"

"How should I know?" Kendall said slowly. "You teleported it, didn't you?"

"Yes."

"Then where did you send it?"

"Nowhere."

There was a slight pause as the words settled.

"Nowhere?"

"I blanked my mind just as I sent it, failed to specify a destination. It's doesn't drain as much energy as a full teleport, either. That's how Billy managed to survive!"

Kendall looked him straight in the eye. "Can you bring it back?"

Henry closed his eyes, nodded slowly. "Yes, I think I can."

Light was suddenly everywhere. When the flash faded, Henry's wallet was in his hand.

"Yes, it can be done. But it's as fatiguing to bring it back as to send it. And I think that it's going to have to be Billy who recalls the school."

Kendall turned his attention to June. "What are the chances he'd survive that?"

She shook her head. "Almost zero. He'll need a couple of weeks at least to recuperate first, and even then it's dangerous. And probably not worth it. Wherever this 'nowhere' is, there's not likely to be any air there, is there?"

Henry shook his head. "No probably not."

Emily looked at him for a long moment, then teleported the wallet from his hands. It appeared in her lap in a soft flash of light. Scowling, she tried again. This time, the wallet remained missing.

"Bring it back, Henry." Her voice was soft.

Henry closed his eyes for almost a full minute. "I can't," he said simply.

There was a flash. "But I can, easily. So only the person who sends it can get it back." Emily shook her head. "It just seems a shame to leave all those people hanging in limbo, even if they are dead."

"Any chance that it will just pop back of it's own accord?" Kendall asked.

Both Henry and Emily shrugged.

"I think that it's definitely time to get some sleep then. We will all think about this better when we're awake."

Emily nodded, looked at her watch. Suddenly, she pulled the watch from her wrist, glanced at it briefly, and sent it nowhere. Everyone looked up at the pop.

Emily grinned theatrically, waited almost a full minute, then recalled the watch. She stared at it as though seeing it for the first time.

"They're still alive," she said quietly. "Teleportation allows you move from place to place skipping the intervening space. It appears you also skip the intervening time. My watch didn't gain so much as a second while it was gone. So no time is passing for the people in the school."

The mood of the room brightened noticeably for the first time in several hours.

"Good thinking, Emily," Kendall said. "We have a chance of rescuing them. We just wait for Billy to recover, get him to bring the school back. With luck we'll even find a way to do it on a grid and he won't have to use his own energy."

June looked skeptical, Emily contemplative. Henry gave a sudden, strangled gasp. "That half a man we found going down the stairs. . . "

Kendall sobered instantly. "Yes. He doesn't even know he's dead."

Dawn

Kendall shifted the unfamiliar army uniform on his shoulders, seeking without success to make it more comfortable. Henry stood nearby with a practiced ease; it was not the first time he has worn such a uniform. Both men were carefully scrutinizing the school foundations.

"There's a lot of damage to the structure," Henry said. "I rather doubt that the school would continue to stand for more than a couple seconds after being brought back."

"Which would injure or kill most of the occupants," Kendall finished for him. "Clearly unacceptable. So what do we do?"

Henry shook his head. "If we knew exactly where the people were, we could probably teleport them out before the building

collapsed. But there's no way to know that I can see."

"Could we rebuild the foundation so that the school would stand?"

"I thought of that," Henry replied. "But we don't know how. The blueprints were destroyed in a fire some years ago, and in any case we don't know exactly how much of the school was taken and how much left. I'm not sure that it would work in any case; the sudden weight on the foundations would be likely to break them."

"Any chance that there are any blueprints left somewhere? Interior drawings or photographs? If we knew the complete structure of the building we could drop a teleport shield on it, immobilize it in one place long enough for the people to get out."

Henry considered for several seconds. "That sounds awfully dangerous. There aren't any blueprints, but we could probably find photographs of the interior. But even if we could completely reconstruct the inside it would probably take several Teletrix working together to keep the geometry straight, and if we weren't perfectly synchronized we'd probably just accelerate the destruction."

Kendall's spun suddenly toward Henry. "Of course! You're a genius, Henry!"

"Of course. But my brilliance is such that escapes even me at the moment. What did I say?"

"Never mind, I need to think about it some more. But we've probably got a solution to that problem. The next question is, how do we cover this all up?"

Henry smiled slowly. "Emily and I had a discussion about that last night. She had an idea that's so outrageous it can't fail."

Kendall snorted. "I can't wait. Let's get back to the office."

Henry spread his map out on Kendall's desk. Emily stood at his side; Kendall sat in his usual chair. Each grabbed a corner to prevent the paper from rerolling itself.

"Here's the major camp, and the latrines," Henry said, pointing. "Everyone not on duty will be there. They've erected a tent over the school foundations to keep the gawkers away; the on-duty patrols will be right around the tent to keep away suspicious people. Nevertheless, there will probably be a crowd of worried parents over here, in the compound."

"Any chance there will be stragglers?"

"It's always possible, but not likely. I've been watching them for a week now, and they've been relatively invariant in their routine. But if there are, the others know what to do with them, so it won't be a big deal."

"Good," Kendall said, glancing at his watch. "We have about ten minutes. I'll take the parents, Henry, you get the tent and the patrols, Emily, the main camp is yours. Then start looking for anyone we missed. Meet me here when you're done." He tapped the map. "Any questions?"

"I question your sanity," Emily said. "Other than that, no."

"That's what you're there for," Kendall said. "If something goes wrong with this plan, get that school back into the nether as fast as you can."

"Understood."

Kendall checked his watch again. "Nine and a half minutes exactly. Let's go!"

The office was replaced with starry darkness. Kendall slid across the night toward the small rope-enclosed compound. Perhaps sixty people were in it, despite the hour; tents and sleeping bags were omnipresent.

Kendall closed his eyes, brought forth an image of the yellow grid that was so much a part of his talent. Normally he would have required neither concentration nor the closed eyes, but the task he performed now was still relatively new, and there was little room for error.

He mentally cut away half of the grid, imagining the lines fading to nothing in one direction, opened his eyes. Superimposing the grid upon the enclosure and the public latrines beyond, he concentrated on the nothing beyond his grid and gave a short mental push.

Usually he would have pulled air from the other end of the grid to fill the space, but tonight he just performed a second teleport a few moments later, sucking air from over an ocean hundreds of miles away.

There was just the slightest rumble, a gentle breeze, then silence. The compound and its occupants were gone.

A crash of thunder from beyond the trees told him that Henry had been less successful, but it no longer mattered. Kendall smiled to himself, and flickered to the meeting place.

The army and the tent were gone, sent into an empty nowhere, out of space and time. The school foundation was barely visible in the near-complete darkness.

Henry and Emily were already there. A few moments later they were joined by June and Billy, who had been hiding nearby for several minutes.

"So far, so good," Kendall said. He kept his voice at a whisper despite the fact that there was no one to hear except the five people gathered in the clearing. "Now the fun begins. Emily, you should probably sit in that tree over there to give you a better view. If you think something's wrong, you know what to do."

Emily nodded, and vanished.

June carried two large briefcases. She handed one to Henry, the other to Kendall. "It took myself and about fifty academy folks all day to get this stuff into two thousand containers. Don't drop those cases or the whole county will go to sleep. And not wake up."

"No problem," Henry said. "We'll try not to break them."

He hefted his case and vanished.

Darkness prevailed for a few seconds longer.

There was a sudden flurry of activity. Four helicopters appeared silently in the air, dropped slightly as they adjusted to the pressure change from their source. Moments later the whirring of their blades filled the night. Everywhere men and women were materializing, filling the schoolyard with humanity. These people turned and ran for the edge of the concrete playground, only to be replaced fifteen seconds later with a new batch. And so it continued, again and again, until fully two thousand people stood waiting.

Equipment began appearing, transferred fully constructed from a storeroom beneath the Colorado Rockies. Wooden towers, bleachers, ladders, and other paraphernalia were quickly set up. Seventeen huge searchlights illuminated the air over the school foundations.

Kendall strode to the playground as the activity slowly settled into an expectant silence. His wife and Billy followed slowly. Two thousand Teletrix had arranged themselves about

the school, where they could view it from every angle. They stood silently, waiting.

Kendall summoned a megaphone, spoke into it.

"Thank you all for coming this evening. I apologize for any inconvenience this may have caused you, but we could think of no other way of resolving this problem without your aid.

"You have all been instructed in what to do. Please remember that time will be very short; you may have as long as ten seconds, but four is a more likely guess. At this time you should arrange yourself so that each of you can see where the school will appear."

There was a slight shifting of the crowd.

Kendall opened the briefcase he held. On the other side of the empty foundation, Henry did the same. Within, hundreds of vials of a white powder glimmered.

"Each of you should take one of these. Be very careful with it; do not breath it or break it."

The briefcase emptied rapidly.

Kendall looked at June expectantly. She nodded once, placed her hand on Billy's shoulder.

"Do you remember our lessons? It's time to bring the school back. But you must be very careful to do it the way Henry showed you. Don't make any light."

Billy smiled. "I can do it." He closed his eyes, opened them, then closed them again. Finally, he opened them and turned toward June.

"It didn't work."

Kendall swore silently.

June was more gentle. "Just try again, Billy."

Billy nodded skeptically, turned toward the hole in the ground, and closed his eyes.

Without a whisper, the school flickered back into existence.

Almost immediately, the ceiling of the top floor vanished, the walls following a fraction of a second later as a thousand Teletrix teleported bits and pieces of the building away. People within became visible, frozen by a shock that had not yet had time to fully register. The remaining Teletrix teleported them into the playground as quickly as they became visible. Inside of a second, none remained on the top floor.

The school began to tilt crazily to one side. The low rumbling only drove the Teletrix to faster speeds. The middle floor was eaten away, it's people pulled out and added to the collection in the playground as they became appeared. When none remained, the bottom floor, too, began to disappear like sand in a strong wind.

The walls now began to collapse, but it was far to late to make any difference. Even as they fell, the walls vanished, the students and teachers flickered to safety The bottom floor collapsed inward, but there was no one left on it.

Kendall watched the school vanish piecemeal until he was sure everyone who could be rescued was out. But there was still an occupant of the building.

Kendall met Henry in the ruins of the basement, seeking half a man. They found him without too much trouble, his body just beginning to realize it was in pain. Henry and Kendall had discussed this for hours in the preceeding days, but their decision pleased neither of them.

With a flash of his mind, Kendall sent the man almost a hundred million miles away. His body was consumed instantly and painlessly by the fusion furnace of the sun.

"I'm sorry," Kendall said quietly. "But this is the only thing we could do for you."

Henry and Kendall stared at the empty place where he had been for several long minutes, silently, then teleported back to the playground.

In the time they had been gone, the equipment had vanished. Each of the Teletrix had chosen a single resident of the school and taken him or her home. The drug June had distributed created a sleep laced with enough dreams to blur the line between reality and nightmare. The events of the night would be pieced together vaguely, if at all. For the people in the school, day would have become night, their minds disoriented. The school would still be gone when they awoke, but with luck they would not remember being in it.

At the end of it all, only Henry, Emily, and Kendall remained. One of the Teletrix had taken June and Billy back to the Colorado office.

"It's not a perfect success," Emily said. "We had a couple of bumps and bruises from falling bricks, but nothing that a little time won't cure. Plus, of course, it will be impossible to hide the signs of all those people here, but that will be only a minor mystery. The tabloids will probably pass us off as space aliens."

Kendall nodded. "That and the fact that every soldier and parent here tonight is going to find their watch a few minutes slow."

"Speaking of which," Henry said, "it's been almost ten minutes since we took out the natives. We'd best get them back before they get too much out of kilter. Keeps the mystery count low."

"Agreed."

The three of them separated to their former positions.

Returning the parents' compound was easier. Kendall merely superimposed a whole grid over the empty scene, and bled the energy of transport into it. Silently and lightlessly the compound reappeared, the air it replaced ending up somewhere over the Pacific.

Five minutes later, wine glasses clinked over Martin Kendall's desk.

"Well, we did it. Only one casualty, and little disruption. When the missing people reappear tomorrow morning, this whole thing should pass. Eventually, the army will get tired of guarding that now-useless hole in the ground and go home." Kendall raised his glass. "I'd like to thank all of you for your help, especially Billy here."

Billy took a sip from his glass. "It's good!" he said.

"Indeed," Kendall said. "Best lemonade I've ever tasted."

Christopher Kempke is a dangerous, psychopathic Computer Science graduate student with too much time on his hands. Attempts to lock him up have resulted only in a temporary confinement at Oregon State University, where he can be reached as kempkec@mist.cs.orst.edu on good days, and not at all on bad.

Editor's note: Popping Up *is actually the third story Chris has written set in the Teletrix 'universe'. The first,* Going Places*, was published in October of 1989 (Volume 1, Issue 1), and the second,* Being There*, was published in April of 1990 (Volume 2, Issue 2).*

If you like *Quanta*, you may want to check out these other magazines, also produced and distributed electronically:

Inter*Text*

An Electronic Fiction Digest Contact: *jsnell@ucsd.edu*

InterText, like its predecessor, *Athene*, is devoted to publishing amateur writing in all genres of fiction. It will be published on a bi-monthly basis, hopefully alternating with *Quanta* (so subscribers to both will get one netmagazine every month). The magazine's editor is Jason Snell, and associate editors are Geoff Duncan and Phil Nolte, all of whom have been seen in the pages of *Athene* or *Quanta* (or both).

InterText is published in both ASCII and PostScript formats (though the PostScript laser-printer version is the version of choice). Its first issue will appear next month. For a subscription (specify ASCII or PostScript), information, or submissions of stories to be published in InterText, contact Jason Snell at *jsnell@ucsd.edu*.

DargonZine

The Magazine of the *Dargon* Project Editor: Dafydd *white@duvm.BITNET*

DargonZine is an electronic magazine printing stories written for the Dargon Project, a shared-world anthology similar to (and inspired by) Robert Asprin's Thieves' World anthologies, created by David "Orny" Liscomb in his now retired magazine, FSFNet. The Dargon Project centers around a medieval-style duchy called Dargon in the far reaches of the Kingdom of Baranur on the world named Makdiar, and as such contains stories with a fantasy fiction/sword and sorcery flavor.

DargonZine is (at this time) only available in flat-file, text-only format. For a subscription, please send a request via MAIL to the editor, Dafydd, at the userid *white@duvm.BITNET*. This request should contain your full userid (logonid and node, or a valid internet address) as well as your full name. InterNet (all non-BITNET sites) subscribers will receive their issues in Mail format. BitNet users have the option of specifying the file transfer format you prefer (either DISK DUMP, PUNCH/MAIL, or SENDFILE/NETDATA). Note: all electronic subscriptions are Free!

The Guildsman

The Journal of the Gamers' Guild of UCR Contact: *jimv@ucrmath.ucr.edu*
ucsd!ucrmath!jimv (uucp)

The Guildsman is an electronic magazine devoted to role-playing games and amateur fantasy/SF fiction. At this time, the Guildsman is available in LaTeX (.tex) source and PostScript formats via both email and anonymous ftp without charge to the reader. Printed copies are also available for a nominal charge which covers printing and postal costs. For more information, email *jimv@ucrmath.ucr.edu* (internet) *ucsd!ucrmath!jimv* (uucp)

Thank you, thank you very much